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THE RELATIONSHIP OF PARENTAL INVOLVEMENT, SCHOOL CLIMATE
AND OTHER SELECTED FACTORS
TO SECONDARY STUDENTS' ACHIEVEMENT
IN FAMILY AND CONSUMER SCIENCES

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By

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* * * * *

The Ohio State University
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ABSTRACT

The Ohio Work and Family Life curriculum was designed to prepare students for the work of the family. A statewide assessment system was developed to assess secondary student achievement on the Work and Family Life courses of Personal Development and Resource Management.

The purpose of this study was to determine what selected factors were related to student achievement on the Work and Family Life tests. This study examined the elements of parental involvement, school climate, school location category, school size, curricular factors and student personal characteristics as they relate to student scores on the competency tests in Personal Development and Resource Management.

The design of the study was ex post facto/correlational. The population of the study was Ohio secondary students during the fall semester of 1996. A random cluster sample of students was drawn consisting of 40 Personal Development classrooms and 40 Resource Management classrooms. The student respondents with useable pretest and posttest matches included 653 Personal Development students and 421 Resource Management students. Parent Involvement Measure and Quality of School Life data were collected through numbered surveys encoded to match the numbered pretests and posttests.

For each of the variables of interest, descriptive statistics were computed including frequencies and measures of central tendency. Correlation coefficients were
used to determine relationships between variables. Regression analysis and multivariate statistics were used to determine variance accounted for by the model.

More females were enrolled in both Personal Development and Resource Management classes. Females showed higher achievement scores on Personal Development and Resource Management classes, however males made higher gain scores on the Resource Management test.

Grade level and gender were significant predictors of posttest score on the Personal Development test. Suburban school location category accounted for an additional variance in the model.

Suburban school location category accounted for variance on the Personal Development gain score for this sample. Additional variance was accounted for by whether the score counted for a grade.

Grade level and gender accounted for variance on the Resource Management posttest score in the sample. Whether the score counted for a grade accounted for an additional variance on the posttest score. Only school location accounted for variance explained for gain scores on the Resource Management test.
To Van
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CHAPTER 1

INTRODUCTION

With its roots in the home economics movement in the late nineteenth century, family and consumer sciences education has been responsive to societal concerns. Catherine Beecher wrote in the 1842 *A Treatise on Domestic Economy* of the need for “domestic economy as a branch of study” as a direct response to the conditions of the times (cited in Brown, 1985, p. 184). She identified the “deplorable sufferings of multitudes of young wives and mothers from the combined influence of poor health, poor domestics, and a defective domestic education” (cited in Brown, 1985, p. 184).

Participants at the meetings of the Lake Placid Conference in Home Economics between 1899 and 1908 began to define home economics as a field of study. The men and women who attended this conference saw a need to provide education for young people on the management of the home and the development of the family. In *The Proceedings of the Lake Placid Conferences*, Ellen R. Richards reported that “The present aim of the Lake Placid Conference is to teach the American people, chiefly through the medium of the schools, the management of their homes on economic lines as to time and energy” (cited in Brown, 1985, p. 250). In addition Richards described social changes caused by the industrial revolution and the “disintegration of the family” (cited in Brown, 1985, p. 247). Many who attended the conference saw a need to educate for “enhancing development of human capacities through the family so that individuals would develop
into ‘fine, strong’, mature men and women and so that their participation in society would channel social institutions into directions that would advance human freedom” (Brown, 1985, p. 249).

The federal government responded by providing support for education for the work of the family. In 1917 the Smith-Hughes Act provided federal funding for home economics education in recognition of the educational and occupational needs of women in the home and in the workplace. Recognizing that society depends on work and family systems for its survival, Congress continued support for home economics education for men and women through a series of subsequent acts and amendments for Consumer and Homemaking Education.

The American Vocational Association (AVA) continues to support family and consumer sciences education. A 1992 resolution passed by the AVA stated “The labor force is produced and affected by families and there is a relationship between family functioning and work productivity” (cited in Kister et al., 1993a, p.5).

Over the past three decades, the way in which family and work systems interact has changed dramatically. Managing work and family responsibilities has become one of the most challenging tasks facing American families.

Increasing numbers of single-parent families and dual-income families, changes in work and family roles, differences between employer and family expectations and changes in lifestyles have created new perspectives on the relationship between work and family life. The problem of competing work and family demands is an issue not only for family members but for the economy as well. Society cannot be optimally productive unless the needs of employers and employees are accommodated (Kister, et al., 1993a, p. 5).

Family and consumer sciences education continues to respond to the changing contexts of work and family life. One response has been to promulgate the appropriateness of studying work and family life in the public schools. With an
understanding of work and family roles, students are better prepared to make informed decisions regarding their future work and family lives. Knowledge of work and family life is of critical importance to individuals and society both now and in the future.

The Vocational Family and Consumer Sciences Program in the Ohio Department of Education has taken seriously its obligation to be responsive to societal needs. The mission of this program is to “prepare youth and adults for the work of the family” (Kister et al., 1993a, p.v.). The ultimate aim of family and consumer sciences education is to “strengthen families and to empower individuals to take action for self and others in the home, the workplace, the community and the world” (Kister et al., 1993a, p.v.).

In pursuit of this mission, in 1991, the Ohio Department of Education introduced the high school family and consumer sciences Work and Family Life curriculum to prepare students “for competence in the important, challenging and ever-changing work of the family” (Ohio Department of Education, 1994). This curriculum is based on the relationship between work and family life framed by the practical problems individuals and families face daily. This is the only program in Ohio’s public secondary schools with a concentration on the practical problems of work and family life. Because of the importance of preparing students for the work of the family, the Ohio Department of Education’s Division of Vocational and Adult Education has provided vocational unit funding to local school districts for this program.

Although Ohio developed the Ohio Vocational Home Economics Curriculum in 1973 (Ohio Department of Education, 1973) and the Ohio Practical Action Curriculum 1984 (Ohio Department of Education, 1984), the Work and Family Life program was the first state curriculum to have vocational funding associated with its implementation. Beginning in the fall of 1995, only the non-occupational secondary family and consumer sciences Work and Family Life core courses received vocational unit funding. These core
courses are: Personal Development, Resource Management, Nutrition and Wellness, Parenting, Family Relations and Life Planning. Each core area represents an 18-week non-occupational vocational course for high school students. All courses include the four process competencies of: (a) Managing Work and Family Responsibilities, (b) Solving Personal and Family Problems, (c) Relating to Others and (d) Assuming a Leadership Role.

In the past it has been difficult to determine student achievement gains in family and consumer sciences programs across the state. Prior to the Ohio Work and Family Life curriculum there were wide variations in courses, content and instructional methods. The implementation of a common curriculum foundation made the collection of aggregate student achievement data possible. In light of the Carl D. Perkins Vocational and Applied Technology Education Act in 1990 which placed an increased emphasis on accountability and student gains (United States Congress, 1990), the Ohio Department of Education began an ongoing standardized competency test program to determine student achievement gains in the Work and Family Life core courses of Personal Development and Resource Management. In collaboration with The Ohio State University Vocational Instructional Materials Laboratory, the Ohio Department of Education developed a valid and reliable test bank to assess student competency gains in these courses. Subject matter experts from the university and the state department as well as teacher practitioners developed multiple choice test items for pre and posttesting. In order for family and consumer sciences education to prepare youth and adults for the work of the family and thus continue to be responsive to societal needs, it is important to identify the multiple and complex factors associated with student achievement gains in this program area. Two of the most important of these factors are parent involvement and school climate.

Parent involvement and school climate have been associated with student achievement in other scholastic areas. In her 1987 review of literature, Henderson stated
that “involving parents in their children’s’ formal education improves student achievement” (1987, p. 9). Parent involvement in school was found to have a positive influence on student achievement, however most of the research was focused on elementary school children (Paulson, 1994). While parental involvement tends to decline as students enter middle school and high school, it may still be a very important component of their school achievement. Parent involvement is both a National Education Goal and an Ohio State Board of Education priority.

