

**Factors that impact FACS teachers' early adoption of
1998 Family and Consumer Sciences National Standards and
their classroom assessment practices**

by

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TABLE OF CONTENTS

LIST OF FIGURES	v
LIST OF TABLES	vi
ABSTRACT	vii
CHAPTER 1. INTRODUCTION	1
History of National Standards and Assessment	2
Advantages for Applying National Standards and Assessment	3
Critics of National Standards and Assessments	4
FACS National Standards	5
Need for this Study	6
Purpose	7
Objectives	7
Assumptions	8
Definitions	8
Limitations	9
CHAPTER 2. LITERATURE REVIEW	10
National Standards and Local Control	10
The Connection Between National Standards and Assessment	13
National Standards for Family and Consumer Sciences	16
Theory of Diffusion Research	19
Summary	25
CHAPTER 3. METHODOLOGY	27
Research Design	27
Population and Sample	28
Instrument Development	28
Data Collection Packet and Procedures	31
Data Analysis	32
CHAPTER 4. RESULTS AND DISCUSSION	33
Sample Demographics	34
Perceptions for Using Standards and Classroom Assessment Strategies	36
Comparison Between Adopters and Non-adopters	41
Other Standards Used	58
Discussion	60
CHAPTER 5. CONCLUSIONS	64
Summary	64
Implication	70
Conclusion	71

Recommendations for Future Research	72
APPENDIX A. SURVEY INSTRUMENT, COVER LETTER, AND FOLLOW-UP LETTER	74
APPENDIX B. PERMISSION TO USE FACS NATIONAL STANDARDS LOGO	82
APPENDIX C. HUMAN SUBJECTS APPROVAL	84
APPENDIX D. DATA FOR TEACHERS' CURRICULUM REVISION CYCLE	86
REFERENCES	89
AKNOWLEDGMENT	95

LIST OF FIGURES

Figure 4.1	Are you using 1998 FACS National Standards?	43
Figure 4.2	Reasons for not using FACS National Standards.	46
Figure 4.3	Adopted 1998 FACS National Standards.	50
Figure 4.4	Percentage of FACS teachers using selected classroom assessment practices.	53
Figure 4.5	Percentage of FACS teachers using selected classroom assessment practices by National Standards adoption group.	54
Figure 4.6	FACS teachers' grading methods.	56
Figure 4.7	FACS teachers' testing period.	57

LIST OF TABLES

Table 2.1	Comparison of selected diffusion research traditions.	21
Table 3.1	Distribution of population and sample.	28
Table 4.1	FACS teacher characteristics.	34
Table 4.2	Teachers' perceptions for national standards.	38
Table 4.3	Teachers' perceptions for using FACS National Standards.	40
Table 4.4	Teachers' perceptions for classroom assessment strategies.	41
Table 4.5	Are you using 1998 FACS National Standards?	42
Table 4.6	Reasons for not using FACS National Standards.	45
Table 4.7	Teachers' integrating of FACS National Standards adoption category and state.	47
Table 4.8	FACS teachers' classroom assessment practices.	51
Table 4.9	F-test for equal means of assessment strategies between adopters and non-adopters.	52
Table 4.10	Distribution of teachers' curriculum revision frequency.	58
Table 4.11	Other national- or state-level standards used in the classroom.	59
Table 4.12	What do you need to insure that your students are up to "standards"?	61
Table 4.13	Number of FACS teachers in the school building.	61

ABSTRACT

The centerpiece for educational reform is in effectively setting high academic standards for what students should learn and then testing students' abilities to meet these standards. The primary purpose of this study was to explore the contribution of the 1998 FACS National Standards to assessment practices of FACS teachers, and to investigate the differences between FACS teachers who are adopters and those who are non-adopters of the FACS National Standards. In March, 2001, FACS middle school and high school teachers in Iowa, Nebraska, and Minnesota were invited to participate in this study. An equal number (n=60) of teachers were randomly selected from each state to comprise the invited sample (N=180). A survey instrument formatted as a booklet was developed for particular use in this study, and was mailed to the invited FACS teachers. The response rate was 30%. Data were analyzed using SPSS Version 10.0. Descriptive statistics were computed, including frequencies, percentages, means, and standard deviations. The F-test and the Chi-square test were conducted to compare group means and proportions respectively.

Teachers were positive in their responses toward using general national standards and FACS National Standards, and they reported using a variety of assessment tools in the classroom. Rogers' (1995) diffusion theory was used to categorize FACS National Standards adoption groups. Findings revealed that the State Department of Education's support and encouragement contributes most to adopting FACS National Standards. Iowa had the most teachers using FACS National Standards, while many Minnesota teachers were not aware of the FACS National Standards or did not choose to use any kind of national level standards.

This study indicates that standards had little influence over teachers' current assessment practices and grading methods. In addition, standards adopters tended to use

assessment and testing as part of their teaching more often, and tended to have a longer curriculum revision cycle than non-adopters. Among the 16 content standards of FACS National Standards, seven consumer and family living context areas are commonly emphasized in secondary school, while several of nine career preparation context areas are somewhat ignored by FACS teachers.

CHAPTER 1. INTRODUCTION

Is it any wonder that it appears high school students are not motivated to learn? Is what they are taught relevant to what they are held accountable for? Are American schools failing? Are American schools being blindsided where teachers are teaching “in the dark” and students are being tested “in the dark”?

The various education problems often cited in schooling, teaching, and learning call for educational reform to improve the quality of America’s public education. The education reform of the 1990s, initiated by the report, *A Nation at Risk* (US National Commission on Excellence in Education, 1983), and *What work requires of the schools: A SCANS report for America 2000* (Secretary’s Commission on Achieving Necessary Skills [SCANS], 1991), played a pivotal role in raising concern over the quality of education. The centerpiece for educational reform is in effectively setting high academic standards for what students should learn and then testing students’ abilities to meet these standards (Russonello & Stewart, 2000).

Former Assistant Secretary of Education Diane Ravitch is prominently recognized as one of the chief architects of the modern standards movement. In her book *National Standards in American Education: A Citizens Guide* (1995), Ravitch provided a common-sense rationale for standards:

Americans . . . expect strict standards to govern construction of buildings, bridges, highways, and tunnels; shoddy work would put lives at risk. They expect stringent standards to protect their drinking water, the food they eat, and the air they breathe. . . Standards are created because they improve the activity of life. (pp. 8-9)

She asserted that just as standards improve the daily lives of Americans, they would improve the effectiveness of American education. Ravitch states that "Standards can improve achievement by clearly defining what is to be taught and what kind of performance is expected" (p. 25).

Coinciding with the standards movement is the development and administration of appropriate assessments. Assessment is a crucial accompaniment to standards as the vehicle through which standards are to be raised. Although there is an agreement that high academic standards and assessments can improve students' learning, what and how teachers should teach, and how to measure the resulting student learning have been vigorously debated over the past several years.

History of National Standards and Assessments

American education has a long history of standard setting activity since the nineteenth century. A primary reason to establish standards has been to ensure that all children get similar and high quality education.

At the beginning of the 20th century, the National Education Association sponsored a commission on the reorganization of secondary education whose report established a set of standards. In the 1930s, the Progressive Education Association had a major influence in educational evaluation, wanting to initiate a fundamental overhaul of American secondary education. In the 1950s, critics of American education attacked the standards of performance in curricula and teaching methods, particularly in high schools (Bestor, 1953). In the 1960s, a new era of comparison standards was achieved in various national systems of education

(Husen, Tuijnman, & Halls, 1994). In the last two decades of the 20th century, the effort to create a national system of standards and assessments was perhaps the most striking initiative of American education structural changes (Ravitch, 1995). The major reason that national and state leaders have coalesced around the need for defining content and student performance standards is that the quality of American education must be improved, and the current system of relying on local decision making over curriculum is failing to bring about that improvement. These leaders recognized the need for national standards to describe what children are supposed to learn and to provide comparable assessments to determine if they have learned it (National Education Goals Panel, 1992).

Advantages for Applying National Standards and Assessments

The historical overview suggests that applying national standards and assessments in the classroom can improve education. Standards tell students what they need to do to be successful in school; assessments tell students whether they are making progress.

Assessments also tell employers and colleges whether high school graduates truly possess the necessary knowledge and skills for work and future study. According to Ravitch (1995), the advantages of applying national standards and assessments are as follows:

1. Standards establish the principle that all students should encounter the same educational opportunities and attempt the same level of performance.
2. Standards can improve achievement by clearly defining what is to be taught and what kind of performance is expected.
3. Content standards make it possible to coordinate the various parts of the educational system to promote student learning (Harnischfeger & Wiley, 1975).

4. Standards and assessments provide consumer protection by supplying accurate information to students.

Critics of National Standards and Assessments

The push toward national standards has attracted intense opposition, largely because of widespread concern about the possibility of a national curriculum and the increased federal control of education (Ravitch, 1995). Many people, for many different reasons, object to national education standards and national assessments. Opponents voiced the following criticism.

1. National standards will be minimal, reduced to the lowest common denominator, especially if they are controlled by a federal agency. And, national standards based on traditional subject matter disciplines, such as mathematics, science, and history will narrow the curriculum (Ravitch, 1995).
2. The government might impose controversial values and opinions (Arons, 1994).
3. National testing programs will harm children and will distort priorities in the classroom (Eisner, 1993).
4. *Teaching to the test* is bad in current practice because many tests ask narrow questions about disconnected fragments of information, thus leading teachers to drill their students on right answers rather than to teach for deep understanding of the concepts involved (Ravitch, 1995).
5. National standards and national tests will do nothing to help poor inner-city schools (Apple, 1993).

6. National standards and national tests accomplish little by themselves. Unless they are accompanied by better teaching, a better school environment, better instructional materials, and more highly motivated students, student achievement will not improve. The limitations are imposed, because measurement technology is imperfect.

FACS National Standards

A standard is both a goal (what should be done) and a measure of progress toward the goal (how well it was done). According to Ravitch (1995, pp. 12-13), there are three types of education standards: content standards, performance standards, and school delivery standards. A content standard (or curriculum standard) provides clear, specific descriptions of skills and knowledge that should be taught to students. It is measurable so that students can demonstrate their mastery of their skills or knowledge. Performance standards define the degrees of mastery or levels of attainment, and describe what kind of performance represents inadequate, acceptable, or outstanding accomplishment. School delivery standards (opportunity-to-learn standards) define the availability of programs, staff, and other resources that schools, districts, and states provide so that students are able to meet challenging content and performance standards.

Unlike the math, science, or foreign language national standards that were developed by federal agencies, family and consumer sciences (FACS) national standards were developed by FACS educators, FACS professionals, and representatives of FACS businesses and industry. The FACS National Standards are the content-related standards that provide a strong and clear conceptualization of family and consumer sciences. They help define and give common direction to the discipline of family and consumer sciences in local and state

programs across the nation. Standards provide the road map for where FACS education ought to position students for success in their family, community, and work life (Vail, Fox, & Wild, 1997). Sparks and Hirsh (1997, p. 4) stated the influences of FACS education standards on education reform as results-driven education, systems-based thinking, and constructivism. These influences have implications for instruction, assessment, and program evaluation.

Need for this Study

The purpose of establishing standards and assessments is to raise the academic achievement of all learners, to emphasize the value of education for future success in college and careers, to encourage improvement of instruction and collaboration among teachers, and to motivate students to have higher aspirations in their school work (Ravitch, 1995). Teachers are a central factor in the reforms brought by national standards whether by use of alternative or standardized assessments. Do the standards help teachers teach more effectively? Do teachers find the standards useful or a hindrance? Do teachers have enough time and resources to understand the standards themselves and to integrate them successfully into their lesson plans? Are tests helping teachers to assess students' abilities, or are they wasting too much time in the classroom? Are students learning more by using the standards? Answers to these questions depend to a great extent on the teachers' judgments. Teachers must be the core group to advise the developers of standards and give testimony on how the standards are being implemented. Others have an important role to play in standards development and modification, but no one group can equal the experience that classroom

teachers have. In assessment, the teacher is an important collaborator in creating tasks, as well as in developing guidelines for scoring and interpretation (Liskin-Gasparro, 1996).

Much research has been done to examine national standards and assessment tools in traditional academic areas, such as mathematics, science, foreign language, and history, but little investigation has occurred in the field of family and consumer sciences. This study was designed to examine the teachers' adoption of 1998 FACS National Standards and their influence on assessment practices in the classroom.

Purpose

The overall purpose of this study was to explore the contribution of 1998 FACS National Standards to assessment practices of FACS teachers, and to investigate the differences in assessments between FACS teachers who are adopters and those who are non-adopters of FACS National Standards.

Objectives

The objectives of this study consisted at the following components:

1. Identify the perceptions of FACS teachers for using FACS National Standards in the classroom.
2. Describe current assessment practices of FACS teachers.
3. Explore the relationship of assessment practices to adoption of FACS National Standards for curriculum.
4. Identify characteristics of FACS teachers who are early adopters of FACS National

Standards.

Assumptions

This study was designed based on the following assumptions:

1. The respondents will answer the questions honestly.
2. The statements in the questionnaire are a valid measure of factors that influence FACS teachers' willingness to use National Standards and assessments in the classroom.
3. The instrument is appropriate for fulfilling the objectives of this study.

Definitions

For use with this study, the following definitions are given:

1. *Standard*: A standard refers to the degree of excellence required for particular purposes, a measure of what is adequate, a socially and practically desired level of performance (Livingston, 1985).
2. *Content*: Content defines the various areas of knowledge and skills that all the students should learn.
3. *Content standard*: Content standards describe the subject-specific knowledge and skills that programs are expected to teach and students are expected to learn, and thereby describe the goals for individual student achievement (Kister, 1997).
4. *Assessment*: Assessment refers to the techniques used in collecting information about educational outcomes either subjectively by using expert judgments or by means of standardized, objective tests measuring cognitive – but sometimes also noncognitive – aspects of learning and student performance (Tuijnman & Postlethwaite, 1994)

5. *Competencies*: Competencies indicate the level of proficiency that students should exhibit after study in classes. All competencies build from strong cognitive, affective, and psychomotor bases.

Limitations

This study is limited to the FACS teachers who teach in Iowa, Nebraska, and Minnesota. Therefore, generalizing to groups other than FACS teachers or to other geographic areas is not advised. The teaching behaviors and teaching techniques may be different according to the subject areas taught or the state educational system where the teaching occurs.