Similarly, school climate has been shown to have a significant impact on student achievement. Hoy and Tarter (1992) refer to school climate as school health. They conclude that healthy schools appear to be high achieving schools. Sutherland’s (1994) research indicates that the school climate does make a difference in the achievement levels of students. Brookover et al. (1979, p. 6) states that children’s achievement in academic subjects is “partly a function of the social and cultural characteristics of the school social system.” He believes school environment affects learning outcomes. “School climates and organizations that promote and perpetuate non-learning are unlikely to produce high levels of achievement. But schools designed to produce high levels of achievement can function as well as any other social system” (1979, p. 148). Sweeney (1992) writes that size of school, community type, and level of attendance make a difference in school climate. He states that as the size of the school increases, the climate becomes less positive. Suburban schools tend to have more positive climates than rural schools and, in general, urban schools have the least positive climates.

Understanding the relationships parent involvement and school climate have to student achievement in Work and Family Life education will assist teachers in understanding their impact and thereby provide them with a basis for modifying content, instructional approach, and assessment practices.
Purpose and Objectives of the Study

The purpose of this study was to determine what selected factors are related to student achievement on the Work and Family Life tests in the areas of the Personal Development and Resource Management. This study examined the elements of parental involvement, school climate, school location category, school size, time spent on the curriculum and student personal characteristics as they relate to student scores on the competency tests in the Work and Family Life areas of Personal Development and Resource Management.

The objectives of this study were to: (a) determine student achievement on the Personal Development and Resource Management tests; (b) identify personal characteristics of students enrolled in Personal Development and Resource Management courses; (c) identify students’ perceptions of parents’ involvement in their education; (d) identify students’ reactions towards school climate; (e) investigate relationships between student achievement on the Personal Development and Resource Management tests, students perceptions of parent involvement, and school climate; (f) determine if a relationship exists between student achievement, perceived parent involvement, school climate and school location category; and (g) identify predictors of student achievement on the Personal Development and Resource Management tests.
Research Questions

The research questions to be answered were:

1. Is there a student achievement gain from pretest to posttest on the Personal Development test and the Resource Management test after instruction under the Ohio Work and Family Life program?

2. Are student personal characteristics related to student scores on the Personal Development test and the Resource Management test?
   a. gender
   b. age
   c. grade
   d. previous family and consumer sciences classes
   e. school attendance

3. Does certainty of future career choice relate to student scores on the Personal Development test and the Resource Management test?

4. Does certainty of future family life (e.g., marriage, children, home life, etc.) relate to student scores on the Personal Development test and the Resource Management test?

5. Are student scores on the Personal Development test and the Resource Management test related to school location category?

6. Are student scores on the Personal Development test and the Resource Management test related to school size?

7. Are curricular factors, specifically time spent on the Ohio Work and Family Life curriculum and whether the score is counted for a grade, related to student scores on the Personal Development test and the Resource Management test?
8. Is student reaction to school climate related to student scores on the Personal Development test and the Resource Management test?

9. Is student perceived parental involvement related to scores on the Personal Development test and the Resource Management test?

10. Which independent variables are the best predictors of the dependent variable?

Definition of Terms

Vocational Education Terms

**Consumer and Homemaking Education** - Categorical program in the federal Carl D. Perkins Vocational and Applied Technology Education Act of 1990 which supplies funding for family and consumer sciences education. The Consumer and Homemaking line item was rescinded in 1995.

**Family and Consumer Sciences Education** - The courses which prepare learners for competence in the work of the family, home economics related occupations, and the successful interrelating of work and family life (Ohio Department of Education, 1996).

**Home Economics education** - Drawn from various disciplines including social sciences, physical sciences, biological sciences, economics, psychology, philosophy, and the arts. Home economics knowledge is structured in relationship to the home and family environment (Kister, 1989). In 1994, the American Home Economics Association voted to change the name of the professional organization to the American Association of Family and Consumer Sciences and the Home Economics Division of the American Vocational Association changed its name to Family and Consumer Sciences. The term home economics will be used to describe the program prior to June, 1994, and family and
consumer sciences will be used to reflect the current name where appropriate.

**Ohio Competency Analysis Profile (OCAP)** - The employer verified competency list that outlines the knowledge, skill, and attitudes needed to enter and remain in a given occupational area or succeed in applied academics, dropout prevention or work and family life program (Ohio Department of Education, 1996).

**Personal Development** - One of the six core Work and Family Life courses focuses on practical problems related to taking responsibility for self and others, building self-esteem, building relationships with family and peers, managing stress and conflict, planning for future careers, and making responsible choices regarding sexuality and parenting (Center on Education and Training for Employment, 1995, p. 16).

**Resource Management** - One of the six core Work and Family Life courses focused on practical problems related to managing resources to achieve personal and family goals; making informed consumer choices; creating and maintaining a living environment; selecting, obtaining, and maintaining clothing; making food choices; and preparing and serving nutritious foods (Center on Education and Training for Employment, 1995, p.16).

**Vocational Education** - The organized educational programs offering a sequence of courses which are directly related to the preparation of individuals in paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree. Such programs shall include competency-based applied learning which contributes to an individual's academic knowledge, higher order thinking skills, work attitudes, general employability skills, and the occupational specific skills necessary for economic independence as a productive and contributing member of society (Ohio Department of Education, 1996, p. 18).

**Work and Family Life Program** - The program that prepares students for competence in
the work of the family. It is offered at both the middle school and high school levels and replaces what was formerly designated consumer and homemaking education. High school instruction includes personal development, resource management, family relations, parenting, nutrition and wellness, and life planning. The program integrates problem-solving, communication, management, citizenship, and leadership throughout the curriculum (The Ohio Department of Education, 1996, p. 19).

General Education Terms

**Parent involvement** - A measure of parenting attitudes and behaviors, including values toward achievement, interest in schoolwork, and involvement in school functions (Paulsen, 1994).

**Quality of School Life** - A measure of student affective response to the school. The Quality of School Life Scale (QSL) measures general student reactions to school, level of interest in schoolwork, and student evaluations of instructional and personal interactions with teachers (Epstein & McPartland, 1978).

**Rural schools** - Counties which have a population less than 40,000 and are not contiguous to a Metropolitan Statistical Area (As cited in McCracken & Peasley, 1994, p. 4).

**Rural/Suburban schools** - Schools located in counties which have a population less than 40,000 and are contiguous to a metropolitan statistical area (As cited in McCracken & Peasley, 1994, p. 4).

**School climate** - A social environment made up of a combination of such elements as teacher-student interactions, programs, and classwork.

**School health** - A composite measurement of the organizational climate of a school which takes into account seven dimensions-academic emphasis, morale, institutional integrity, resource support, consideration, initiating structure and principal influence (Hoy & Tarter, 1992).
Secondary level - Grades six through twelve which includes schools organized as middle schools, junior high schools, career centers, and joint vocational schools.

Semi-Rural schools - Schools located in counties which have a population greater than 40,000 and are not contiguous to a Metropolitan Statistical Area (As cited in McCracken & Peasley, 1994, p. 4).

Suburban schools - Schools located in counties which have a population greater than 40,000 and are contiguous to a Metropolitan Statistical Area (As cited in McCracken & Peasley, 1994, p. 4).

Urban schools - Schools located in counties which are classified as a Metropolitan Statistical Area by the 1990 U.S. Census (As cited in McCracken & Peasley, 1994, p. 4).

Assumptions

It is assumed for the purpose of this study that adolescents respond honestly and thoroughly to questions reflecting their perceptions of parent involvement and school climate.

Limitations

This study employed a data base, property of the Ohio Department of Education and subject to conditions for its use established by The Ohio State University Vocational Instructional Materials Laboratory (VIML).

This study required teachers' cooperation to secure student volunteers. In order to participate in the study, it was necessary that parents be informed of the study. Students were not permitted to participate in the study if parents objected. Each student participant was required to accurately complete four data collection instruments over a five month period.
The data used in this study were collected by self-reporting instruments and thus are subject to limitations inherent in such instruments. This study is limited to generalizations about Ohio secondary students enrolled in vocational family and consumer sciences Work and Family Life classes. Caution must be applied when applying these findings to family and consumer sciences students in other programs.
CHAPTER 2

REVIEW OF LITERATURE

The purpose of this study was to determine what selected factors are related to student achievement on the Work and Family Life tests in the areas of the Personal Development and Resource Management. This study examined the elements of parental involvement, school climate, school location category, school size, time spent on the curriculum and student personal characteristics as they relate to student scores on the competency tests in the Work and Family Life areas of Personal Development and Resource Management.

This review of literature explores those factors believed to be associated with student achievement in Work and Family Life education. The literature in this chapter is presented in six sections. The first section examines the research in family and consumer sciences education. The second section focuses on the development of the Work and Family Life curriculum. Achievement motivation is presented in the third section. Parental involvement is covered in the fourth section. In the fifth section, school climate and the quality of school life is examined. In the sixth section, school characteristics including size of school and location categories are discussed.
Family and Consumer Sciences Research

In their review and synthesis of existing data related to secondary Consumer and Homemaking Education (C&HE) programs, Griggs and McFadden (1980) found that many studies provided data suggesting that C&HE programs were effective, however, the studies tended not to be widely generalizable. Students in these studies tended to have been enrolled in courses that were unique to a given school and there were wide variations in course content and instructional methods. They recommend research to determine characteristics of the C&HE students and factors that influence learners.

In her review of the literature on learners in family and consumer sciences, Sternberg (1996) contends the "research affirms the need for and relevance of contemporary home economics education" (p.145). She suggests that research in the area of family and consumer sciences "should address the problems and issues confronting today's teens more deliberately" (Sternberg, 1996, p. 139).

Researchers identify the need to evaluate the effectiveness of all areas of family and consumer education in relationship to student achievement. In her examination of selected research related to family and work conducted by Home Economic Educators, Felstehausen (1996) recommends assessing the effectiveness of family and work programs. Amos and Brun (1996) suggest "Family and Consumer Sciences educators ...increase their efforts in theory development, methodology in research, and technology with the goal of improving the effectiveness of nutrition education" (p.195). Murphy and Fulton (cited in Gritzmacher & Tooke, 1996) used both quantitative and qualitative design to measure effectiveness of a pregnant adolescent parenting program. Gain scores revealed a significant increase in knowledge of parenting, child abuse potential was significantly lower, and self-esteem did not change. Seventh and eighth grade students enrolled in individualized food courses were given pretests and posttests (Preston cited in Gritzmacher & Tooke, 1996). Cognitive posttests yielded significantly higher scores than
pretests. Teachers with prior curriculum experience had higher student scores than those who did not.

Gritzmacher and Tooke (1996) examined the research to identify studies focusing on achievement in family and consumer sciences. A national study involving seven states of high school graduates who had taken three or more semesters of home economics examined behaviors in the areas of parenting, nutrition, and consumer education. They found that behaviors were related to community size, Home Economics enrollment, gender, FHA/HERO chapter in school, class rank, and number of comprehensive child and family courses taken. Pestle (cited in Gritzmacher and Tooke, 1996) compared students who had taken home economics and those who had not and found that the mean scores tended to increase with the number of semesters taken. Fox and Van Buren (cited in Gritzmacher & Tooke, 1996) compared students who had taken home economics and those who had not and found that student perceptions of life skill competencies were higher among students who had taken home economics. Female students in this sample scored higher than male students.

Family and consumer sciences education has been linked to student achievement in other curricular areas. Ludwig, Robertson, Boschung, and Strickland (cited in Miller & Tulloch, 1996) studied student achievement of math, reading and language skills of students enrolled in a home economics course integrating these basic skills. Posttests revealed that students achieved significantly higher gains in reading, language and mathematics than the control group. However, both experimental and control groups made significantly higher scores on the home and personal management test. When secondary students in a nutrition science course were compared with chemistry students on achievement of science concepts, the nutrition science students scored significantly higher on the science content and problem solving tests (Ezell & Waters cited in Miller & Tulloch, 1996). Parkhurst and Williams (cited in Gritzmacher & Tooke, 1996)
investigated student achievement when math skills were integrated into a foods course. Students scored significantly higher on the posttest mathematics skills.

Limited numbers of studies were found measuring student achievement in Family and Consumer Sciences. This may be due in part to the limited number of instruments available to measure achievement. Burge and Culver (1996) conducted an investigation of instruments used in Family and Consumer Sciences Education research and concluded that intelligence, achievement and aptitude tests were the least frequently used instruments. However, Stillwell, Radcliffe and Sitton (cited in Burge & Culver, 1996) conducted a statewide study to determine achievement scores of students in a life management course after having developed a valid and reliable achievement test for this course content. The collection of aggregate achievement data would be possible with the development of a statewide competency based curriculum as well valid and reliable instruments to measure student gains in this area.

Summary

In reviewing the Family and Consumer Sciences research from 1985 through 1995, Redick (1996) concluded that “Many studies have been done on programs and teachers but they tend to describe and relate aspects rather than to determine effectiveness or show relationships to student achievement” (p.313). Family and Consumer Sciences professionals recommend further research in the areas of achievement, measurement of skills and knowledge in order to direct practice.

Development of the Work and Family Life Curriculum

In 1990, the 118th General Assembly in Ohio called for the State Board of Education to “prepare a plan of action for accelerating the modernization of the vocational education curriculum” (Ohio Department of Education, 1990, p. 12). As part of the modernization plan, the Ohio Department of Vocational and Career Education specified that all vocational programs and services would specify “comprehensive,
employer-verified” competency lists with “measurable and challenging outcomes to evaluate student performance” (Ohio Department of Education, 1990, p. 12).

The Ohio Department of Education vocational home economics service area had responsibility to prepare the Ohio Competency Analysis Profile (OCAP) for secondary home economics in comprehensive high schools and middle schools. This list of competencies, the Work and Family Life OCAP, was based on the following assumptions:

1. Knowledge of work and family life is important to individuals and society both now and in the future.
2. Managing work and family responsibilities is one of the most challenging tasks facing American families.
3. The way in which family and work systems interact has changed dramatically.
4. Students need to understand work and family roles in order to make informed decisions regarding their future work lives and family lives.

Kister stated

Home economics curriculum is drawn from various disciplines including the social sciences, physical sciences, biological sciences, economics, psychology, philosophy, and the arts. Home economics knowledge is structured in relationship to the home and family environment. This aspect is what makes home economics unique (1989, p. 3).

Therefore, the Work and Family Life OCAP list was developed by subject matter experts including representatives from the fields of psychology, sociology, healthcare, higher education, human services, law, law enforcement and private industry. The curriculum was based on the mission to “prepare youth and adults for the work of the family” with the aim of strengthening families and empowering “individuals to take action for self and others in the home, the workplace, the community and the world” (Kister et al., 1993a, p.v.). The central focus was the relationship between work and family life
framed by the practical problems individuals and families face daily.

The curricular areas of Personal Development, Resource Management, Nutrition and Wellness, Parenting, Life Planning and Family Relations were included in the Work and Family Life OCAP. The OCAP list for the Work and Family Life courses was approved by the Division of Vocational and Career Education, Ohio Department of Education and published by The Ohio State University Center on Education and Training for Employment in 1991. Following the publication of the OCAP list, the curriculum and a series of curricular resource guides for the Work and Family Life courses were developed.