CHAPTER 2. LITERATURE REVIEW

National Standards and Local Control

National standards are important in showing what educators and subject-matter teaching associations think ought to be mastered in their content areas. Standards-based educational reform has significant promise for improving the quality of American public education, and standards are critical to reducing educational inequalities (Murnane, 2000; Nash, 2000). There appear to be three principle reasons advanced for the development of standards: standards provide a common set of expectations, standards serve to clarify expectations, and standards raise expectations for all students.

It is widely agreed that public schools' academic standards need to be raised. However, there have been debates on standardization and centralized control (how to raise standards and who should decide standards) among educators and school administrators. According to Meier (2000, p. 7), six basic assumptions underlie “the current state and national standards-setting and testing programs now off the ground in 49 of 50 states (all but Iowa)”:

- Goals: it is possible and desirable to agree on a single definition of what constitutes a well-educated eighteen-year-old and demand that every school be held to the same definition;
- Authority: the task is best left to experts—educators, political officials, leaders from industry and the major academic disciplines—operating within a system of political checks and balances;
- Assessment: it will be possible to measure and compare individuals and schools across communities—local, state, national, international;

- Enforcement: sanctions need to be standardized that are removed from local self-interested parties, including parents, teachers, and local boards;
- Equity: expert-designed standards, imposed through tests, are the best way to achieve educational equity;
- Effective learning: clear-cut expectations, accompanied by automatic rewards and punishments, will produce greater effort, and effort—whether induced by the desire for rewards, fear of punishment, or shame—is the key to learning.

(pp. 7-9)

Meier stated that standardization has shifted “the locus of authority to outside bodies” and turned “teachers and parents into the local instruments of externally imposed expert judgment.” Centralized authority—educators, political officials, leaders from industry and the major academic disciplines—have been busily suppressing teacher innovation and democratic education. Meier and her advocates believed that teachers were enormously frustrated by implementing the state-mandated standards perpetrated by people who hadn’t been in a real classroom (Chase, 2000). They supported local control and local empowerment. They suggested an alternative model about school reform: schools that were more personal and compelling, where youngsters can keep company with interesting and powerful adults who were in turn in alliance with the students’ families and local institutions.

On the other hand, national standards supporters believed that the standards created outside of an individual school by a state or school district would not necessarily make matters worse (Chase, 2000) and national standards were never imagined to be mandatory, but only to provide guidelines and inspiration for those interested in defining for all students the goals essential to success and for those who cared to look at the standards for guidance in

building state or local standards or refashioning individual school curricula (Nash, 2000). Contrary to Meier's view, they believed that local control decreased both progressive and retrograde education.

Standards-based reform efforts are now making progress in many states and their impact is starting to appear in classrooms around the country. In the 1980s, President Ronald Reagan advocated sharply cutting back on any national assistance for education because he was a strong proponent of local control of government (Jennings, 1998, p. 9). In the 1990s, President George Bush (1991, p. 648) called for a "national crusade" to transform the country's educational system. The central elements in Bush's crusade were national goals, national standards, and a national test to measure progress toward achieving those standards. President Bush was clearly calling for a departure from the country's tradition of local control of schooling in advocating national goals, standards, and tests. President Bill Clinton continued Bush's educational goals, most notably the development of voluntary national curriculum standards and national testing (Chira, 1993). President Clinton (1997) urged every state and school to shape the curriculum to reflect the national standards and to train teachers to lift students up to them. During the congressional debate on Goals 2000, state control over education was reaffirmed under the Constitution. President George W. Bush (Milbank, 2001) proposed the benchmarked state tests in his educational proposal. To ensure the rigor of the state tests, states and districts agreed to submit to a five-year performance agreement and subject to especially rigorous standards of accountability.

By the end of 1996, nearly every state wrote and was beginning to implement clearer academic benchmarks for public schools (Jennings, 1998). Some states, such as Kentucky and California, were trying to build standards consistent with these voluntary

national standards-based systems, and they were taking some care to make sure that their standards were consistent with the voluntary national standards. Other states, such as Vermont, were organizing the standards into clusters (O'Neil, 1995). These developments showed a healthy federalism, with the national government funding the agreements on national standards that were reached by subject-matter specialists, while the states chose their own approaches to using these resources at state or local level. As a result, two educational summits were held with the nation's governors raise calling to education standards in the states and write tests to ensure students met them (Jennings, 1998).

However, the various sets of national standards were not easily melded into a system-wide curriculum, because each group of teachers thought students should know a great deal about their particular content area. There were few federal agencies that would undertake the task of melding and balancing the various national standards to fashion a curriculum that the agency would then mandate the states and local school districts to follow (Jennings, 1995). The standards, therefore, served more as resource documents than as specific curricula or even curricular frameworks. Hence, it seems that setting clear standards and writing tests to measure students' attainment is only the beginning point, teachers must be retrained, and textbooks must be improved (Jennings, 1998, p. 184).

The Connection Between National Standards and Assessment

The development and administration of district and statewide assessments is an outgrowth coinciding with the national standards. Standards will be meaningless if students continue to be tested without regard to them. Therefore, discussion of standards tends to turn into debates about assessment and testing (Ravitch, 1995, p. 11).

Using assessment in the classroom and school to provide the diagnostic information for improving individual students' performance has been common for decades. The role of testing to provide information for accountability is gaining in prominence and importance (Mullis & Owen, 1994). During the 1990s, national and local assessments have been increasingly seen as a major component of education reform. According to Mullis and Owen (1994), the assessment strategies for content or curricular frameworks include item banking, paper-and-pencil assessment (multiple-choice vs. constructed response), beyond paper-and-pencil assessment instruments (performances, portfolio, and interactive technology via computers), and a combination of these approaches. In the United States, national assessments currently are conducted in six curriculum areas: reading, writing, mathematics, science, history, and geography. These assessments are based on national or state level curriculum guidelines, which are developed by the national government and professional organizations. For example, the National Council of Teachers of Mathematics has published mathematics standards and efforts are proceeding in other subjects, including the arts, civics, and English (Mullis & Owen, 1994).

Educational research showed that classroom teachers play an essential role in raising standards and realizing education reform (Mesicek, 1993). If the required assessments are accepted, education programs will be greatly affected. The demand for classroom teaching is becoming complex. Teachers needed to understand a wider range of assessment processes in making their assessment judgments. And the assessment process would benefit from additional training of teachers for more standard approaches.

Many educators believed that assessment can play an important role in systematic educational changes (Wolf, 1992). Wu and Guei (2000) investigated the association between

various forms of assessment and the content areas, and the association between content components and the test results from different classroom assessments. Henke, Chen, and Goldman (1999) studied the characteristics of teachers who used a wide range of teaching practices, including traditional practices and those recommended for standards. Their report indicated that teachers who participated in recent faculty development programs were more likely to use recommended teaching practices than those who did not; teachers were more willing to use innovative methods when they became more familiar and confident with them (Henke et al., 1999).

Classroom assessments have not been examined in depth. Stiggins and Conklin (1992) stated that “Although we were in an outstanding position to construct and administer a high-quality, large-scale testing program in the early 1980s, we were far less able to teach teachers how to address the task demands of the day-to-day measurement of student achievement” (p. 11). A recent national telephone survey of 1,019 public school K-12 teachers conducted in 2000 (Doherty, 2001) revealed that public school teachers supported educational standards and attributed classroom behavior change to educational standards. The survey results also suggested that teachers received only modest training to implement standards. According to this survey, having the tools needed to implement standards such as lesson plans and modules that matched standards, and time demands for covering the standards required materials were the big issues for teachers. Also, from their survey in 10 selected states researchers from University of Wisconsin reported that there might be little overlap between what state assessments tested and what teachers taught (Boser, 2001). They found that students were mainly asked to recall facts and perform other simple procedures, while classroom instruction focused more on solving novel problems or applying skills.

Other studies focused on the national standards and assessment in particular subject areas such as vocational education (Gordon, 2001; Rahn, O'Driscoll, & Hudecki, 1999), agriculture education (Warmbrod, 1993), English, mathematics, science, and social studies (Belden, Russonell, & Stewart, 2001). Their findings also showed that teachers must know appropriate assessment strategies and how to apply this knowledge, and teachers need appropriate tools and resources to implement subject area standards.

National Standards for Family and Consumer Sciences

The mission of family and consumer sciences education is to prepare students for family life, work life, and careers in family and consumer sciences by providing opportunities to develop the knowledge, skills, attitudes, and behaviors needed for a better life (NASAFACS, 1998). Family and consumer sciences educators have been instrumental in establishing national content standards for learners (Stage, 1997). In 1994, family and consumer sciences administrators and educators were involved in refining the teacher standards and posed the challenge also to take charge of creating the content standards. The vision of FACS National Standards state that “Family and consumer sciences education empowers individuals and families across the life span to manage the challenges of living and working in a diverse global society. Our unique focus is on families, work, and their interrelationships” (NASAFACS, 1998, p. 2).

Family and Consumer Sciences National Standards were set for students (National Education Goal Panel, 2000) and related standards were established for teachers (National Board for Professional Teaching Standards, 1997). The FACS National Standards “are based on knowledge and skills needed for home and family life as well as those needed to succeed

in related careers” (National Association of State Administrators of Family and Consumer Sciences [NASAFACS], 1998, p. 5). The FACS National Standards include sets of standards for 16 areas of study that represent the major content areas in family and consumer sciences. These content areas are in two contexts: the consumer and family living context and the occupational context, and they were developed to accommodate content, process, systems of action, and academics. As a cohesive whole, these areas of study better represent the field and its career pathways, and they serve to reflect vision and mission (Hetherly, 1999). Specifically, three groups of standards are delineated: comprehensive standards, content standards, and competencies. Hence, they are structured in a three-level, nested format. Each set of standards includes one comprehensive standard and several content standards. A total of 86 content standards comprise the 16 areas of study. Each area of study is designed with one comprehensive standard. The areas of consumer and family living context “demonstrate respectful and caring relationships in family, workplace, and community” (NASAFACS, 1998, p. 195). The occupational context areas reflect a strong focus on career preparation. These standards are written as exit standards, with emphasis on higher-level cognitive and psychomotor domains, and they are defined at the state or local level (Fox, 2000).

FACS National Standards identify the education processes students use to apply knowledge, solve real-life problems, and reach valued ends while maintaining dignity and respect for themselves and others (Ashby, Conkin, & O’Connor, 2000; Costa & Liebmann, 1997; Marzano et al., 1988). To achieve these standards, it becomes important to frame teaching units around practical problems (Ashby, Conkin, & O’Connor, 2000). Also, assessment of process is needed, which is beyond traditional paper-and-pencil tests (Wiggins

& McTighe, 1998). In addition, the FACS National Standards provide a useful framework for developing a standards-related component of a research agenda for family and consumer sciences education and provide a guide for looking at the interaction of program content and process to learn how outcomes are achieved, and why (Bobbitt & Youatt, 2000).

FACS teachers' adoption of FACS National Standards is the central element of FACS educational reform. Purcell (2001) stated that the FACS National Standards provided validity, consistency, and improved quality of an existing program; a substantial documentation that can be used by administrators to support decisions on resource allocation within the school; assurance that those students within these programs have a preparation that meets nationally accepted content standards; and a mechanism to enhance credibility of what family and consumer sciences educators teach. (p. 57)

All FACS programs across the country should be required to meet the National Standards (Purcell, 2001). Historically, family and consumer sciences have focused on teaching basic living skills (East, 1980). In response to changing social needs, women's careers were not only cooking, sewing, taking care of children, household or house keeping. Correspondingly, FACS have endured considerable changes (Erwin et al., 1996). Much more career preparation content was included in the FACS National Standards. Although the professionals and FACS administrators thought these career-emphasized contexts were important and should be taught in secondary school, there were not emphasized in the FACS classroom as expected. Smith and Hall (2001) studied the perceptions of parents, professionals, and vocational administrators in Georgia regarding the National Standards for FACS curriculum. The participants were surveyed about which standards in the consumer and family context areas should be taught in the FACS program and whether they believed

that the standards were being taught in FACS programs in Georgia. They found all three groups of participants generally supported the inclusion of the standards for all seven standards in consumer and family living context. However, a lower percentage of participants responded in the affirmative that the seven curricular areas were being taught in the curriculum, and a large number of participants were uncertain or did not respond to this question.

From reviewing the history of educational reform and national standards, it appears that any standard system does not easily transfer into direct educational benefit. It is a long implementation process to improve the teaching and learning effects. It is imperative therefore to consider the educational changes for FACS resulting from adopting this educational innovation—FACS National Standards. Rogers' (1983, 1995) diffusion theory has developed over the years as a framework for examining and understanding the integration of innovations in a system. This theory may be applied into FACS teachers' adoption of FACS National Standards.

Theory of Diffusion Research

History of diffusion research

According to Rogers (1995), an innovation is “an idea, practice, or object that is perceived as new by an individual or other unit of adoption.” Faseyitan, Libii, and Hirschbuhl (1996) indicated that innovations are not always diffused and adopted rapidly even when the innovation has obvious advantages. Rogers' theory of the diffusion of innovations was based on a meta-analysis of 2,585 diffusion publications from eleven disciplines (see Table 2.1). It is sufficient to apply this theory to any of these disciplines

(Rogers, 1995, p. 42). From Rogers' (1995) theory of the diffusion of innovations, the process of adoption of innovations was used in the current study.

Diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system. Diffusion is a special type of communication concerned with the spread of messages that are perceived as new ideas. The main elements in the diffusion of new ideas are: (1) an innovation, (2) that is communicated through certain channels, (3) over time, (4) among the members of a social system.

The innovation-decision process is the mental process through which an individual (or other decision-making unit) passes (1) from first knowledge of an innovation, (2) to forming an attitude toward the innovation, (3) to a decision to adopt or reject, (4) to implementation of the new idea, and (5) to confirmation of this decision. This process consists of a series of actions and choices over time through which an individual (or an organization) evaluates a new idea and decides whether or not to incorporate the innovation into ongoing practice (Rogers, 1995).

Research on the diffusion of innovations started in a series of independent intellectual enclaves. In terms of educational research, the spread of new teaching ideas was studied among school personnel while sociologists investigated the diffusion of agricultural innovations to farmers (see Table 2.1). Many researchers used Rogers (1983, 1995) diffusion theory in adoption of innovations in the field of educational technology (Casey, 1996; Hanson, 1998).

Table 2.1. Comparison of selected diffusion research traditions.