Figure 2.1 shows the conceptual framework for the Ohio High School Work and Family Life Curriculum (Ohio Department of Education, 1994).
High School Work and Family Life Conceptual Framework

Core Process Competencies
(to be integrated in every course)

Managing Work & Family Responsibilities
- expanding the concept of work and family
- on-going analysis of interaction of work and family roles

Solving Personal and Family Problems
- clarification of issues
- making decisions for the well-being of self and others

Relating to Others
- positive, caring relationships
- effective communication
- conflict management

Assuming a Leadership Role
- citizenship and leadership in families and beyond
- cooperation
- evaluation of social conditions
- using planning process to achieve goals

Core Course Areas
(minimum offering: one semester per core course area)

Personal Development
- taking responsibility for self and others
- enhancing self esteem
- forming relationships with family and peers
- managing stress and conflict
- achieving career goals
- parenting responsibility

Resource Management
- achieving personal goals
- making consumer choices
- creating and maintaining living environments; evaluating housing
- making clothing decisions; maintaining clothing
- planning food choices; preparing meals
- taking responsibility for a global environment

(figure continues)

Figure 2.1: High school Work and Family Life conceptual framework

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Nutrition and Wellness
- making choices to promote wellness for self and others
- relating psychological and social needs and food choices
- obtaining and storing food
- planning, preparing and serving nutritious meals
- selecting and using equipment
- promoting optimal nutrition and wellness of society

Family Relations
- understanding the role and significance of family
- preparing for adult, family life
- nurturing human development through the lifespan
- building healthy family relationships
- managing stress, conflict, and crisis
- coordinating work and family
- recognizing social forces that impact on families

Parenting
- parenting roles and responsibilities
- readiness and preparation for parenthood
- meeting the physical, emotional, social and intellectual needs of family members
- nurturing healthy, caring relationships
- parenting in various family structures and cultures
- responsibilities of families and society in nurturing children

Life Planning
- developing a life management plan
- taking responsibility for self and others
- building interpersonal relationships
- establishing a lifelong career planning
- managing resources to achieve goals and to meet food, clothing, and housing needs
- coordinating personal and career responsibilities
Summary

Thus, the Work and Family Life curriculum was developed in a context of school reform and a time during which state legislators were calling for increased accountability. With input from professionals in the work of the family, the Work and Family Life competencies focused on solving practical problems relevant to the dynamic interrelationships of work life and family life for secondary students both now and in the future.

Achievement and Motivation

Multiple and complex factors are related to student achievement in an educational environment. Among those is the student’s own motivation to learn. Motivation is a term used to explain human behavior. While it is but one set of elements in a web of factors determining behavior, most teachers accept the premise that learning cannot occur without motivation (Wlodkowski, 1977).

Ball defines motivation as “the process involved in arousing, directing and sustaining behavior” (1977, p. 2). When defined in this way, motivation is hypothetical as a psychological construct. It is something that is inferred and not directly observed or measurable. Ball states it is presumptuous to claim motivation as explaining behavior, but it merely describes why people behave in certain ways.

The three broad views of motivation presented here are behavioral, cognitive and humanistic. These three views provide the foundation for achievement motivation. Achievement motivation is presented in light of research by McClelland (cited in Franken, 1982), Atkinson (cited in Franken, 1982), and Weiner (1984).

Behavioral Views of Motivation. Classical conditioning is an early behavioral theory first described by Ivan P. Pavlov and extended to educationally meaningful applications by John Watson. Watson demonstrated how the association of an emotional
state with a previously neutral stimulus is applied to education. The teacher’s words or the printed text can be thought of as conditioned stimuli either for positive or negative emotions (Ball, 1977, pp. 5-7).

Behaviorists emphasized that individuals are motivated when their behavior is reinforced. Thorndike (1874-1949) (cited in Ball, 1977) was the first to relate reinforcement or instrumental conditioning to learning. He believed that the association of responses to stimuli depended on what happened after the response. He suggested that when a connection between stimulus and response is made, and then is followed by a satisfying state, the connection is strengthened. Skinner (1904-1990) (cited in Ball, 1977) further concluded that any stimulus following a response is a reinforcer if it increases the probability of the preceding responses recurring in the future.

Miller and Dollard (cited in Ball, 1977, p. 11) attempted to show that imitation is a learned behavior. They showed that with appropriate reinforcements, frequency of imitative behavior could be raised. Parents and teachers may serve effectively as models for imitative learning.

Cognitive Views of Motivation. Cognitive processes play an important role in student learning. “Just as behavior is often functional, aiding in goal attainment, cognitions serve adaptive functions for reaching desired end states” (Weiner, 1984, p. 16). Many student actions occur in order to maintain self-esteem. Often thoughts and behaviors are determined by one’s self-concept, and self perception provides stability to personality over time. Concern with self is at the core of human experience and as such, is significant to the study of motivation.

The cognitive view of achievement motivation holds that the human mind is motivated towards consistent relationship and that attitudes will change in an attempt to restore a state of equilibrium or balance to a disruptive cognitive organization (Ball, 1977,
Humanistic Views of Motivation. Abraham Maslow proposed that there are sets of basic needs. These needs, arranged in an hierarchical order are: physiological, safety, belongingness, love, esteem and self-actualization, knowing and understanding, and aesthetic. He suggests that humans are motivated by the desire to achieve or maintain the various conditions upon which these needs rest as well as more intellectual desires (Maslow, 1972, p. 45). When a basic need is satisfied, a “higher” need emerges and serves as the center of organization of behavior. Human needs are usually partially satisfied and partially unsatisfied. “When the deficiency needs have been satisfied, the growth motivated person seeks pleasurable tension and engages in self-directed learning” (Redick & Vail, 1991, p. 19). The humanistic view of motivation emphasizes personal freedom, choice, self-determination, and striving for personal growth. Humanistic theory stresses the importance of needs and intrinsic motivation.

These major views provide the foundation for achievement motivation and attribution theory. Jones et al., (1972) defines attribution as the basic process of perceiving the self, other persons and the settings in which people function. Eccles (1993) ties attribution and self-perception to student achievement.

Achievement Motivation. Achievement motivation as a psychological construct first appeared in 1938 in H.A. Murray’s list of needs as “(n)eed Achievement” (Heckhausen, 1991). Murray recognized that people differ in desire or tendency to “overcome obstacles, to exercise power, to strive to do something difficult as well as quickly as possible” (cited in Franken, 1982, p. 345). Murray developed the Thematic Apperception Test (TAT) to measure differences in human motivation. McClelland (cited in Franken, 1982) and his associates continued Murray’s work with the refinement of the TAT that allowed them to reliably differentiate people in terms of need-achievement motivation.
McClelland's (cited in Franken, 1982) interpretation of need-achievement motivation suggests that cues previously associated with positive situations produce a partial arousal of the positive effect originally experienced. The individual partly experiences as well as anticipates a pleasurable outcome. If prior achievement situations lead to a positive affect, the individual would be more likely to engage in achievement behaviors. McClelland's (cited in Franken, 1982) research indicated that men with high need-achievement motivation tend to come from families in which achievement striving is emphasized. Young adults with need-achievement motivation often report that their parents were not particularly warm individuals, who emphasized achievement rather than affiliation (Beck, 1978).

Atkinson (cited in Franken, 1982) suggests that the need to achieve is tempered by the need to avoid failure. If a person was punished for failing, a fear of failure would be a motive to avoid failure. Atkinson determined that achievement motivation is determined by two factors, hope for success and fear of failure (cited in Franken, 1982). Achievement motivation theory for Atkinson is an expectancy-value theory because it assumes that the tendency to engage in a particular activity is related to the strength of the cognitive expectation that the behavior leads to a particular consequence. In addition, the goal must have value. People engage in an achievement related activity as a result of their belief that the activity leads to valued goals (Petri, 1981).

Vidler (1977) recognized that the development of the need for achievement is influenced by many factors. Cultural values, social role systems, educational processes, peer-group interactions and child-rearing practices are factors that influence achievement. He cites Winterbottom and McClelland's research that found the mothers of sons with high achievement motivation differed from those whose sons had low achievement motivation. Mothers of high achieving sons set higher standards for their sons, expected independence and mastery behavior at an early age and rewarded their sons affectively.
Rosen and D'Andrade (cited in Vidler, 1977) also looked at the relationship between child-rearing practices and achievement motivation in children. They concluded that self-reliance training fostered high need for achievement in children, provided that the training did not reflect generalized parental authoritarianism or rejection (cited in Vidler, 1977).

**Attribution Theory.** Attribution theory emphasizes cognitive information processing as crucial to the understanding of behavior. Attribution approaches generally acknowledge the importance of motives in generating attributions and the role of attributions in the future direction of behavior (Petri, 1981).

Weiner (1984) is associated with attribution theory and its relationship to achievement motivation. Weiner (1984) believes that any theory of motivation must include a full range of cognitive processes, emotion and rational and nonrational actions. "The guiding principle of attribution theory is that individuals search for understanding, seeking to discover why an event has occurred" (Weiner, 1984, p. 18). A causal attribution answers the question why an outcome has occurred. Knowing why one has failed might increase later chances for success.

A causal search is not limited to a single motivational domain. Weiner (1984) recognizes that student achievement can be ascribed to ability, motivation, others, difficulty of the task or even luck. The number of perceived causes is infinite and is dependent on the particular activity that is under consideration.

Weiner (1984) theorizes that individuals use four elements to interpret and predict the outcome of an achievement related event. The four causal elements are ability, effort, task difficulty and luck. In attempting to explain the success or failure of an achievement related event, the individual assesses his ability level, the amount of effort expended, the
difficulty of the task and magnitude and direction of luck. Two of the four elements are described as internal factors (ability and effort), while two of the factors are considered external factors (task difficulty and luck). Two of the elements have stable characteristics (ability and task difficulty), while two of the elements have unstable characteristics (effort and luck).

Weiner (1984) concludes that in achievement-related contexts, affect is determined by the locus of control dimension. A person who places responsibility for success or failure on ability-effort (internal factors) feels more pride or shame than a person who places responsibility for outcomes on task difficulty or luck (external factors) (Ball, p.53). His model suggests that the achievement motive can be defined as the “capacity for perceiving success as caused by internal factors, particularly effort” (Jones et al., 1972, p. 112).

In her study of classroom motivation from an attributional perspective, Graham (1984) suggests that “causal attributions are central to a theory of motivation that has proved to be exceedingly rich and applicable to a wide range of achievement-related concerns” (p. 31). Attributional research has identified a number of informational cues, such as prior performance history and social norm information, that influence causal attributions.

Eccles (1993) demonstrates that (a) perceptions of one’s abilities and the value one holds for these competencies are important mediators of activity and course choice and performance; (b) parents’ attitudes, beliefs and perceptions about their children’s abilities are critical mediators of children’s academic self and task beliefs - more critical in some instances than either the children’s own academic performance or classroom experiences” and that (c) classroom characteristics have a significant impact on the developmental trajectory of early adolescents’ motivational orientation in school, as well as on their self beliefs and task beliefs (p. 145).
Eccles (1993) recognizes that parents' behavior can influence their children's interests. Katkovsky, Crandall and Preston (cited in Eccles, 1993) found that "parents who value intellectual competence are more likely to become involved in their children's intellectual pursuits" (p. 169). She states that "parents involvement with their children's achievement have important consequences for achievement motivation and behavior" (1993, p. 169). The impact of parents' involvement on children's motivation is likely to be mediated by children's perceptions of their parents' behavior.

Eccles states that

Families who provide a positive emotional environment are more likely to rear children who want to internalize the parents' values and goals and therefore imitate the behaviors they model. ...(C)children growing up in such homes should be more likely to develop a positive achievement orientation if the parents themselves provide a model of a positive general achievement orientation (1993, p. 51).

However, it should be noted that excessive attempts to influence children's interest in a specific way can backfire and lead to a decrease in their interest and involvement (Eccles, 1993).

Eccles' (1993) research indicates that parents hold specific beliefs about their children and the nature of their talent. Yee and Eccles (cited in Eccles, 1993) found that parents of boys rated natural talent as a more important reason for their children's success in math than did parents of girls. (cited in Eccles, 1993, p. 163). Parents of girls rated effort as a more important reason for their success in math. Based on her research, Eccles concludes, that the gender-role stereotype attributions parents make for their children's performance may be more important mediators of parents' gender differentiated perceptions of their math competence. She found that parents of boys attributed their son's success in math and sports to natural ability. Parents of girls were more likely to attribute their daughter's success in English to natural ability. She concludes that parents' perceptions of their children's competencies in various domains are influenced by the sex
of the child and by the parents' gender-role stereotyped beliefs about which sex in naturally more talented in these domains (1993, p. 168).

Van Buren states that "Home economics has been affected by sexism and gender issues since its beginning" (1996, p. 269). Since the content of family and consumer sciences is often gender stereo-typed, based on Eccles research, it is possible that parents attribute girls' success in the area as being associated with natural talent and boys' success with effort. It is also possible that parents offer more support for girls' participation in family and consumer sciences courses.

As is true for parents, teacher influences have also been linked to student achievement motivation, satisfaction and self-concept. A German study by Heckhausen (cited in Jones, et al., 1972, p. 98) demonstrated that student ability and motivation (effort) attributions differentially influence rewards and punishments bestowed by teachers. Studies indicate that warm student-teacher relationships increase a teacher's influence by increasing students' desire to do what the teacher says. Eccles contends that the impact of teacher influence on motivation and performance should also depend on the extent to which the teacher runs a well-managed but not overly controlling classroom.

Recent work has extended this general approach to the climate of the entire school. Brookover et al. (1979) suggests that the achievement of children in academic subjects is "partly a function of the social and cultural characteristics of the school social system" (p.6). He states that

children take their cues from those important to them and with whom they interact, attending carefully to their expectations and definitions of appropriate behavior in the student role. In the context of the social system, students come to perceive the role definitions, the norms, expectations, values, and beliefs that others hold for them and act accordingly.

Brookover et al. (1979) contends that the school social system or social environment affects school learning outcomes.
Summary

Behaviorists believe that humans are motivated by stimulus and response. The cognitive view "conceive(s) of an action sequence as instigated not by stimulation but by some source of information. External and internal events are encoded, categorized and transformed into a belief" (Weiner as cited in Vail & Redick, 1991, p. 17). Behavior is a function of intervening thought processes. The humanistic view of motivation stresses the intrinsic need for personal growth and fulfillment based on satisfying a hierarchy of deficiency needs in order to satisfy growth needs.

McClelland (cited in Franken, 1982) recognized that achievement behaviors are reinforced if achievement situations lead to positive affects. Atkinson (cited in Franken, 1982) suggested that the need to achieve is offset by the fear of failure. Weiner (1984) reasoned that cognitive processes played a role in attributing why an event has occurred. The four elements Weiner suggested to interpret and predict the outcome of an achievement related event are ability, effort, task difficulty and luck. These elements are classified as internal or external factors.

Graham (1994) and Eccles (1993) associate attribution theory with student achievement in the classroom. Their research suggests that parents' values of education and involvement in their children's education are related to their achievement. Eccles further concludes that the school environment contributes to student achievement.

Parental Involvement

Family and consumer sciences teachers have historically worked with parents and family members in the education of students. Until 1996 extended service time had been required for Ohio teachers to make home visits to parents and family members. Parents frequently serve as advisory committee members to many Work and Family Life programs. Little has been done, however, to determine the extent to which parent involvement is
related to student achievement.