Diffusion Research Tradition	Typical Innovation Studies	Method of Data Gathering and Analysis	Major Types of Findings
Rural sociology	Agriculture ideas (weed sprays, hybrid seed, fertilizers)	Survey interviews and statistical analysis	S-shaped adopter distribution; characteristics of adopter categories; perceived attributes of innovators and their rate of adoption; communication channels by stages in the innovation-decision process; characteristics of opinion leaders.
Education	Teaching/learning innovations (kindergartens, modern math, programmed instruction, team teaching)	Mailed questionnaires, survey interviews, and statistical analysis	S-shaped adopter distribution; characteristics of adopter categories.
Communication	News events, Technological innovations	Survey interviews and statistical analysis	Communication channels by stages in the innovation-decision process; characteristics of adopter categories, and of opinion leaders; diffusion networks.

Rogers noted that despite the distinctiveness of these approaches to diffusion research, similar results were found that the diffusion of an innovation followed an S-shaped curve over time and that innovators had higher socioeconomic status than later adopters. Although education has an important diffusion research tradition in terms of the number of studies completed, it is less important in terms of this contribution to the theoretical understanding of the diffusion of innovations. Moreover, diffusion of innovations in educational organizations is more complex than that of individual innovativeness (Rogers, 1995). Unlike individual innovativeness that is influenced by personal knowledge, attitudes, willingness, and persuasion, organizational innovativeness is influenced by size, individual leadership characteristics, structure of the organization, and external characteristics of organization (Rogers, 1995).

Adoption categories

Adopter categories are classified by the time element in the diffusion process. The criterion for adopter categorization is innovativeness, the degree to which an individual or other unit of adoption is relatively earlier in adopting new ideas than other members of the social system. The adopter categories are innovator, early adopter, early majority, late majority, and non-adopter (laggards).

A voluminous research literature has accumulated about variables related to innovativeness. Results of diffusion research can be grouped in a series of generalizations under three headings: (1) socioeconomic status, (2) personality values, and (3) communication behavior. Rogers (1995) compared characteristics of adopter categories as the following:

1. Socioeconomic characteristics.

- a. Early adopters are not different from later adopters in age.
- b. Earlier adopters have more years of formal education than later adopters.
- c. Earlier adopters are more likely to be literate than are later adopters.
- d. Earlier adopters have higher social status than later adopters.
- e. Earlier adopters have a greater degree of upward social mobility than later adopters.
- f. Earlier adopters have larger units (farms, schools, companies, and so on) than later adopters.

2. Personal variables.

- a. Earlier adopters have greater empathy than later adopters.
- b. Earlier adopters may be less dogmatic than later adopters.
- c. Earlier adopters have a greater ability to deal with abstractions than do later adopters.
- d. Earlier adopters have greater rationality than later adopters.
- e. Earlier adopters have greater intelligence than later adopters.
- f. Earlier adopters have a more favorable attitude toward change than later adopters.
- g. Earlier adopters are better able to cope with uncertainty and risk than later adopters.
- h. Earlier adopters have a more favorable attitude toward science than later adopters.
- i. Earlier adopters are less fatalistic than later adopters.
- j. Earlier adopters have higher aspirations (for formal education, occupations,

and so on) than later adopters.

3. Communication behavior.

- a. Earlier adopters have more social participation than later adopters.
- b. Earlier adopters are more highly interconnected through interpersonal networks in their social system than later adopters.
- c. Earlier adopters are more cosmopolite than later adopters.
- d. Earlier adopters have more change agent contact than later adopters.
- e. Earlier adopters have greater exposure to mass media communication channels than later adopters.
- f. Earlier adopters have greater exposure to interpersonal communication channels than later adopters.
- g. Earlier adopters seek information about innovations more actively than later adopters.
- h. Earlier adopters have greater knowledge of innovations than later adopters.
- i. Earlier adopters have a higher degree of opinion leadership than later adopters.

(pp. 269-275)

In terms of FACS teachers, the following adopters' characteristics may be critical to integration FACS National Standards into classroom socioeconomic characteristics such as age, education, social status, and units; personal characteristics such as attitude toward change, science, and aspiration; and communication behaviors such as interpersonal network and leadership.

Early adopters

Early adopters are a more integrated part of the local social system than are innovators. They have the greatest degree of opinion leadership in most systems. The early adopter is considered by many as “the individual to check with” before using a new idea. According to Rogers (1995), early adopters decrease uncertainty about a new idea by adopting it, and then conveying a subjective evaluation of the innovation to near-peers through interpersonal networks. Because early adopters are not too far ahead of the average individual in innovativeness, they serve as a role model for many other members of a social system. This adopter category is generally sought for speeding the diffusion process (p. 167).

Late adopters (Laggards)

Late adopters are the last in a social system to adopt an innovation. They tend to be suspicious of innovations and change agents. Their innovation-decision process is relatively lengthy, with adoption and use lagging far behind awareness-knowledge of a new idea. Resistance to innovations on the part of late adopters may be entirely rational from the laggards’ viewpoint, as their resources are limited and they must be certain that a new idea will not fail before they can adopt (pp. 265-266).

Summary

Curriculum standards drive what students learn in the classroom. Subject-matter benchmarks measure students' academic achievement toward these standards. It is widely agreed that public schools' academic standards need to be raised. However, there is national debate over how to implement such standards—how prescriptive they should be, and whether they should be national or local, voluntary or mandated. The assessment function is a crucial

accompaniment to national standards. Classroom teachers need to understand a wider range of assessment processes and they need specific training for applying assessment strategies that complement standards.

Although studies considering the adoption of national standards to improve student's learning have been conducted in many academic areas, very little has been done with FACS standards. Assessment of standards in the FACS classroom has not been explored, either. Rogers model of diffusion of innovations has been applied in several educational fields, and it seems to hold promise for examining FACS National Standards' early adopters' characteristics.

CHAPTER 3. METHODOLOGY

The primary purpose of this study was to explore the contribution of the 1998 FACS National Standards to assessment practices of FACS teachers, and to investigate the differences between FACS teachers who are adopters and those who are non-adopters of the FACS National Standards.

The specific objectives of this study were to

1. Identify the perception of FACS teachers for using FACS National Standards in the classroom.
2. Describe current assessment practices of FACS teachers.
3. Explore the relationship of assessment practices to adoption of National Standards for curriculum.
4. Identify characteristics of FACS teachers who are early adopters of National Standards.

This chapter described the methodology followed for this study, including research design, population and sample, instrument development, data collection packet and procedure, and data analysis.

Research Design

An exploratory study was conducted to meet the objectives of the study. Descriptive statistics including frequencies, percentages, means, and standard deviations were calculated for individual items on the instrument. Other statistical analyses (F-test and Chi-square test) were used to compare adopter groups by means and proportions.

Population and Sample

The population consisted of middle school and high school family and consumer sciences (FACS) teachers in Iowa, Nebraska, and Minnesota. The teachers' mailing lists were obtained from various resources (see Table 3.1). A sample of 60 teachers was selected from each state using the random number table. In March, 2001, all 180 FACS teachers were mailed the survey and were asked to respond by mail. Twenty-two percent of the teachers responded to the initial mailing. A follow-up letter was sent beginning one week before the expiration of the response due date. The final response rate was 30%.

Table 3.1 Distribution of Population and Sample.

State	Resource	Population Number	Sample Number
Iowa	Iowa Department of Education, Bureau of Technical & Vocational Education	482	60
Minnesota	Minnesota Department of Administration, State Mailing List Service	237	60
Nebraska	Nebraska Department of Education website, http://164.119.104.86:591/Locator/FMPro .	476	60

Instrument Development

Instrument development procedure

The survey instrument was reviewed extensively throughout its development by three university experts in the areas of national standards, assessments, and research design. The experts were asked to evaluate the instrument for its fit with the research objectives, readability, concepts, formatting, and layout. Their comments were noted and appropriate revisions were made.

Due to the length of the instrument (104 items), revisions were made to shorten it and also better control for response set bias by the teachers. When positive statements alone are used in an instrument, there is the possibility that the respondents will develop a response bias that results in a direction more positive than is the actual case. When the instrument is lengthy, there is the additional tendency for the respondents to become fatigued and respond in a pattern. To avoid a response set on the part of the family and consumer sciences teachers surveyed, a six-point, Likert-type range was used: 1-strongly disagree, 2-moderately disagree, 3-mildly disagree, 4-mildly agree, 5-moderately agree, 6-strongly agree. This forms an ordered array from strong disagreement to strong agreement. A neutral midpoint was not added to the response scale because it was too ambiguous and represented the absence of belief or opinion. Items of this sort may be poorly suited to the research goal because we are more often interested in the presence of some phenomenon rather than its absence (Devellis, 1991). Selecting six response points rather than a lesser number allowed the teachers greater freedom of response, provided them an opportunity to consider their responses carefully, and increased the reliability of their responses (Nunnally, 1970). Additional revisions included rewriting the items for readability, parallelism in grammar, and measurement of a single concept per item.

A second version of the instrument was drafted. Next, in a pilot test, the instrument was mailed to 10 family and consumer sciences teachers in Iowa. They were asked to answer and evaluate the instrument for its readability, concepts, formatting, and layout. There was a 40% response rate (n=4) by the teachers to the pilot test. The teachers' comments were noted and revisions were made on the instrument. This version was reviewed by experts in the areas of evaluation and research design. The final version of the

instrument was formatted as a booklet and printed (see Appendix A). Meanwhile, an approval of using 1998 FACS National Standards logo as the cover of the survey booklet was obtained by email (see Appendix B).

Instrument constructs

A six-point, Likert-type range was used in the first three sections. The response categories were 1-strongly disagree, 2-moderately disagree, 3-mildly disagree, 4-mildly agree, 5-moderately agree, 6-strongly agree.

The first section of the instrument surveyed the teachers on their personal perception for general national standards (10 items). The second section of the instrument listed statements regarding perception for using FACS National Standards (11 items). The third section of the instrument listed statements regarding FACS teachers' perception on classroom assessment strategies (12 items). The fourth section listed statements regarding FACS teachers' classroom assessment practices, grading procedures, and curriculum revision frequency. Response requested in the fourth section was Yes or No. In the fifth section, items were written regarding FACS teachers' demographic information. The sixth section listed open-ended questions asking about other state level standards they were using and what they thought can bring their students up to standards.

In terms of the six-point Likert scale, *1-strongly disagree* was the most negative attitude and *6-strongly agree* was the most positive. Given the fact that the mean score for each question was a continuous number, the teachers' attitude toward each item was interpreted by the following criteria:

1-1.5 represents strongly disagree;

1.5-2.5 represents moderately disagree;

- 2.5-3.5 represents mildly disagree;
- 3.5-4.5 represents mildly agree;
- 4.5-5.5 represents moderately agree;
- 5.5-6 represents strongly agree.

A mean score around 3.5 is defined as neutral.

Based on Rogers' (1995) diffusion theory of innovation, the innovation effect variables such as age, education, and attitude toward change were integrated into the items in each section. In addition, several items were modified from Bartz and Stinger's (1996) article *The programmatic implication of foreign language standards*. The adoption status was identified by whether the participant was using 1998 FACS National Standards or not. The early adopter status was identified by the time when the teacher started using National Standards in the classroom.

Data Collection Packet and Procedures

The Institutional Review Board (IRB) at Iowa State University reviewed the proposed study design and instrument (see Appendix C). They found no harm was employed to the subjects and confidentiality of the data was assured. In addition, the researcher completed the training course on the Protection of Human Subjects and received the Certificate of Completion from the National Institutes of Health (NIH) Office of Human Subjects Research. A cover letter was written on the department letterhead that explained the purposes of the study to the participants, and helped them understand the importance of their role and the usefulness of their responses. Each letter was personally addressed and hand signed by the researchers (see Appendix A). A code number was used to identify each

instrument and answer sheet. The participants were assured of confidentiality of their responses. An incentive of a \$20 value gift was promised to offer one of the participating teachers in the cover letter. The instrument was a 4-inch x 5.5-inch booklet (see Appendix A). The cover letter, booklet, answer sheets, and a postage-paid return envelope were mailed to each participant. Participants were asked to respond on the answer sheets in the survey booklet and to mail them back in the postage-paid return envelope.

The packets were mailed to 180 teachers in March 2001 with a 3-week response time requested. Twenty-two percent of the teachers responded to the initial mailing. Follow-up letters were sent beginning one week before the expiration of the response due date to non-respondents (see Appendix A). A second packet was mailed to five teachers who indicated they had misplaced their original packet. The final response rate was 30%, with 54 teachers responding.

Data Analysis

The computer software program SPSS10.0 (<http://www.spss.com/>) was used by the researcher to manage and analyze the data. Data were cleaned, coded, entered, organized and stored using appropriate data management protocol. Procedures were selected to yield descriptive statistics and to test hypotheses. The descriptive statistics computed included frequencies, percentages, means, and standard deviations. The statistical treatments selected to test hypotheses included the F-test and the Chi-square test. In the instance of missing data, no response was coded. Missing data were maintained as system missing.

CHAPTER 4. RESULTS AND DISCUSSION

The primary purpose of this study was to explore the contribution of 1998 FACS National Standards to assessment practices of FACS teachers. The second purpose was to investigate the differences between FACS teachers who are adopters and those who are non-adopters of the National Standards.

The specific objectives of this study were to

1. Identify the perceptions of FACS teachers for using 1998 FACS National Standards in their classroom.
2. Describe current assessment practices of FACS teachers.
3. Explore the relationship of assessment practices to adoption of national standards for curriculum.
4. Identify characteristics of FACS teachers who are early adopters.

The findings of this study are discussed in this chapter. Data analyses consisted of the calculation of descriptive statistics, and the use of the F-test and the Chi-square test.

The population consisted of secondary school family and consumer sciences teachers in Iowa, Minnesota, and Nebraska. The invited sample were 180 teachers randomly selected from teacher lists. In March 2001, 180 FACS teachers were mailed the survey and were asked to respond by mail. Twenty-two percent of the teachers responded to the initial mailing. Follow-up letters were mailed beginning one week before the expiration of the response due date. The final response rate was 30%, with 54 teachers responding.

Sample Demographics

The demographic data is presented in Table 4.1. The teachers in the responding sample had an age range from under 25 to 64 years old. Over half of the teachers (53.7%) were in the 45-54 years old range, with another twelve teachers (20.4%) in the 35-44 years old range. One teacher was under 25.

Most teachers (92.6%) who responded were female. Four teachers were male. Three of them came from Iowa, and one from Nebraska. Given the fact that the majority of FACS teachers are females, the sampling procedure may have over represented the male teachers. Over half of the teachers (55.6%) responding came from Iowa, while Minnesota (18.5%) and Nebraska (25.9%) did not have a high response rate.

Thirty-one teachers (57.4%) responded that their highest degree was a bachelor's degree. Twenty-two teachers (40.7%) reported that they had earned a master's degree. One teacher had earned a doctorate degree. Fifty teachers (92.5%) had earned licensure specified in the family and consumer sciences area. Three of the four teachers without FACS teaching endorsement came from Iowa, and the other one from Minnesota.

Most teachers (98.1%) reported that they are taking or have taken graduate courses. Forty-four took FACS content graduate courses, 39 took curriculum courses, and 30 took assessment courses. Other graduate courses reported by the teachers were special needs education, technology and computers, health education, child development, interdisciplinary, young adult psychology, gifted and talented education, and administration. A few teachers did not respond to this set of questions.

Twenty-three teachers (42.6%) taught at both the middle school and high school level. Twenty-two (40.7%) taught only high school, and nine (16.7%) taught only middle

school. Nearly one-third of the teachers responding (n=17, 32.1%) had more than 25 years teaching experience. Five reported 1-5 years teaching experience. This result suggested this study included new FACS teachers. Over half of the teachers (64.2%) reported that they often attended FACS professional conferences (see Table 4.1).

Table 4.1 FACS Teacher Characteristics.

Variable	Frequency	Valid Percent	
Age in years			
<25	1	1.85	
25-34	3	5.56	
35-44	12	22.22	
45-54	29	53.70	
55-64	9	16.67	
Gender			
Female	50	92.59	
Male	4	7.41	
State			
IA	30	55.56	
MN	10	18.52	
NE	14	25.93	
Highest Degree			
Bachelor	31	57.41	
Master	22	40.74	
Doctorate	1	1.85	
Missing	6		
Graduate Courses			
No	1	1.85	
Yes	53	98.15	
FACS content	Yes	39	82.98
	No	8	17.02
	Missing	6	
Curriculum	Yes	39	82.98

	No	8	17.02
	Missing	6	
Assessment	Yes	30	63.83
	No	17	36.17
	Missing	6	
Others	Yes	33	76.74
	No	10	23.26
	Missing	10	
Teaching Subject Endorsement			
	No	3	5.66
	Yes	50	94.33
	Missing	1	
School Level			
	High School	22	40.74
	Middle School	9	16.67
	Both	23	42.59
Teaching Experience, in years			
	1—5	5	9.43
	6—10	3	5.66
	11—15	6	11.32
	16—20	10	18.87
	21—25	12	22.64
	25+	17	32.08
	Missing	1	
FACS Professional Conference Attendance			
	No	19	35.85
	Yes	34	64.15
	Missing	1	

Perceptions for Using Standards and Classroom Assessment Strategies

The family and consumer sciences teachers were surveyed to identify their perceptions for national standards, using FACS National Standards, and classroom

assessment strategies. The teachers were asked to respond on a 6-point scale (1-strongly disagree, 2-moderately disagree, 3-mildly disagree, 4-mildly agree, 5-moderately agree, 6-strongly agree).

National standards in general

In this part, the teachers were asked to answer 10 questions on their perceptions for general national standards. Overall, the teachers surveyed were positive (see Table 4.2). A few items were described below.

Item 1 received the highest mean score ($M=4.69$) in this section. This suggested that the teachers agreed that *national standards are important*. Item 4, *national standards make it possible to coordinate the various parts of the educational system to promote students' learning*, received an agreement of mean 4.47. Item 9, *the standards help teachers reflect on their own practice and become thinkers of their work, not just doers*, received a mean of 4.45.

Item 10, *standards help students be creative*, received the lowest mean score of 3.24. The teachers' attitude toward Item 5, *standards provide consumer protection* ($M=3.76$), and Item 6, *standards motivate students to have a higher aspiration on their school work* ($M=3.75$), seemed to be neutral (see Table 4.2).

The results implied that FACS teachers perceive national standards to be important for curriculum development and teaching. However, they hesitated to agree that general national standards are sufficient to enhance students' learning.

Table 4.2 Teachers' perceptions for national standards.

Statement	Item Number	N	M ^a	SD
• I feel that national standards are important.	1	53	4.69	.88
• National standards make it possible to coordinate the various parts of the educational system to promote students' learning.	4	52	4.47	1.05
• The standards help teachers reflect on their own practice and become thinkers of their work, not just doers.	9	52	4.45	1.22
• National standards should be used as a basis for curriculum development in the school.	2	53	4.33	1.10
• National standards should be used for assessment construction.	3	53	4.27	.93
• Standards can encourage improvement of collaboration among teachers.	8	52	4.18	1.16
• Our school pays attention to national standards for its curriculum development and planning.	7	51	4.08	1.28
• Standards provide consumer protection by supplying accurate information to students.	5	52	3.76	1.27
• Standards can motivate students to have higher aspirations in their school work.	6	52	3.75	1.45
• National standards help students be creative in their schoolwork.	10	52	3.24	1.16

^a The scale used is: 1-strongly disagree, 2-moderately disagree, 3-mildly disagree, 4-mildly agree, 5-moderately agree, 6-strongly agree.

Using FACS National Standards

Teachers were surveyed on 11 items for their perceptions of using the 1998 FACS National Standards (see Table 4.3). *The local community's values have a bigger impact on what FACS teachers teach than National Standards*, Item 11, had the highest mean of 4.29. The teachers also showed positive attitude to Item 6, *FACS National Standards are manageable in my program* (M=4.06), Item 1, *my curriculum is based on FACS National*

Standards (M=4.04), and Item 7, *I use FACS National Standards as a framework to report to parents*, received the lowest mean score (M=2.80). Item 8, *when I am developing my assessment plan, I refer to FACS National Standards* (M=3.14), Item 9, *middle and high school textbooks and materials presently on the market are adequate to help bring students up to "standards"* (M=3.29), and Item 10, *Changing my curriculum to meet national standards would be a major change that diminishes my control in the classroom* (M=3.16), also turned slightly negative.

The teachers were neutral on other items in this section. They accepted with hesitation that the FACS National Standards are desirable to improve students' thinking (M=3.69), communication (M=3.65), management (M=3.61), and leadership (M=3.55) abilities. Furthermore, it was not usual for the teachers to use FACS National Standards as a reference for their assessment tools or reports for the parents (see Table 4.3).

Assessment strategies

In this part, teachers were surveyed on 12 items for their perceptions for using FACS classroom assessment strategies. In general, the responses were positive, except Item 7, *I like to use instrument-banks or test-banks for testing*, which received the lowest mean of 2.80. Item 8, *I use a variety of assessments in my classroom* (M=5.57), received the highest mean. Item 12, *I like to put myself in the students' situation before I choose test instrument* (M=5.06), received the second highest mean. The teachers moderately agreed that they would like to use assessment strategies that are *not expensive* (M=4.87), *easy to duplicate* (M=4.60), and *easy to locate* (M=4.52). Also, they moderately agreed that they *frequently adjusted the test items for the same course* (M=4.77), and *used the test results to adapt their teaching* (M=4.75). They mildly agreed that they would like to adopt assessment strategies

that were *easy to grade* ($M=4.47$), that *their colleagues were using* ($M=4.23$), and that the *State Department of Education recommended* ($M=3.92$) (see Table 4.4).

Table 4.3 Teachers' perceptions for using FACS National Standards.

Statement	Item Number	<i>N</i>	<i>M</i> ^a	<i>SD</i>
• The local community's values have a bigger impact on what FACS teachers teach than national standards.	11	52	4.29	1.35
• FACS National Standards are manageable in my program.	6	52	4.06	1.39
• My curriculum is based on 1998 FACS National Standards.	1	50	4.04	1.46
• FACS National Standards are desirable to improve students' thinking ability.	2	52	3.69	1.29
• FACS National Standards are desirable to improve students' communication ability.	4	52	3.65	1.28
• FACS National Standards are desirable to improve students' management ability.	3	52	3.61	1.27
• FACS National Standards are desirable to improve students' leadership ability.	5	52	3.55	1.27
• Middle and high school textbooks and materials presently on the market are adequate to help bring students up to "standards".	9	49	3.29	1.30
• Changing my curriculum to meet national standards would be a major change that diminishes my control in the classroom.	10	52	3.16	1.55
• When I am developing my assessment plan, I refer to FACS National Standards.	8	52	3.14	1.65
• I use FACS National Standards as a framework to report to parents.	7	51	2.80	1.29

^aThe scale used is: 1-strongly disagree, 2-moderately disagree, 3-mildly disagree, 4-mildly agree, 5-moderately agree, 6-strongly agree.

Table 4.4 Teachers' perceptions for classroom assessment strategies.

Statement	Item Number	<i>N</i>	<i>M^a</i>	<i>SD</i>
• I like to use a variety of assessment tools in the classroom.	8	54	5.57	.64
• I like to put myself in the student's situation, before I develop or select assessment tools.	12	54	5.06	.84
• I use assessment results to evaluate my curriculum.	11	54	4.92	.83
• I adopt assessment strategies that do not cost too much.	4	53	4.87	1.14
• I frequently adjust the test items for the same course.	9	54	4.77	1.30
• I use assessment results to provide information for adapting my teaching.	10	54	4.75	.85
• I use assessment strategies that are easy to duplicate.	2	53	4.60	1.09
• I use assessment strategies that are easy to locate.	1	53	4.52	1.16
• I adopt assessment strategies that are easy to grade.	3	53	4.47	1.07
• I adopt assessment strategies that my colleagues are using.	6	53	4.23	1.18
• I use assessment strategies that are suggested by the State Department of Education.	5	53	3.92	1.48
• I like to use instrument-banks or test-banks for testing.	7	54	2.91	1.55

^a The scale used is: 1-strongly disagree, 2-moderately disagree, 3-mildly disagree, 4-mildly agree, 5-moderately agree, 6-strongly agree.

Comparison Between Adopters and Non-adopters

Adoption rate and reason for not using FACS National Standards

Teachers were asked to respond to the following questions, *are you using 1998 FACS National Standards in your classroom*, and *what year did you integrate 1998 FACS National Standards into your classroom*. These two questions were used to identify FACS National Standards adoption categories by Rogers' diffusion theory (1995).

Iowa had the highest adoption rate (73.3%) among all three states, while Minnesota had the lowest adoption rate (10%), and Nebraska was between with an adoption rate of 57.1% (see Figure 4.1 and Table 4.5).

The reasons why they were not using 1998 FACS National Standards mentioned by non-adopters varied among states. The response rate for this open-ended question was 95.2%, and only one non-adopter did not reply to this question. According to these teachers' answers, state and local standards were the main reason. Time was the second most often given response.

For Iowa teachers, the major reason was Iowa had its own benchmarks and competencies, although they were cross-referenced to 1998 National Standards. A possible concern here was that some Iowa teachers may have responded as adopters because they thought the benchmarks they were using were based on National Standards, while some other Iowa teachers who were using locally developed benchmarks may have responded as non-adopters.

Table 4.5 Are you using 1998 FACS National Standards?

State		Frequency	Percent
IA (n=30)	No	8	26.67
	Yes	22	73.63
MN (n=10)	No	9	90.00
	Yes	1	10.00
NE (n=14)	No	6	42.86
	Yes	8	57.14

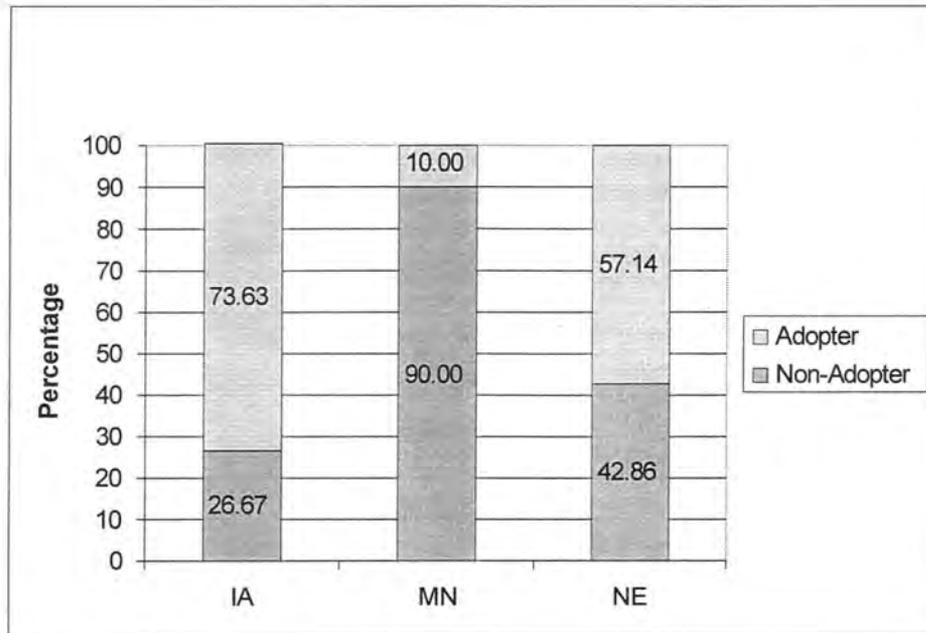


Figure 4.1 Are you using 1998 FACS National Standards?

For Minnesota teachers, most answered that they did not use national standards because they were not aware of them. They were using Minnesota state standards. Others thought FACS National Standards were cumbersome and a waste of time.

Nebraska teachers indicated that they were using Nebraska state essential learning documents. One teacher mentioned that very small classes and low budget were the reasons (see Table 4.6).

Further exploration suggested that there was a trend in adopting FACS National Standards (see Figure 4.2). Basically, there were two types of reasons why teachers were not using FACS National Standards: they were not aware or they were aware but choose not to use. For the second type, three layers were identified based on whether the teachers made the judgment on National Standards. First were those who did not use National Standards because the standards were not required by local school board or state department. These teachers did not make a judgment on National Standards itself. Second were those who considered using the National Standards but decided against them. These teachers showed a negative attitude toward using National Standards. Third were potential adopters who were not using National Standards as their main teaching standards right now but they were not opposed to using National Standards and might use them in the future.

Table 4.6 Reasons for not using FACS National Standards.

State	Reason	Frequency ^a
IA (n=8)	• As a basis for forming our own standards.	3
	• Use them as a reference with our state standards.	1
	• Local school board has not requested to adopt standards.	1
MN (n=9)	• I was not aware of them.	3
	• They have not been mailed to me.	2
	• Cumbersome. Have my own methods developed through the year. I am very independent.	1
	• It is a huge waste of everyone's time.	1
	• Use state standards.	1
	• No time.	1
	• I will use in future.	1
NE (n=6)	• We use the Nebraska essential learning document. I was not aware of national standards.	2
	• I don't have document, time to read, understand and use it. Overloaded.	1
	• Very small classes, and low budget.	1

^a Total for each state may exceed number of respondents because more than one reason could be offered.