O’Donnell and O’Donnell (1995) state that “the evidence continues to mount that the most significant single factor in student achievement is the individual’s student family. The research findings are so convincing that debate on this point seems hardly worthwhile” (p. 25). In her extensive review of parent involvement programs, Henderson (1987) maintains that “parent involvement improves student achievement” (p.1). She recognizes that “programs designed with strong parent involvement produce students who perform better (academically) than otherwise identical programs that do not involve parents as thoroughly, or that do not involve them at all” (1987, p. 1). She confirms that when parents help children at home and stay in touch with them at school, they score higher than children of similar aptitude and family background whose parents are not involved.

While much of the research on parent involvement is focused on early childhood education, Henderson (1987) states there are strong effects from involving parents continuously throughout high school. Hollifield (1994) notes that parent involvement in their children’s schooling declines dramatically as students move through middle school and high school. He believes, however, that students still want and need their parents’ support to reach their education goals.

Becher (1984) established several family process variables and parent behaviors related to student achievement. In her review of research on parent involvement, she found that children with higher achievement scores most often had parents who held high expectations for achievement, exerted more academic pressure, provided more academic guidance, and exhibited a higher level of general interest in their children (Becher, 1984). These parents interacted with and responded to their children frequently. Becher (1984) found that children with higher scores had parents who used more advanced levels of thought and language and provided more assistance in the development of problem solving.
strategies. Higher scoring children had families who provided more reinforcement of school behavior than for children who did not score as high. Becher found that parent involvement programs that were the most effective were those which emphasized the importance of the parent and a close relationship between parent and teacher.

Parents' Value of Education and Interest in Schoolwork. Bloom (1964) suggested that differences in the academic performance may be related to the value the family placed on school learning and the reinforcement of learning in the home (p. 123). In a later work (1986), he stated that home environment factors including priority given to school work over other pleasurable activities and academic aspirations and expectations parents have for their children have more influence on children's achievement in school than parents' level of education, income, or occupational status. Bloom (1986) contends that what parents do, rather than their status characteristics, are the more powerful determinants in the home environment related to school achievement of their children (p. 4).

In a focused study of poor families and their high school-aged children, Clark (1983) found that a family's overall cultural style, not material status, educational level, income or social surroundings, is what determines whether children are prepared for school. He established that high achieving students participated in frequent dialogues with their parents. Clark notes that these parents hold common attitudes towards education and show concern about the student's school success. Steller suggests that parents are the "significant others" who, with teachers, set expectations for children's achievement (1988, p. 39). Mayeske's analysis of the 1966 Coleman report concluded that parent expectations and supportive activities are crucial to student achievement (1969).

McDill and Rigsby (1969) identified parent involvement to be the critical factor in the achievement and aspirations of high school students. In a later study, they showed a significant positive correlation between parent involvement and interest in the high school
and scores on a math achievement test (McDill & Rigsby, 1973). In their secondary analysis of the High School and Beyond (HSB) data, Shanan and Walberg (1985) revealed that the amount of discussion between parents and children concerning education was found to be significantly related to mathematics and reading achievement.

**Parents Participation in School Activities.** In *The Learning Gap*, Stevenson and Stigler (1992) compared the level of performance of the American educational system to schooling in Chinese and Japanese cultures. Parental involvement in schooling is a hallmark of these Asian cultures. They write:

The close cooperation in Asian cultures between parents and teachers leads to a strong emphasis on communication between home and school, reflected in a simple but very effective technique employed in both Japanese and Chinese schools. Each child carries a small notebook back and forth between home and school. A parent must indicate in the notebook that the child had completed the daily homework assignment and may write about any general problems or difficulties of which the teacher should be aware. In turn, teachers use the notebooks to communicate with parents about homework assignments, test results, special activities in school and the child’s behavior. Parents and teachers are expected to check the notebook everyday.

Only through this degree of intimate knowledge of what is happening at school can parents hope to be aware of the ways they can help their children and provide a home environment conducive to studying. Parent-teacher conferences, parental visits to the school, and meetings of parent-teacher associations in America do not provide the kind of day to day feedback that parents get through notebooks carried back and forth by Chinese and Japanese children (1992, p. 84).

Gillum (1977) found that school districts with the greatest gains in reading scores were those in which parents were involved and had responsibility for working with teachers and children. Dornbusch, Ritter, Leiderman, Roberts and Fraleigh (cited in Henderson, 1987) concluded that while parent education is an important family background variable related to student achievement, “the degree of parental participation in such school functions as open school nights... is strongly linked to (student) grades” (cited in Henderson, 1987, p.32). Even a low level of participation can have a powerful
statistical effect, as in Jenck's finding that schools with active parent-teacher organizations had a higher average student achievement than those without them (Jencks, 1972).

Becher (1984) cites Schlossman's concerns that increased emphasis on the role of parents could place excessive pressure on them. In his critical analysis of parent education, he writes

These programs.... view poverty mothers—rather than professional educators—as the critical agents in developing their children's intellectual potential.... Parent education programs thereby shift the burden of accountability for failure from .... professional education to the poverty parent.... Parent education not only tends to blame the victim, it places an inordinate share of blame on women alone (cited in Becher, 1984, p. 10).

While the current state of knowledge about parent involvement provides extremely strong support for continuing these efforts, careful consideration should be given to such concerns.

Summary

There appears to be a significant relationship between parents involvement in their children's education and their children's achievement in school. This seems to hold true when parents value education and have an interest in schoolwork. While much of the research in this area focuses on early childhood education, there is support to warrant parent involvement in high school as well. Parent involvement in school activities has been shown to have a positive relationship to student achievement.

School Climate

In addition to parental involvement, research suggests that student achievement is related to school climate. Sutherland (1994) identified school climate as an important component of the school. She states that while not easily defined, "school climate is easily recognizable" (1994, p. 3). In schools with a healthy climate, staff and students care for, respect and trust each other; morale is high and social and academic growth are
The literature on effective schools indicates that education depends not only on teacher behavior and classroom instruction, but on features of the school as a whole. Gottfredson and Gottfredson (1989) correlated teachers scales on the Effective School Battery (ESB) with student academic achievement, progress through grades, attendance and dropout rates. The ESB assessed several measures of school climate. Results showed that the ESB scales were related to academic performance, especially in the elementary grades; to attendance and dropout rates especially in the middle schools and high schools. These correlations persisted even when statistical controls were applied for student ethnic composition and socio-economic status.

Rutter et al. (1979) showed that significant differences were found between pupils in different secondary schools that could not be attributed to social selection or intelligence factors (p. 178). The results showed that the relationship between the cumulative assessment of the schools “character” and the outcome of the different pupil variables was much stronger than the connection between the individual features of the school organization.

This suggests that the cumulative effect of these various social factors was considerably greater than the effect of individual factors of their own. The implication is that the individual actions of measures may combine to create a particular ethos or set of values, attitudes and behaviors that will become characteristic of the school as a whole (Rutter et al., 1979, p. 179).

Rutter et al. concludes that students’ behaviors and attitudes are shaped and influenced by their experiences at school and “in particular, by the qualities of the school as a social institution” (Rutter et al., 1979, p. 179).

James Sweeney writes that “school climate makes a difference” (1992). Reporting on the Iowa State University’s School Improvement Model (SIM) project, he concludes
that size of school, community type, and level of attendance make a difference in school climate. He states that as the size of the school increases, the climate becomes less positive. Suburban schools tend to have more positive climates than rural schools and, in general, urban schools have the least positive climates. Elementary schools tend to be more positive than secondary schools. Sweeney's report states that student discipline and attitudes tend to be climate dissatisfiers. He suggests that "in schools where discipline or student attitudes are not perceived as positive, the climate generally suffers" (1992, p. 70).