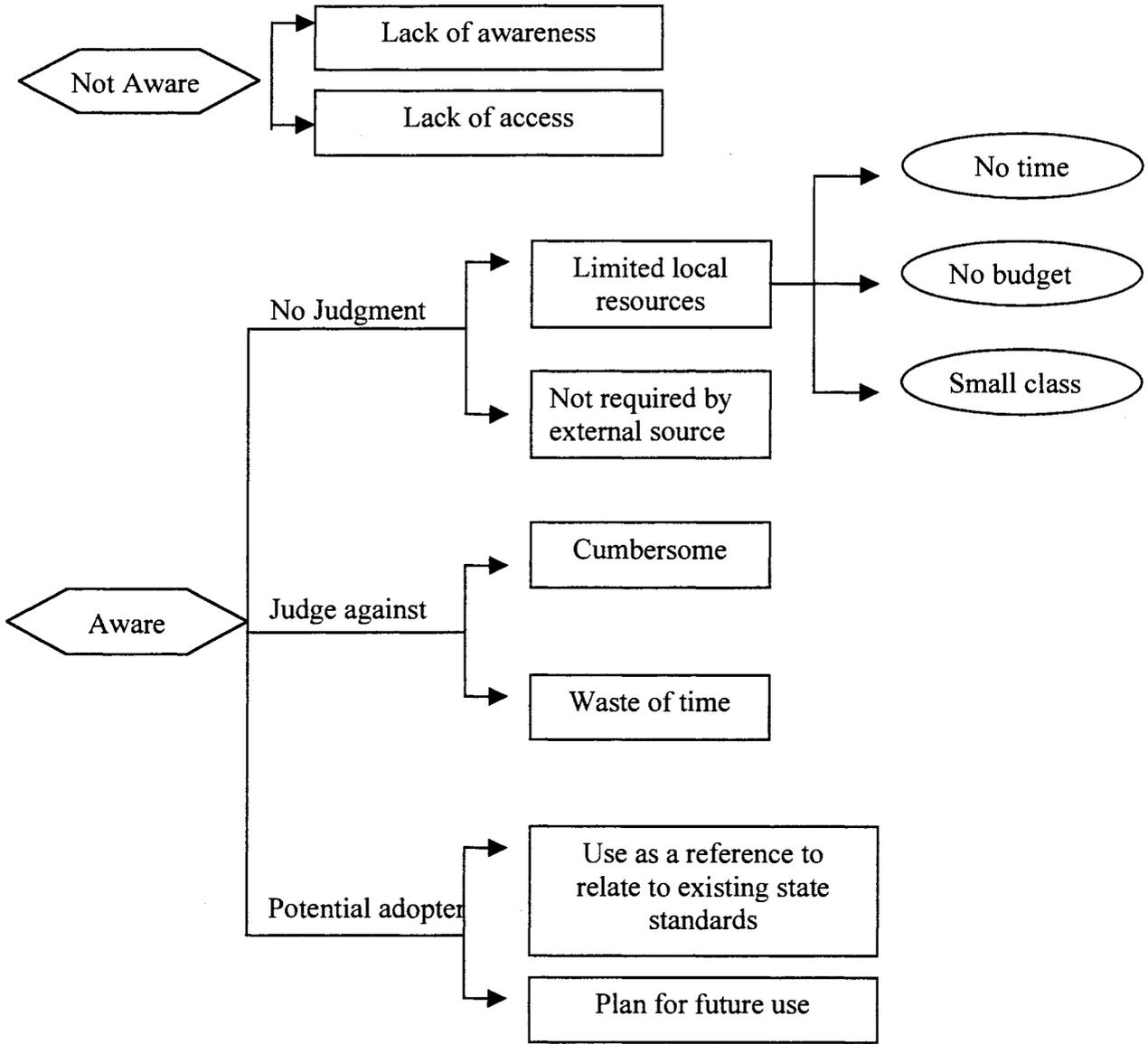


Figure 4.2 Reasons for not using FACS National Standards.

Adoption categories

Among the teachers who are using 1998 FACS National Standards in their classrooms, 9 of them integrated it in 1998, 15 of them in 1999, 7 in 2000, and 1 in 2001 (see Table 4.6). According to Rogers' (1995) diffusion theory, we can classify FACS National Standards adopters into three categories by the time they integrated standards into their curriculum: innovator, early adopter, and laggard. We define the teachers who integrated FACS National Standards in 1998 as innovators, teachers who are using it now as early adopters, and the non-adopters as laggards. Due to the low response rate in Minnesota and Nebraska, these results might be biased.

Table 4.7 Teachers' Integration of FACS National Standards by Adoption Category and State.

State	Adoption Category	Year	Frequency	Valid Percent
IA	Innovator	1998	6	20.69
				58.62
	Early adopter	1999	11	
		2000	5	
		2001	1	
Laggard	(non-adopter)	6	20.69	
Missing		1		
MN	Early adopter	1999	1	10.00
	Laggard	(non-adopter)	9	90.00
NE	Innovator	1998	3	23.08
				38.46
	Early adopter	1999	3	
		2000	2	
Laggard	(non-adopter)	5	38.46	
Missing		1		

Adoption rates for comprehensive standards

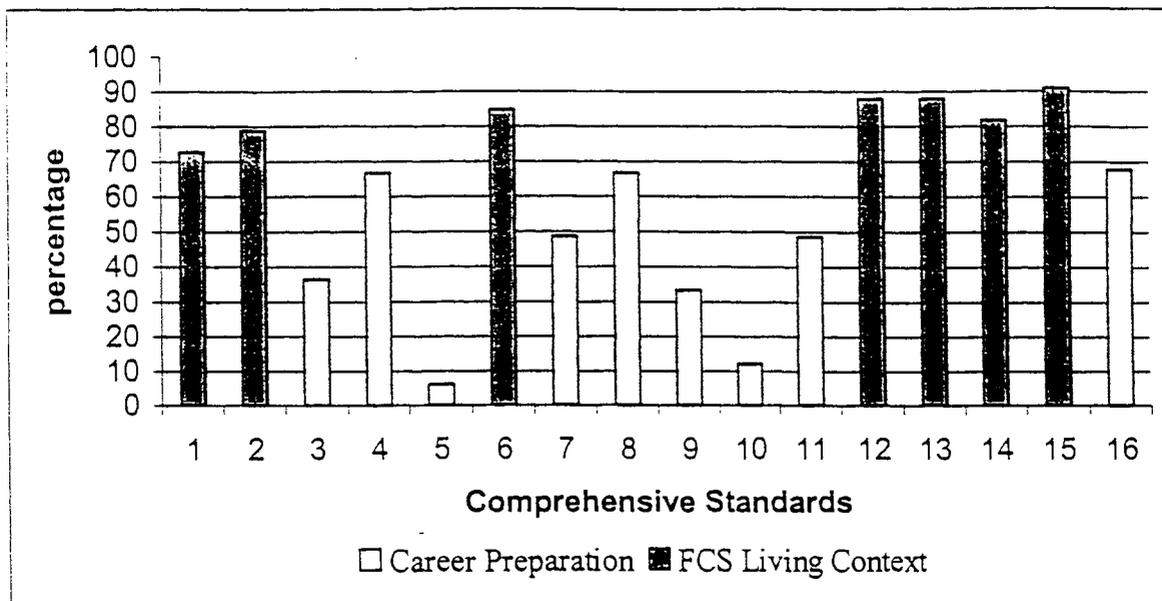
Teachers who responded that they were using 1998 FACS National Standards in their classroom were asked to identify the standards (from 1 to 16) they chose to use. More than 65% of teachers responded that they were using standards 1- Career, community, and family connections, 2- Management practices related to consumer and family resources, 4- Careers in early childhood, education, and services, 6- Significance of family and its impact on individuals and society, 8- Careers in food production and services, 12- Human growth and development, 13- Relationships in family, workplace, and community, 14- Nutrition and wellness practices, 15- Parenting roles and responsibilities, and 16- Careers in textiles and apparel. Specifically, standard 15 received the highest rate (more than 90%). Standards 6, 12, and 13 all had high adoption rates (more than 80%). However, standards 3- Careers in consumer services, 5- Careers in facilities management and maintenance, 9- Careers in food science, dietetics, and nutrition, and 10- Careers in hospitality, tourism, and recreation received relatively low adoption rates (less than 40%), compared to the other standards. Especially, standard 5-Careers in facilities management and maintenance had the lowest adoption rate (less than 10%). Standard 10-Careers in hospitality, tourism, and recreation had a low adoption rate at nearly 10% (see Figure 4.3).

These results implied that FACS National Standards adopters' curriculum was based on National Standards, but did not cover all standards identified. Among all the 16 comprehensive standards, nine of them were specifically focused on career preparation, and the other seven were focused within the consumer and family living context and included family; nutrition and wellness; human development; interpersonal relationships; career, community, and family connections; parenting; and family and community service.

Consistent with previous studies (Felstehausen & Couch, 1991; Wendland & Torrie, 1993), the seven non-career related context areas such as family relations, parenting, child development, and nutrition and wellness remained popular in the secondary school. However, the less emphasized areas—careers in customer service, careers in facility management and maintenance, and careers in hospitality, tourism, and recreation—are all career-focused.

Classroom assessment practices

The teachers were surveyed for the assessment strategies they used in the classroom. The results indicated that the teachers were using a variety of assessment strategies. Multiple choice, true or false questions, short answers, matching, live skill performance, and projects were the most popular (nearly 100%) strategies the National Standards adopters were using. Other assessment strategies such as crossword puzzle, scenario, case study, extended response questions, and student peer-evaluation were used in the FACS classroom more than 60% (see Table 4.8 and Figure 4.4). These results implied that teachers still utilize traditional test items, and they welcome using other authentic assessments, too.



- 1 Career, community, and family connections.
- 2 Management practices related to consumer and family resources.
- 3 Careers in consumer services.
- 4 Careers in early childhood, education, and services.
- 5 Careers in facilities management and maintenance.
- 6 Significance of family and its impact on individuals and society.
- 7 Careers in family and community services.
- 8 Careers in food production and services.
- 9 Careers in food science, dietetics, and nutrition.
- 10 Careers in hospitality, tourism, and recreation.
- 11 Careers in housing, interiors, and furnishings.
- 12 Human growth and development.
- 13 Relationships in family, workplace, and community.
- 14 Nutrition and wellness practices.
- 15 Parenting roles and responsibilities.
- 16 Careers in textiles and apparel.

Figure 4.3 Adopted 1998 FACS National Standards.

The difference between National Standards adopters and non-adopters was slight (see Figure 4.5 and Table 4.9). The data showed that non-adopters used the traditional assessment strategies and some authentic assessments such as scenario, portfolio, living skill performance, case study, and extended response question less frequently than adopters. Meanwhile, non-adopters used student self-evaluation more frequently than adopters. However, the F-test showed that all the differences between adopters and non-adopters on classroom assessments were not significant at the 95% level of confidence. We might conclude that National Standards adopters and non-adopters are not really different in assessment strategy selection. Their assessment preferences were not affected much by National Standards. Therefore, the same assessment tools may work well for both groups.

Table 4.8 FACS teachers' classroom assessment practices.

Assessment Strategies	Frequency	Percent
Multiple choice	53	98.15
True or false	52	96.30
Short answer	51	96.23
Matching	49	92.45
Living skill performance	49	92.45
Project	48	88.89
Case study	44	81.48
Student self-evaluation	44	81.48
Scenario	40	74.07
Crossword puzzle	39	72.22
Extended response question	39	72.22
Student peer evaluation	33	61.11
Portfolio	24	44.44

Table 4.9 F-test for equal means of assessment strategies between adopters and non-adopters.

Assessment Strategies	<i>N</i>	<i>M</i>	<i>SD</i>	F
Multiple choice	54	0.98	0.14	1.36
True or false	54	0.96	0.19	0.04
Short answer	53	0.96	0.19	0.04
Matching	53	0.92	0.27	1.75
Crossword puzzle	54	0.72	0.45	0.96
Scenario	54	0.74	0.44	0.00
Case study	54	0.81	0.39	0.27
Extended response question	54	0.72	0.45	2.60
Living skill performance	54	0.91	0.29	3.22
Project	54	0.89	0.32	4.82*
Portfolio	54	0.44	0.50	0.95
Student self-evaluation	54	0.81	0.39	0.27
Student peer evaluation	54	0.61	0.49	0.34

* $p < .05$

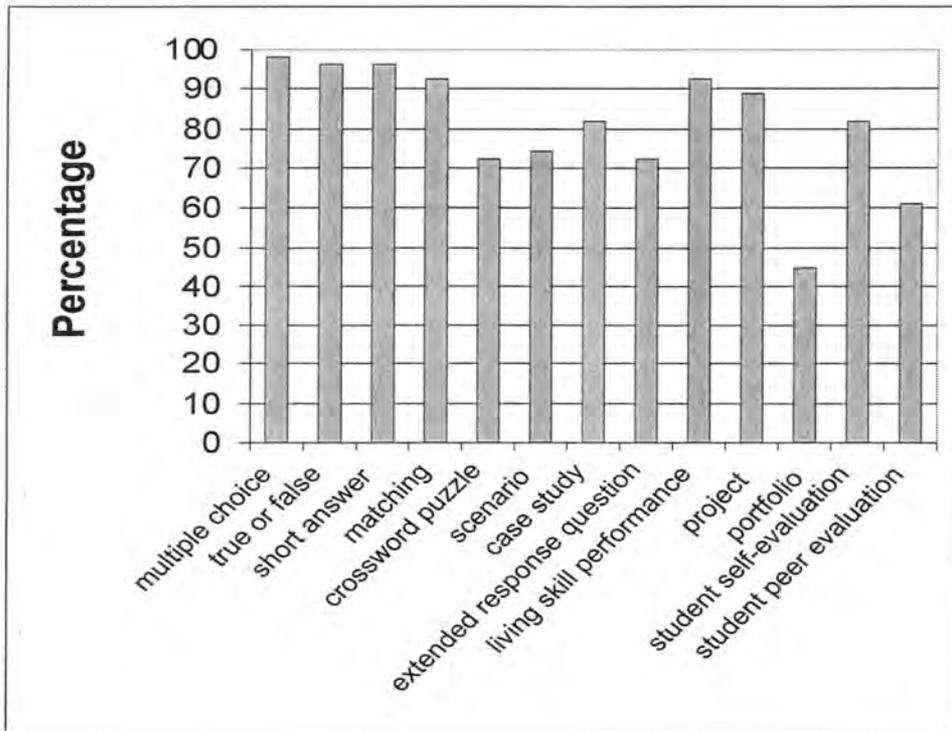


Figure 4.4 Percentage of FACS teachers using selected classroom assessment practices.