Brookover et al. (1979) defined school climate as "the composite of norms, expectations, and beliefs which characterize the school social system as perceived by members of the social system" (1979, p. 19). Their research was based on the general theory of socialization that humans come to behave in the ways that they perceive others around them expect and define as appropriate for them (p. 136). Brookover demonstrated that the social psychological variables identified as school climate explained much of the between-school variance in school achievement (p. 141). The study of 91 randomly selected Michigan elementary schools refutes the earlier research of Coleman (1966) and Jencks (1972) who indicated that schools do not and (or) cannot make a difference in the achievement outcomes of students. Brookover et al. contended that these earlier studies devoted little or no attention to the nature of social interaction that occurs within the school (1979, p. 135). They indicated that

high achieving schools are most likely to be characterized by the students' feeling that they have control, or mastery of their academic work and the school system is not stacked against them. This is expressed in their feelings that what they do may make a difference and that their teachers care about their academic performance. In contrast, the schools that are achieving at lower levels are characterized by the students' feeling of futility in regard to their academic performance. This futility is expressed in their belief that the system functions in such a way that they cannot achieve, that their teachers are not committed to their high achievement, and that other students will make fun of them if they actually try to achieve (Brookover et al., 1979, p. 143 - 144).
Thus, when students, teachers and all associated in the school social system assume that all students can and will learn, and provide appropriate norms and expectations, and practice the appropriate patterns of reinforcement and instruction for all, students will acquire a sense of control over their environment and overcome the feelings of futility and will achieve at higher levels (Brookover et al., 1979, p. 148)

Quality of School Life. Schools generate a social environment or climate through a combination of all the elements they comprise, including teacher-student interactions, programs, and classwork. Epstein and McPartland (1981) developed the Quality of School Life Scale (QSL) as a measure of student reactions to school climate. The QSL measures general student reactions to school (Satisfaction With School), level of interest in schoolwork (Commitment to Class Work), and student evaluations of instructional and personal interactions with teachers (Reactions to Teachers). Wright and Jenses (1981) determined that the QSL appears to be a fair measure of student affective response to the school.

However, unlike Rutter (1979) and Brookover (1979), Epstein (1981) doubted that school climate had a causal relationship to school achievement. In her analyses, Epstein writes

One of the persistent quandaries in research on student attitudes is the question of causation of achievements and attitudes. This is a standard chicken-egg enigma; Do positive attitudes cause higher achievement or does high achievement cause more positive attitudes? (1981, p. 100).

Her conclusion is “there is no important causal relationship between school achievement-test scores and attitudes towards school, or vice versa” (1981, p. 107). She states that relatively small environmental effects in student attitude may be all that can be expected at any single point in time. She does, however, suggest that when longitudinal data is examined, the patterns of influence are continuous and convincing throughout
adolescence. The comparisons imply the cumulative nature of small effects may be more important than cross-sectional studies are able to indicate (Epstein, 1981, p. 99).

Epstein (1981) cites the work of Malpass and Aiken who reported more positive relationship between attitudes and report card grades than between attitudes and achievement scores (Epstein, 1981, p. 100). Positive attitudes in class may motivate students to pay attention, take an interest in the class work, listen to the teacher's messages, and improve report card grades based on the daily work done in class (Epstein, 1981, p. 103).

Gnagey (1981) concluded that disruptive students have different perceptions of the quality of school life. Gnagey's study indicated that disruptive students don't like school. Using the QSL for the highest quartile of teacher identified well-behaved students (facilitators) and for the lowest quartile of teacher identified disruptive students (inhibitors), he showed a strong connection between extreme classroom behavior patterns and achievement students (1981, p. 55). Disruptive students had comparatively low QSL/TCH subscale scores. Students who are considered disruptive by their teachers have generalized their negative reactions to their school experiences. Student who are considered facilitators for the learning environment in their classes are positive about school and are in general committed to their class work.

Summary

Research indicates that there is a relationship of school climate to student attendance, dropout rates and report card grades. Various studies suggest a relationship between school climate and student achievement. Longitudinal data of adolescents indicate that a relationship exists between student attitude about school climate and student achievement.
School Size

Garbarino (1980) hypothesizes that school size matters, especially for academically marginal adolescent students. He suggests that the effect is not linear. That there is a threshold size and increases above 500 in a secondary school do not have an appreciable effect. Too often studies on school size make comparisons in which there is little variation, all schools are large. For example, the range in school size in Chicago in 1961-62 was between 620-4085, the average size was 2184 students. Garbarino (1980) believes that recent trends toward consolidation and larger schools force larger numbers of academically marginal students into these secondary schools.

McPartland and McDill (cited in Garbarino, 1980) related school size to school crime. Smaller schools were found to be more responsive and to have less crime. Their study suggests that smaller schools have better social control.

Barker and Gump (1964) found that large schools deprive most students of experiences in participatory roles. They found that large schools have more settings in which students can act, yet there are proportionately more people to fill those settings. Their research showed that students in large schools participated less frequently than students in small schools. Lindsay (cited in Fowler & Walberg, 1991) found that increased school size had a negative effect on student participation in extra-curricular activities, student satisfaction and school attendance.

Fowler and Wahlberg (1991) found a negative relationship between school size and student outcomes. Pittman and Haughwout (cited in Fowler & Wahlberg, 1991) proposed that large student bodies adversely affected the school climate and the student’s ability to identify with the school and its activities. Fowler and Wahlberg (1991) concluded that “students who are dissatisfied, who do not participate in school activities, and who are chronically absent or do not identify with the school will achieve less, whether on
achievement tests or on some postschooling measure” (1991, p. 191). They found that school size had a negative relationship to student outcomes. Six outcomes, including retention and several of the achievement test scores were negatively associated with size of school.

Summary

Research indicates that school size matters, especially for academically marginal students. Garbarino (1980) suggests that the effect school size has is not linear. Studies often compare all large schools. Smaller schools were found to be more responsive, have better social control and have less crime.

Larger schools had a negative effect on student participation in extra-curricular activities, student satisfaction and school attendance. Fowler and Wahlberg (1991) found that school size had a negative relationship to student outcomes including retention and achievement.

School Location

Finally, the Work and Family Life curriculum is a state model curriculum offered in wide variety of settings, including rural, urban, and suburban. In that resources are allocated to schools differently based on school location, research is needed to determine the relationship of school location to student achievement.

John Goodlad states that schools are “the same but different” (1984, p. 246). The same in the “ways of schooling-the mechanics of teaching, the kinds of activities in which students are engaged in classrooms, the modes of learning encouraged, instructional materials, tests and quizzes, grouping practices, and classroom arrangements” (1984, p. 246). Yet Ohio schools, like many across the United States, have serious inequities from one district to another. “Discrepancies exist in wealth and the quality of schooling in urban, suburban and rural school districts” (McCracken & Peasley, 1995, p. 3). Alan
Inequities in school finance derive from the way states finance public elementary and secondary schools. A heavy reliance on local property taxes as a major source of school revenues produces fiscal inequities because the property tax base is not distributed equally across school districts. As a result, property-poor districts usually have a low expenditure per pupil, even with high tax rates, while property-rich districts usually have higher expenditures per pupil, even with low tax rates (1992, p. 455-456).

A study done by the Office of Educational Research and Improvement (Appalachia Educational Laboratory, 1988) suggested that student achievement was lower in rural than in non-rural districts in four states served by the Appalachian Educational Laboratory. The low achievement appeared to be associated with the comparatively greater poverty that characterizes rural areas. The report suggests that equity in school funding is crucial to adequately support rural education.

Kearney (1994) stated the benefits of small, rural schools in his analysis of Idaho high schools. He suggested that community involvement, close interpersonal relationships among teachers, parents, students and administrators may "offset financial and enrollment limitations" (1994, p. 14)

McCracken and Peasley (1995) studied the relationship of school location to student achievement using the percentage of students who passed the Ohio ninth grade proficiency test in the fall of 1990 in the 612 Ohio school districts. They concluded that socioeconomic status was the strongest predictor of student achievement using the socioeconomic (financial ability) measures of percent of families receiving Aid to Dependent Children (p=-.61) and median family income (p=.59). Percent local funding (p=.47) and non-instructional expenses per pupil (p=.41) were the financial effort factors that were most highly related to with achievement.