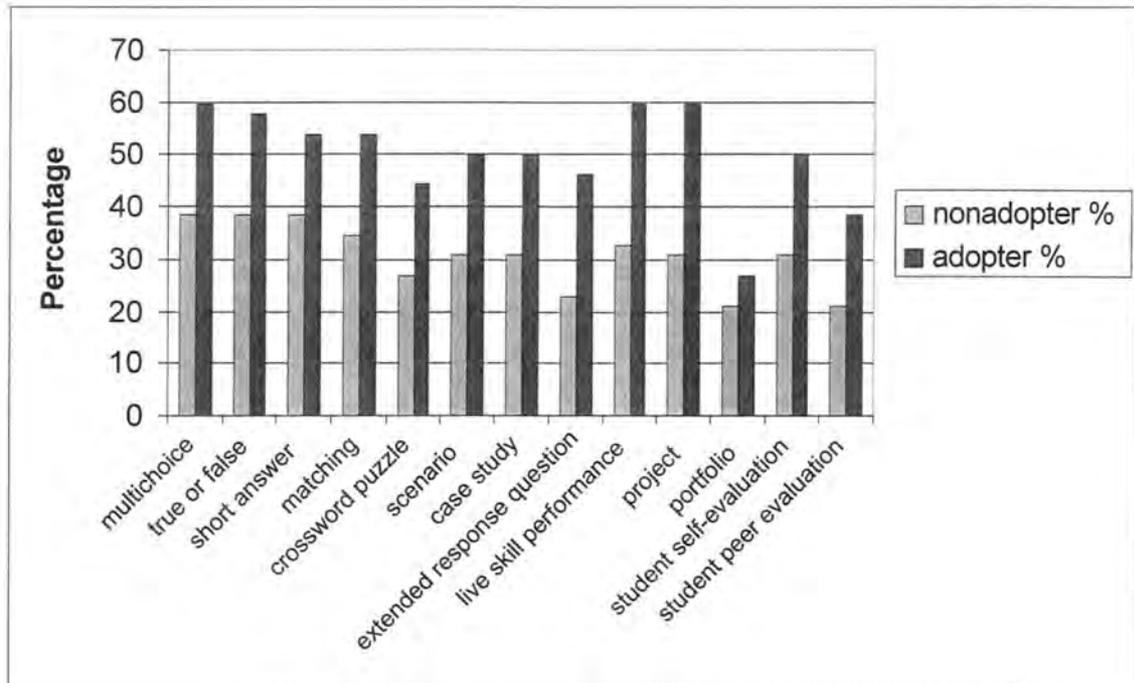


Figure 4.5 Percentage of FACS teachers using selected classroom assessment practices by National Standards adoption group.

Grading methods and testing period

The teachers were asked about their grading methods. Both the adopter group and the non-adopter group used the assigned grade method much more often than curve grading and panel of expert judgment. It turned out that assigning grade was used by about three-fourths of teachers in secondary school FACS classrooms (see Figure 4.6).

However, the Chi-square test showed that the differences in grading methods between adopter group and non-adopter group were not significant at the 95% level of confidence. Therefore, FACS teachers' grading methods might not be influenced by the adoption of FACS National Standards.

For the testing period, the data showed that the adopter group tended to test at the end of the unit, while the non-adopter group tended to test throughout the teaching unit (see Figure 4.7). It was interesting to note that all the adopters tested their students at the end of the teaching unit. Also, 93.55% of the adopters tested throughout the teaching unit, which was higher than the non-adopters' rate of testing throughout the teaching unit. It appeared that National Standards adopters were more likely to use assessments and tests as part of their teaching than non-adopters do. The Chi-square test indicated that the difference for *test at the end of the unit* was significant at the 95% level of confidence ($\chi^2=7.54$, $p=.010$), while the difference for *test throughout the unit* was not ($\chi^2=.04$, $p=.709$).

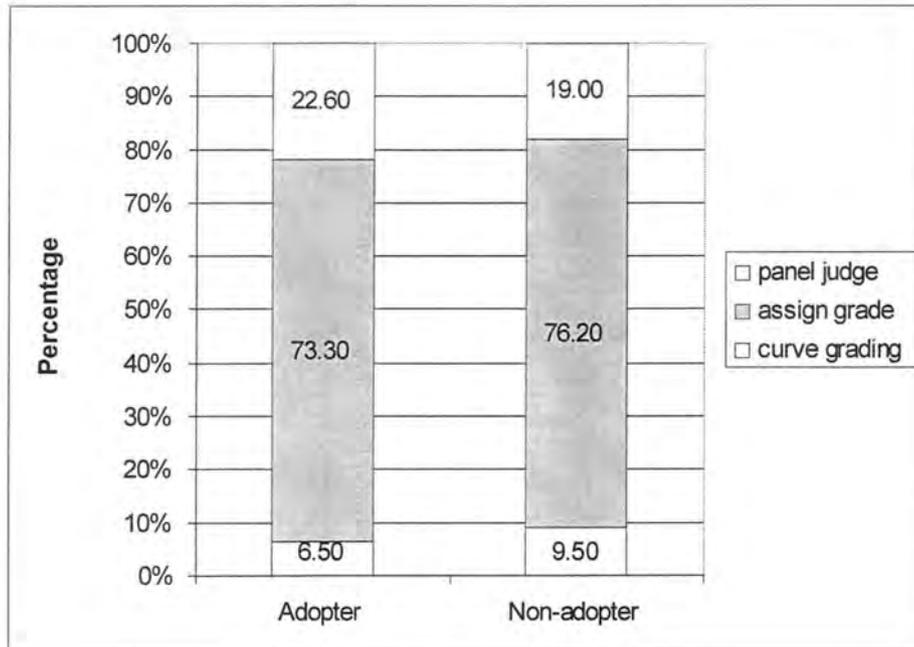


Figure 4.6 FACS teachers grading methods.

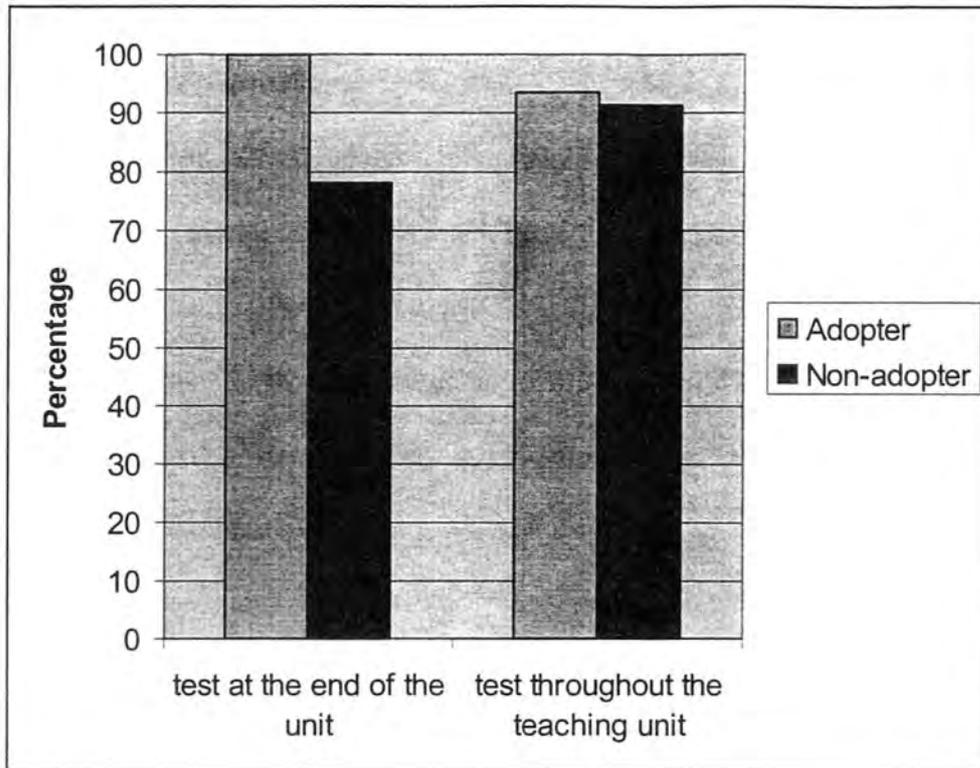


Figure 4.7 FACS teachers' testing period.

Curriculum revision

The teachers were asked to respond to *how often do you revise your curriculum?* Most teachers (around 45%) replied that they revised their curriculum each term or annually. For the adopter group, second most common was “seven years or more,” and the third was “consistent with the class or daily.” For the non-adopter group, the second most common response was “consistent with class”, and the third was “2-5 years” and “seven years or more”. The other time periods to revise their curriculum mentioned by the teachers were “time allowed” and “need based” (see Table 4.10 and Appendix D).

Table 4.10 Distribution of teachers’ curriculum revision frequency.

	Adopter (%)	Non-adopter (%)
Consistently with class or daily	12.90	31.82
Each term to annually	45.16	45.45
2-5 years	6.45	9.09
7 years or more	16.13	9.09
Need based	6.45	0.00

Other Standards Used

Teachers were surveyed on two open-ended questions that asked *what other national or state level standards do you use in your FACS program?* and *what do you need to insure that your students are up to “standards”?*

State standards were most often used, including Iowa state competencies and benchmarks, Minnesota graduation standards, and Nebraska state essential learning documents (see Table 4.12). Specifically, nine Iowa teachers (30%) mentioned they were using “Iowa State Standards”, one (3.33%) mentioned “Area Education Agency Comprehensive School Improvement Plan (AEA CSIP) competencies”, one (3.33%) “Math, Science, Reading Standards”, and one “Ohio State Standards”. Of the 30 Iowa teachers, 18

did not respond to this question. Two Minnesota teachers (20%) mentioned they were using “Minnesota Graduation Standards,” and one (10%) mentioned “Group resources and Consumerism Health Standards.” Seven of the ten Minnesota teachers did not respond. Seven Nebraska teachers (88.89%) responded that they were using Nebraska State Standards, and one (7.14%) mentioned “Nebraska Health Standards, and National Health Standards.” Six of 14 Nebraska teachers did not respond.

Table 4.11 Other national or state level standards used in the classroom.

State		n	% of State
IA (n=30)	Iowa State Standards	9	30.00
	Area Education Agency Comprehensive School Improvement Plan (AEA CSIP) Competencies	1	3.33
	Math, Science, Reading Standards	1	3.33
	Ohio Standards	1	3.33
	No response	18	60.00
MN (n=10)	Minnesota Graduation Standards	2	20.00
	Group resources, Consumerism Health Standards	1	10.00
	No response	7	70.00
NE (n=14)	Nebraska State Standards	7	50.00
	Nebraska Health Standards, National Health Standards	1	7.14
	No response	6	42.85

The teachers in different states responded with similar answers to the second open-ended question *what do you need to insure that your students are up to “standards”?* Time was stated most often. Nine teachers mentioned that FACS teachers were overloaded and they did not have enough time and energy to teach materials outside of state requirements. Updated information was the second most frequent response. Assessment strategies were

mentioned third. A knowledgeable, creative, and administrative educator was also indicated by several teachers. Other needs included standards related curriculum, professional training and conferences, free copies of standards, parents' support, state department of education's support, and easier understanding standards (see Table 4.11).

Table 4.12 showed that 66.04% of schools responding have only one FACS teacher in the school building. Of schools responding, 94.36% have fewer than three FACS teachers. Given the fact that many FACS teachers taught from grade 6 to grade 12, it is reasonable that they do not have extra time to do anything outside the state requirement.

These results suggested that the acceptance of national standards might be influenced by time, updated information, assessment strategies, teachers' dedication, funding, and state department of education's support.

Discussion

The sample demographic information suggests that a typical FACS secondary teacher in the surveyed three states is likely to be a female of 45-54 years old; with a teaching license endorsed in FACS area; having at least a bachelor's degree; currently taking or have taken graduate courses; and having at least 10 years of teaching experience. This finding is similar to Gordon's (2001) study where she stated that a typical vocational education teacher is likely to be in age bracket of 42-51; completed an average of 15 years of teaching and completed a graduate degree.

Table 4.12 What do you need to insure that your students are up to "standards"?

State		Frequency	% of State Group
IA (n=30)	Time	5	16.67
	Assessment tools	3	10.00
	A dedicated administrator and knowledgeable educator	1	3.33
	Record keeping, math and reading and science skills	1	3.33
	Students attendance	1	3.33
	No response	19	63.33
	MN (n=10)	Time	3
Updated information		2	6.67
Training, conference		1	3.33
Curriculum related to standards		1	10.00
No response		3	33.33
NE (n=14)	Time	1	7.14
	Update information, creative and knowledgeable teacher	1	7.14
	Successful accomplishment	1	7.14
	Free standards copies	1	7.14
	Academics	1	7.14
	Easier understood standards	1	7.14
	Listen to others	1	7.14
	One set of standards. Not state/national/local standards	1	7.14
	Parents' support	1	7.14
	Test samples	1	7.14
	No response	4	28.57

Table 4.13 Number of FACS teachers in the school building.

Number of FACS teachers	Frequency	Percent
Missing	1	
1	35	66.04
2	10	18.89
3	5	9.43
4	2	3.77
8	1	1.89
Total	54	100.0

The results of FACS teachers' perceptions for using standards are consistent with Russonello and Stewart's study (2000) of English, mathematics, science, and social studies teachers (2000), who also found that teachers supported high academic standards, but did not give national standards full credit in improving students' school work. Also, FACS teachers believe that the current textbooks and materials in the marketplace are not adequate to bring their students up to standards, which is consistent with Jennings's (1998) statement that setting clear standards is only the beginning point, textbooks must be improved.

FACS teachers' perceptions for using assessment strategies also support findings from Gordon's study (2001). Similar with what Gordon (2001) found about vocational education teachers' assessment practices, these findings revealed that FACS teachers are using diverse assessment strategies in their classroom. However, contrary to Gordon's findings in which live skill performances are the most popular assessment method in the vocational education classroom, objective paper and pencil questions such as multiple-choice, true and false questions, short answers, and matching are the most often used assessment methods in FACS classrooms, and essay type information such as extended response questions are employed more frequently than performance tests.

The findings regarding the adopted FACS content standards closely parallel the study by Smith and Hall (2001). The most often taught FACS subject areas are in the seven consumer and family living contexts—family; nutrition and wellness; human development; interpersonal relationships; careers, community, and family connections; parenting; and family and community services. Our results also indicate that the less taught content standards are in the career preparation context, especially for facilities management and maintenance, and hospitality, tourism, and recreation.

Historically, family and consumer sciences have focused on teaching basic living skills (East, 1980). In response to changing social needs, emphasis has broadened from women's work in the home using skills in cooking, sewing, taking care of children, and house keeping to developing employable skills for careers. Correspondingly, FACS have endured considerable changes (Erwin et al., 1996). Much more career preparation content has been included in the FACS National Standards. Although the standards developers and FACS administrators thought these career-emphasized contexts were important and should be taught in secondary school, they were not emphasized in the FACS classroom as expected. The reasons may vary. For example, teachers might still use older curriculum that they used before; there might not be any appropriate textbooks that covered these occupational areas; or schools might not have enough funding to purchase the related equipment necessary for career training, such as that needed in a food lab.

CHAPTER 5. SUMMARY AND CONCLUSIONS

Summary

Assessment and educational reform movements continue to change and expand. Adopting pedagogical innovations becomes necessary to meet educational demands of the new century. A review of literature indicates that teachers are devoting substantial amounts of resources to the development of educational benchmarks and classroom assessments to meet subject area standards. It is important therefore to identify and understand characteristics that may influence educators' adoption of standards and alternative testing strategies.

The overall purpose of this study was to explore the contribution of 1998 FACS National Standards to assessment practices of FACS teachers, and investigate the differences between FACS teachers who are adopters and those who are non-adopters of National Standards.

The specific objectives of this study were to:

1. Identify the perceptions of FACS teachers for using FACS National Standards in the classroom.
2. Describe current assessment practices of FACS teachers.
3. Explore the relationship of assessment practices to adoption of National Standards for curriculum.
4. Identify characteristics of FACS teachers who are early adopters.

Using a mailed survey instrument, 180 FACS middle school and high school teachers in Iowa, Nebraska, and Minnesota in March, 2001 were invited to participate in this study. An

equal number (n=60) of teachers were randomly selected from each state. The response rate was 30%. Data were analyzed using SPSS Version 10.0. Descriptive statistics were computed. These included frequencies, percentages, means, and standard deviations. The F-test and Chi-square test were conducted to compare group means.

Teachers' perceptions

Means and standard deviations were analyzed for each of the three instrument sections: report of national standards, report of using FACS National Standards, and report of classroom assessments (on a scale of 1 to 6 where 1-strongly disagree, 2-moderately disagree, 3-mildly disagree, 4-mildly agree, 5-moderately agree, and 6-strongly agree). In general, teachers were positive in their responses toward the section outcomes.

National Standards and FACS National Standards

FACS teachers' perceptions of using general national standards for improving education showed mild agreement (M=4.12). For the ten items related to general national standards, the teachers were most positive with the summary statement that *national standards are important* (M=4.69, moderately agree). However, more specific benefits of general national standards, such as standards providing consumer protection (M=3.76), motivating students to higher aspirations (M=3.75), or encouraging creativity in students' school work (M=3.24) were not perceived as highly.

The FACS teachers have less confidence that FACS National Standards can improve education (M=3.32). They seemed to be neutral regarding any influence FACS National Standards have on improving student thinking (M=3.69), communication (M=3.65), management and leadership ability (M=3.55). They mildly disagreed that they would use FACS National Standards as reference to develop assessment plan (M=3.14) and as a

framework to report to parents (M=2.80). The teachers mildly agreed that the local community had a bigger impact than FACS National Standards (M=4.29). Also, the teachers agreed that the current textbooks and teaching materials in the market were not adequate for National Standards based teaching.

Assessment strategies

The FACS teachers showed moderate agreement on perceptions for using assessment strategies (M=4.55). The teachers strongly agreed that they used a variety of assessment tools in the classroom (M=5.57). They indicated that they would use teacher developed and adapted assessments that were frequently adjusted, assessments that are not expensive, but are easy to locate, and easy to duplicate. However, they disagreed with using instrument banks or test banks for testing (M=2.91).

Adoption of FACS National Standards

FACS National Standards adopter and non-adopter groups were categorized based on the questions *Are you using 1998 FACS National Standards in your classroom?* and *What year did you integrate 1998 FACS National Standards into your classroom?* According to Rogers' diffusion theory (1995), adoption categories were defined by the time when teachers reported integrating National Standards into the classroom. Among the three states participating in this study, Iowa had the highest adoption rate (73.3%), followed by Nebraska (57.1%) and Minnesota (10.0%). A finer adoption categorization scheme was considered to correlate more closely to Rogers' categories, using the three groups: innovator, early adopter, and laggard. Teachers who integrated FACS National Standards in 1998 were defined as innovators, teachers who are using the standards currently were defined as early adopters,

and non-adopters were defined as laggards. Nebraska had the greatest proportion of innovators (23.08%), followed by Iowa (20.69%).

The FACS National Standards are designed for minimal overlap, but they are not analogous to courses offered. Instead, standards from a particular area of study that likely would be addressed in several different courses and any one course could include standards from several different areas of study. Although the FACS education content emphasis varies greatly among schools and districts (Quilling, 2000), seven consumer and family living context areas of the 16 comprehensive content standards, such as parenting, family relations, and human development, were most often adopted into FACS curriculum, while several of the nine career preparation context areas were less likely to be emphasized, especially for standard 5- *Careers in facilities management and maintenance* (less than 10%), and standard 10- *Careers in hospitality, tourism, and recreation* (10%).

It appears that content standards are neglected in the FACS classroom. Giving prominence to the occupational context in the FACS standards is one of the considerable changes of FACS education reform. However, although the standards developers and FACS administrators think it important to be taught in all FACS secondary schools, the secondary FACS teachers do not seem to agree. Suggestions that could assist with education in the career preparation context could include: (a) offer information about career preparation to FACS classroom teachers (b) provide corresponding curriculum and teacher training to all secondary schools; and (c) raise funding to provide required equipment for career preparation programs.

Reasons for non-adoption

Teachers indicated several reasons why they were not using FACS national standards. State and local standards and benchmarks were the main reason in all of the three states. Time demand was another important factor. The data indicated that local control and isolation of FACS teachers might be the major obstacles to the acceptance of FACS National Standards.

Further exploration suggested there were two basic types of reasons why teachers were not using National Standards: (1) not aware and (2) aware but choose not to use. Teachers who belonged to the first group did not recognize the existence of FACS National Standards. For the second group, three subgroups were identified based on whether the teachers made the judgment on FACS National Standards. Some did not use National Standards because the standards were not required by local school board or state department (the required materials included Iowa State Competencies and Benchmarks, Minnesota Graduation Standards, and Nebraska Essential Learning Documents). They did not make a judgment on whether the National Standards were good or not. Others were those who had considered the National Standards but decided against using them. These teachers showed a negative attitude to FACS National Standards, although they may be using some other state level standards like Ohio State Standards; Health Standards; and Math, Science, and Reading Standards. Another teacher group that made a judgment on National Standards was the potential adopters. This group of teachers were not using National Standards as their main teaching standards right now, but they were not against using them and might consider using them in the future.

Teachers also identified several factors they would need to ensure that their students were up to standards. These included time, updated information, assessment strategies and curriculum related to standards, teachers' dedication, funding, and local department of education's support.

Classroom assessment practices, grading methods, and testing period

Teacher's responses toward classroom assessment practices were straightforward. Teachers reported using a variety of assessment strategies in their classroom: multiple choice (98.15%), true or false (96.30%), short answer (96.23%), matching (92.45%), living skill performance (90.74%), and project (88.89%). These results indicate that traditional assessment strategies were still often used in FACS classrooms.

The comparison between adopters and non-adopters showed that the difference of assessments used was not significant, assigning grade process was much more often used than curve grading and panel of expert judgment by both groups, and the adopter group tended to test at the end of the unit while the non-adopter group tended to test throughout the teaching unit. Generally, the adoption of FACS National Standards did not affect teachers' assessment preference and grading methods much. However, the test period might be affected. The National Standards adopters tend to use assessments and tests to measure their teaching more often than non-adopters.

Teachers' self-reported curriculum revision period ranged from daily or consistent with class to more than seven years. Nearly half of both adopter and non-adopter groups reported that they revised their curriculum each term or annually. More non-adopters tended to revise curriculum on a class-by-class base (31.82%) than adopters (12.90%). Meanwhile, more adopters tended to have a longer curriculum revision cycle of seven years or more

(16.13% vs. 9.09%). The reason might be that adopters have to spend more time on teaching FACS National Standards covered materials. They might have less energy and time left to do other things. Given the fact that many teachers did not respond to this question, this result may be biased.

In summary, proponents of national standards believe that standards will reform public education by providing equal opportunity to communities and raise student achievement. This study indicates that standards had little influence over teachers' current assessment practices. We might ask whether conditions for implementation meet the accepted criteria for National Standards. Adoption groups were developed based on the integration of FACS National Standards into FACS curriculum. There appeared to be no relationship between the FACS National Standards adoption and teachers' age, highest education attainment, teaching experience, teacher license endorsed in FACS, school setting, or their assessment practices. It seems that our results in this study do not support Rogers' (1995) diffusion theory very well. Given the fact that FACS National Standards are still new to many states, it may still be the early adoption time period. The cutoff time of adoption category used for this study might not be appropriate for this case, and the non-adopters may become adopters with passing time.

Implication

Findings of this study revealed that the State Department of Education's support and encouragement contribute most to the adopting of FACS National Standards. Iowa had the most teachers using FACS National Standards or Iowa Benchmarks that are written based on FACS National Standards. Over half of Nebraska FACS teachers are using FACS National

Standards. However, many Minnesota teachers are not aware of the FACS National Standards or do not choose to use any kind of national level standards.

This may be explained by the limitations of this study. Although the researcher attempted to obtain a representative sample of teachers from the states by randomly selecting an equal number (n=60) from each, the low response rate, and disproportionate responses by state place limitations on the generalizability of these finding to the larger population. However, the trends revealed in the data can suggest possible explanations for teachers' FACS National Standards adoption levels.

Conclusion

The following conclusions, based on the findings of this study, can be made:

1. Generally, the family and consumer sciences teachers responded positively to national standards and FACS National Standards. They endorse standards, but with hesitation.
2. A large majority of non-adopters believes that the existing standards in their states or school districts are already appropriate.
3. Teachers give standards only some of the credit for an increase in actual student learning. They accepted that FACS National Standards are desirable to improve students' thinking, management, communication, and leadership abilities with hesitation.
4. It is not usual for teachers to use FACS National Standards as a reference for their assessment tools development or reports for the parents.

5. Teachers feel pressure from FACS National Standards. They believe that they have too little time to cover all the material to meet the standards.
6. Standards, either national level or local level, are having a direct impact on classrooms. Many teachers have linked their curricula to standards, and modified their curricula to fit the standards.
7. There is no difference in classroom assessments preference between FACS National Standards adopters and non-adopters. National Standards have little impact on assessment strategies' development and selection.
8. Assessments that are not expensive but are easy to locate, duplicate, and grade are the key factors that affect teachers' selection of assessment strategies. They also tend to use what their colleagues are using. State Department of Education does not have much effect on classroom assessments.
9. Assigning grade is the most often used grading method reported in secondary school FACS classrooms. Other methods considered curve grading and panel of expert judges.
10. Among the sixteen content standards in FACS National Standards, standard 3-Careers in consumer services, 5-Careers in facilities management and maintenance, 9-Careers in food science, dietetics, and nutrition, and 10-Careers in hospitality, tourism, and recreation are relatively less taught in FACS classroom than the other twelve standards.

Recommendations for Future Research

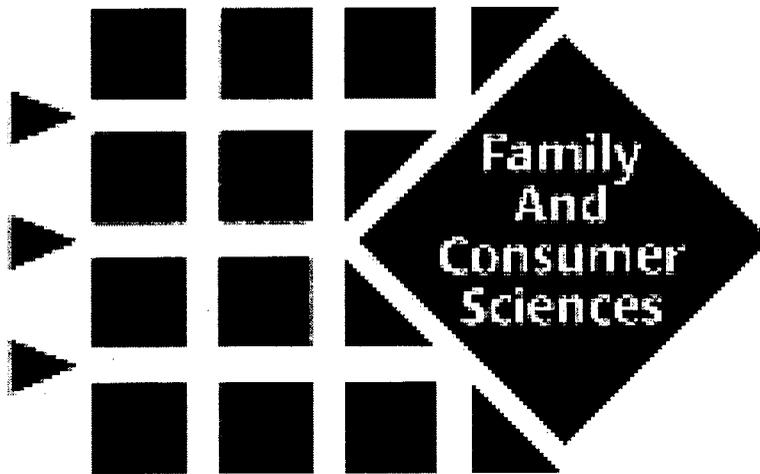
The following recommendations are made based on the findings of the study.

1. This study considered personal characteristics of FACS teachers that might influence their decision to integrate FACS National Standards into their classroom. Future studies should investigate other external and organizational factors including availability of time, funding, administrative support, the context in which teachers work, and rewards and incentives for adopting technology.
2. Results from this study showed that the main reason why FACS teachers are not using FACS National Standards is that state standards or benchmarks are required by their state department of education. Future studies need to investigate the relationship between FACS state standards and FACS National Standards.
3. A positivistic mode of inquiry was used in this study. Future studies should incorporate both positivistic and interpretive modes of inquiry to gain in-depth understanding of FACS teachers' perceptions regarding FACS National Standards and classroom assessments.
4. It is recommended that an interpretive study of non-adopters be done to explore the relationship between time limitation and integration of FACS National Standards.
5. It is recommended to investigate the reason why some occupational context areas such as standard 3-Careers in consumer services, 5-Careers in facilities management and maintenance, 9-Careers in food science, dietetics, and nutrition, and 10-Careers in hospitality, tourism, and recreation are less implemented by National Standards adopters in their classroom.

APPENDIX A.

SURVEY INSTRUMENT, COVER LETTER, AND FOLLOW-UP LETTER

National Standards & Assessment Strategies



I. Perception for National Standards

The following statements ask about your perception for National Standards. (**National Standards** are the specifications of a desired level of content mastery and performance established and agreed upon by a national professional education groups.) Please circle the number representing your agreement with each statement. Remember there are no right or wrong answers. Just answer as accurately as possible.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

1. I feel that national standards are important. 1 2 3 4 5 6
2. National standards should be used as a basis for curriculum development in the school. 1 2 3 4 5 6
3. National standards should be used for assessment construction. 1 2 3 4 5 6
4. National standards make it possible to coordinate the various parts of the educational system to promote students' learning. 1 2 3 4 5 6
5. Standards provide consumer protection by supplying accurate information to students. 1 2 3 4 5 6
6. Standards can motivate students to have higher aspirations in their school work. 1 2 3 4 5 6
7. Our school pays attention to national standards for its curriculum development and planning. 1 2 3 4 5 6
8. Standards can encourage improvement of collaboration among teachers. 1 2 3 4 5 6
9. The standards help teachers reflect on their own practice and become thinkers of their work, not just doers. 1 2 3 4 5 6
10. National standards help students be creative in their schoolwork. 1 2 3 4 5 6

II. Perception for using FACS National Standards

The following statements ask about your perception for using 1998 FACS (Family and Consumer Sciences) National Standards in your classroom. Please circle the number representing your response to the question.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

1. My curriculum is based on 1998 FACS National Standards. 1 2 3 4 5 6
2. FACS National Standards are desirable to improve students' thinking ability. 1 2 3 4 5 6
3. FACS National Standards are desirable to improve students' management ability. 1 2 3 4 5 6
4. FACS National Standards are desirable to improve students' communication ability. 1 2 3 4 5 6
5. FACS National Standards are desirable to improve students' leadership ability. 1 2 3 4 5 6
6. FACS National Standards are manageable in my program. 1 2 3 4 5 6
7. I use FACS National Standards as a framework to report to parents. 1 2 3 4 5 6

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

- 8. When I am developing my assessment plan, I refer to FACS National Standards. 1 2 3 4 5 6
- 9. Middle and high school textbooks and materials presently on the market are adequate to help bring students up to "standards". 1 2 3 4 5 6
- 10. Changing my curriculum to meet national standards would be a major change that diminishes my control in the classroom. 1 2 3 4 5 6
- 11. A local community's values have a bigger impact on what FACS teachers teach than national standards. 1 2 3 4 5 6

III. Opinions on Classroom Assessment Strategies.

The following statements ask your opinions about useful assessment strategies. Please circle the number representing your agreement to each statement.

1	2	3	4	5	6
Strongly Disagree	Moderately Disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree

- 1. I use assessment strategies that are easy to locate. 1 2 3 4 5 6
- 2. I use assessment strategies that are easy to duplicate. 1 2 3 4 5 6
- 3. I adopt assessment strategies that are easy to grade. 1 2 3 4 5 6
- 4. I adopt assessment strategies that do not cost too much. 1 2 3 4 5 6
- 5. I use assessment strategies that are suggested by the State Department of Education. 1 2 3 4 5 6
- 6. I adopt assessment strategies that my colleagues are using. 1 2 3 4 5 6
- 7. I like to use instrument-banks or test-banks for testing. 1 2 3 4 5 6
- 8. I like to use a variety of assessment tools in the classroom. 1 2 3 4 5 6
- 9. I frequently adjust the test items for the same course. 1 2 3 4 5 6
- 10. I use assessment results to provide information for adapting my teaching. 1 2 3 4 5 6
- 11. I use assessment results to evaluate my curriculum. 1 2 3 4 5 6
- 12. I like to put myself in the student's situation, before I develop or select assessment tools. 1 2 3 4 5 6

IV. Classroom Assessment Practices.

Directions: Please indicate which of the following assessment practices you use in your FACS classroom. If yes, please circle Y and write the number of times you used these assessment tools in the past year. If no, please circle N.

Y—Yes N—No

- 1. Multiple-choice tests Y N _____ times
- 2. True or false tests Y N _____ times
- 3. Short answer tests Y N _____ times
- 4. Matching tests Y N _____ times

- | | | | | |
|--|---|---|-------|-------|
| 5. Crossword puzzle | Y | N | _____ | times |
| 6. Scenario | Y | N | _____ | times |
| 7. Case study | Y | N | _____ | times |
| 8. Extended response questions | Y | N | _____ | times |
| 9. Live skill performance | Y | N | _____ | times |
| 10. Extended project | Y | N | _____ | times |
| 11. Portfolio | Y | N | _____ | times |
| 12. Student self-evaluation | Y | N | _____ | times |
| 13. Student peer-evaluation | Y | N | _____ | times |
| 14. Curve grading | Y | N | | |
| 16. Assign grades | | | Y | N |
| 17. Panel of professionals or experts to judge | | | Y | N |
| 18. Test at the end of the unit | | | Y | N |
| 19. Test throughout the teaching unit | | | Y | N |
| 20. How often do you revise your curriculum? | | | _____ | |

V. Please provide us the following information about you:

1. Gender: _____ Female _____ Male
 2. Your age:

_____ under 25	_____ 25-34	_____ 35-44
_____ 45-54	_____ 55-64	_____ 65 and over
 3. What state do you work in?

_____ Iowa	_____ Minnesota	_____ Nebraska
------------	-----------------	----------------
 4. Highest degree:

_____ Bachelor's	_____ Master's	_____ Doctor's	_____ Other (please specify) _____
------------------	----------------	----------------	------------------------------------
 5. Year of last degree: _____
 6. Have you ever taken any graduate courses? _____ Yes
 _____ No *If "No" 6, please go to item 8.*
 7. What kind of graduate courses have you taken?

_____ FACS Content
_____ Curriculum Development
_____ Assessment
_____ Other (please specify) _____
 8. Does your teaching license specifically include the FACS subject area? _____ Yes _____ No
 9. How many years have you been teaching FACS? _____
 10. How many years have you been teaching in your current school? _____
 11. What level of school do you teach?

_____ Middle School/Junior High School
_____ High School
_____ Other (please specify) _____
 12. What grade levels are you teaching currently? _____
 13. Including yourself, how many FACS teachers work in your school building? _____
 14. Do you often attend FACS professional conferences? _____ Yes _____ No
 15. Are you currently using 1998 FACS National Standards?

_____ Yes	<i>If "Yes", please go to item 17.</i>
_____ No	
 16. Please explain why you are *not* using the 1998 FACS National Standards.
-

If you answered item 16, please skip to Part V.

17. What year did you start integrating the 1998 FACS National Standards in your classes?

_____ 1998 _____ 1999 _____ 2000 _____ 2001

18. Please check all the FACS National Standards areas of study you are using with your classes.

- _____ 1.0 Career, community, and family connections.
- _____ 2.0 Management practices related to consumer and family resources.
- _____ 3.0 Careers in consumer services.
- _____ 4.0 Careers in early childhood, education, and services.
- _____ 5.0 Careers in facilities management and maintenance.
- _____ 6.0 Significance of family and its impact on individuals and society.
- _____ 7.0 Careers in family and community services.
- _____ 8.0 Careers in food production and services.
- _____ 9.0 Careers in food science, dietetics, and nutrition.
- _____ 10.0 Careers in hospitality, tourism, and recreation.
- _____ 11.0 Careers in housing, interiors, and furnishings.
- _____ 12.0 Human growth and development.
- _____ 13.0 Relationships in family, workplace, and community.
- _____ 14.0 Nutrition and wellness practices.
- _____ 15.0 Parenting roles and responsibilities.
- _____ 16.0 Careers in textiles and apparel.

V. Your ideas are requested.

1. Please list other National or State level standards you use in your FACS program.

2. What do you need to insure that your students are up to "standards"?

To win the Challenge Grant Assessment Strategies Resource

**Please return this questionnaire booklet postmarked by
April 16, 2001.**

*Tape the booklet closed and drop into the mail.
No postage is necessary.*

THANK YOU FOR YOUR PARTICIPATION!

March, 2001

Dear FACS teacher:

Change and reform in education are helping to create new visions for meeting our highest academic goals for this country's students. FACS (Family and Consumer Sciences) Education National Standards provide the platform for the discipline to move into this new era. (See <http://www.facse.org>.) Assessments play an important role in achieving these educational standards.

We are conducting a study of 1998 FACS National Standards and FACS teachers' classroom assessment practice. This study is critical in determining the kind of assessment tools that could be applied to high school FACS classes. This questionnaire booklet is designed to solicit your perceptions on national standards and assessment. The questionnaire should only take about 15 minutes to complete. We are asking for your participation so that we can learn more about classroom assessment practices. ***You will have a chance to win the Challenge Grant FACS Classroom Assessment Strategies in Food and Nutrition (valued more than \$25) if you return your completed questionnaire booklet by April 16, 2001.***

Each teacher will be assigned an identification number, which appears on the questionnaire. These numbers are assigned to assist us when following-up on missed return booklets. Your returned booklet will be stored in a locked filing cabinet. Participation in this study is completely voluntary, and you are free to skip any question in the booklet that you do not wish to answer. Results from the study will be tabulated as group statistics. Confidentiality will be maintained at all times, and no individual information will be reported. Your name was randomly selected from FACS teachers in Iowa, Minnesota, and Nebraska.

Final results will be available to you upon your request, and can be obtained by contacting the researchers. If you have any questions, please do not hesitate to contact us for further information. We can be reached at (515) 294-2925 or jjchen@iastate.edu.

Thank you for your willingness to participate in this important study.

Sincerely,

Jingjing Chen
Research Assistant
Family and Consumer Sciences Education

Cheryl Hausafus
Associate Professor
Family and Consumer Sciences Education

Margaret Torrie
Associate Professor
Human Development and Family Studies

Dear FACS teacher:

Recently, we sent you a questionnaire booklet concerning your perception of FACS National Standards and your classroom assessment practice.

We have not yet received your response and we feel that the best information about FACS National Standards and FACS classroom assessments come from you, the FACS teacher. Information you can provide will be useful in developing FACS classroom assessment strategies.

In the event the original survey instrument has been misplaced, please send us an email and we will mail you another copy immediately. If you have a copy of the survey, please complete and return it by *April 9, 2001*.

Thank you for providing this valuable information that will contribute to development of quality assessment strategies. In addition, if you would like to receive the results of this study, please send us an email at jjchen@iastate.edu. Your time and effort in completing this survey are greatly appreciated.

Thank you for responding!

Sincerely,

Jingjing Chen
Research Assistant
Family and Consumer Sciences Education

Cheryl Hausafus
Associate Professor
Family and Consumer Sciences Education

Margaret Torrie
Associate Professor
Human Development and Family Studies

APPENDIX B.

PERMISSION TO USE FACS NATIONAL STANDARDS LOGO

Date: Fri, 09 Mar 2001 15:15:42 -0600

To: jjchen@iastate.edu

From: "Judith A. Hetherly" <hetherly@facse.org>

Subject: Logo

CC: pwild@doe.state.in.us

Jingjing,

You are granted permission to use the logo. Good Luck.

Judy

.....

Hello,

I am a graduate student of Iowa State University. I am doing my thesis on " the factors that impact the early adopters of 1998 FACS national standards and their classroom assessment practices".

Since I am doing the research related to the FACS national standards, I would like to use the standards logo as my questionnaire cover. May I get your permission to do that?

Attached file is the cover page of my questionnaire booklet.

I am looking forward to your reply.

Thanks a lot.

Sincerely,

Jingjing Chen

APPENDIX C.

HUMAN SUBJECTS APPROVAL

Iowa State University Human Subjects Review Form

OFFICE USE ONLY
EXPEDITED FULL COMMITTEE _____ ID# 309

PI Name Chen, Jingjing Title Early Adopters of 1998 FACS

Checklist for Attachments

The following are attached (please check):

- 13. Letter or written statement to subjects indicating clearly:
 - a) the purpose of the research
 - b) the use of any identifier codes (names, #'s), how they will be used, and when they will be removed (see item 18)
 - c) an estimate of time needed for participation in the research
 - d) if applicable, the location of the research activity
 - e) how you will ensure confidentiality
 - f) in a longitudinal study, when and how you will contact subjects later
 - g) that participation is voluntary; nonparticipation will not affect evaluations of the subject
- 14. A copy of the consent form (if applicable)
- 15. Letter of approval for research from cooperating organizations or institutions (if applicable)
- 16. Data-gathering instruments

17. Anticipated dates for contact with subjects:

First contact	Last contact
<u>2/20/01</u>	<u>5/1/01</u>
Month/Day/Year	Month/Day/Year

18. If applicable: anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:

Month/Day/Year

19. Signature of Departmental Executive Officer _____ Date 2/13/01 Department or Administrative Unit FCEDS

20. Initial action by the Institutional Review Board (IRB):

Project approved Pending Further Review _____ Date _____ Project not approved _____ Date _____

No action required _____ Date _____

21. Follow-up action by the IRB:

Project approved Project not approved _____ Date _____ Project not resubmitted _____ Date _____

Patricia M. Keith _____ 2-13-01 _____ PM Keith _____

Name of IRB Chairperson Approval Date Signature of IRB Chairperson

APPENDIX D.

DATA FOR TEACHERS' CURRICULUM REVISION CYCLE

Adopter Indicator	State	Curriculum revision cycle
Yes	IA	
Yes	IA	3--4 years
Yes	IA	3--5 years
Yes	IA	all the time, continual update
Yes	IA	continual
Yes	IA	daily
Yes	IA	each semester
Yes	IA	every 3 years
Yes	IA	every 7 years
Yes	IA	every couple years
Yes	IA	every time taught
Yes	IA	every year
Yes	IA	every year
Yes	IA	on-going, 7--8 years
Yes	IA	use different strategy for different
Yes	IA	with every class
Yes	IA	yearly
Yes	MN	3--4 years
Yes	NE	
Yes	NE	
Yes	NE	3--4 years
Yes	NE	annually
Yes	NE	every year as needed
Yes	NE	yearly
Yes	NE	yearly
Yes	NE	yearly
No	IA	0
No	IA	annually
No	IA	as often as time allows
No	IA	every time I teach
No	IA	major-year, minor-continuously
No	IA	on-going
No	IA	on-going
No	IA	7 years
No	MN	constantly
No	MN	daily
No	MN	minor-every term, major-every 5 year
No	MN	yearly
No	MN	yearly

No	MN	yearly
No	NE	3--5 years
No	NE	every 7 years
No	NE	every term
No	NE	needed
No	NE	yearly
No	NE	yearly

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