In a subsequent study, the researchers used multiple indicators of achievement and
determined that financial ability again appeared to be the most powerful predictor of student achievement. Financial effort as measured by the rates of taxation and per pupil expenditure was the second ranking predictor. McCracken and Peasley stated

Semi-rural and rural school districts lagged behind rural/suburban, suburban, and urban districts in most measures of educational achievement. Rural/suburban school districts (districts low in population but near urban centers) were lower in per-pupil expenditure but competed well in terms of educational achievement (1995, p. 14).

McCracken and Peasley concluded that school location was not related to student achievement when financial ability and financial effort were controlled. Rural/urban schools had the highest level of achievement among Ohio schools even though they did not rate the highest in either financial ability or effort. They speculated that proximity to an urban area may be important reaching higher levels of student achievement.

Summary

Discrepancies exist in the wealth and the quality of schooling in urban, suburban and rural school districts in Ohio. Small, rural schools may appear to compensate for financial and enrollment limitations through close interpersonal relationships among administrators, teachers, parents and students. Financial ability appears to be the most powerful predictor of student achievement when Ohio school districts were compared. Financial effort was the second ranking predictor. Rural/urban schools had the highest level of achievement among Ohio schools even though they did not rate the highest in either financial ability or effort.

Chapter Summary

Research in Family and Consumer Sciences education tends to describe and relate aspects rather than to assess effectiveness or show relationships to student achievement.
Professionals in Family and Consumer Sciences recommend further research in the areas of achievement and measurement of skills and knowledge.

The Work and Family Life curriculum focuses on solving practical problems relevant to the dynamic interrelationships of work life and family life for secondary students both now and in the future. The 1993 curriculum was developed in a time when state legislators were calling for school reform and increased accountability. A statewide standardized testing system was developed for the Work and Family Life courses, Personal Development and Resource Management. This review of literature concentrated on the factors associated with student achievement on the Personal Development and Resource Management tests.

Three broad views of motivation were presented in the review. They were the behaviorist view which recognizes that humans are motivated by stimulus and response; the cognitive view which conceives an action sequence stimulated by a source of information; and the humanistic view which stresses the need for personal growth and fulfillment based on satisfying a hierarchy of needs.

McClelland (cited in Franken, 1982) claimed that achievement behaviors are reinforced if achievement leads to positive affects. Atkinson (cited in Franken, 1982) believed that the need to achieve is offset by the fear of failure. Weiner (1984) suggested cognitive processes play a role in attributing why an event occurred. The elements Weiner (1984) proposed to interpret and predict the outcome of an achievement related event are ability, effort, task difficulty and luck.

Graham (1994) and Eccles (1993) associate attribution theory with student achievement in the classroom. Their research maintain that parents' values of education and involvement in their children's education are associated with their achievement. Eccles (1993) further concludes that the school environment contributes to student achievement.
There appears to be a significant relationship between parents involvement in their children’s education and their children’s achievement in school. This seems to hold true when parents value education and have an interest in schoolwork. There is evidence to support parent involvement in high school. Parent involvement in school activities has been shown to have a positive relationship to student achievement.

Another probable factor related to student achievement is school size, especially for academically marginal adolescent students. Research indicated that increased school size had a negative effect on student participation in extra-curricular activities, student satisfaction and school attendance. Large student bodies adversely affected the school climate and the student’s ability to identify with the school and its activities. Smaller schools were found to have better social control and less crime. Student outcomes, including retention and several of the achievement test scores were negatively associated with size of school.

Discrepancies exist in the wealth and the quality of schooling in urban, suburban and rural school districts in Ohio. Financial ability appears to be the most powerful predictor of student achievement when Ohio school districts were compared. Small, rural schools may appear to compensate for financial and enrollment limitations through close interpersonal relationships among administrators, teachers, parents and students.

While previous studies indicate the importance of parental involvement, school climate, school size and school location relative to student achievement, no studies were located that examined their relationship to student achievement in Work and Family Life courses. Knowledge of work and family life is of critical importance to individuals, families and society both now and in the future. Further examination of student achievement is needed to effectively guide educators and administrators in enhancing the curriculum offering. With the advent of a statewide competency test in the areas of
Personal Development and Resource Management it is now possible to more adequately examine factors associated with student achievement. This study provides information related to student achievement in the Ohio Family and Consumer Sciences program, Work and Family Life.
CHAPTER 3

METHODOLOGY

The purpose of this study was to determine what selected factors are related to student achievement on the Work and Family Life tests in the areas of the Personal Development and Resource Management. This study examines the elements of parental involvement, school climate, school location category, school size, curricular factors and student personal characteristics as they relate to student scores on the competency tests in the Work and Family Life areas of Personal Development and Resource Management.

The objectives of this study were to: (a) determine student achievement on the Personal Development and Resource Management tests; (b) identify personal characteristics of students enrolled in Personal Development and Resource Management courses; (c) identify students' perceptions of parents involvement in their education; (d) identify students' attitudes towards school climate; (e) investigate relationships between student achievement on the Personal Development and Resource Management tests, students perceptions of parent involvement, and school climate; and (f.) determine if a relationship exists between student achievement, perceived parent involvement, school climate and school location category; (g) identify predictors of student achievement on the Personal Development and Resource Management tests.
This chapter will address the methodology to be used in this study. The variables of interest, research design, sampling procedures, instrumentation, data collection and data analysis techniques will be discussed.

Research Questions

The research questions to be answered were:

1. Is there a student achievement gain from pretest to posttest on the Personal Development test and the Resource Management test after instruction under the Ohio Work and Family Life program?

2. Are student personal characteristics related to student scores on the Personal Development test and the Resource Management test?
   a. gender
   b. age
   c. grade
   d. previous family and consumer sciences classes
   e. school attendance

3. Does certainty of future career choice relate to student scores on the Personal Development test and the Resource Management test?

4. Does certainty of future family life (e.g. marriage, children, home life, etc.) relate to student scores on the Personal Development test and the Resource Management test?

5. Are student scores on the Personal Development test and the Resource Management test related to school location category?

6. Are student scores on the Personal Development test and the Resource Management test related to school size?
7. Are curricular factors, specifically time spent on the Ohio Work and Family Life curriculum and whether the score is counted for a grade, related to student scores on the Personal Development test and the Resource Management test?

8. Is student reaction to school climate related to student scores on the Personal Development test and the Resource Management test?

9. Is student perceived parental involvement related to scores on the Personal Development test and the Resource Management test?

10. Which independent variables are the best predictors of the dependent variable?

Variables of Interest

The five major variables under investigation were derived from a review of the literature. The variables and their components are:

1. Personal characteristics (independent variable)
   a. age
   b. grade
   c. gender
   d. previous courses taken in Work and Family Life
   e. school attendance
   f. certainty about career choice
   g. certainty about future family (e.g., marriage, children, home life)

2. Perceived parental involvement (independent variable)
   a. values/interest in schoolwork
   b. involvement in school functions

3. Student attitude about school climate (independent variable)
   a. satisfaction with school
   b. commitment to classwork
   c. reactions to teachers

4. School characteristics (independent variable)
   a. school size
   b. school location
      (1.) urban
      (2.) suburban
      (3.) rural/suburban
5. Curricular factors
   a. time spent on the Ohio Work and Family Life curriculum
   b. score is counted for a grade

6. Student achievement (dependent variable)
   a. Personal Development test
      (1.) total score
      (2.) gain score
   b. Resource Management test
      (1.) total score
      (2.) gain score

Research Design

Because the variables examined in this study were not subject to true experimental
manipulation, the design of the study was classified as ex post facto/correlational research.
Gay (1992) categorizes this as descriptive research since it describes conditions that
already exist. The aim of correlational research is to "investigate the extent to which
variations in one factor correspond with variations in one or more other factors based on
correlation coefficients" (Isaac & Michael, 1981, p. 49). Correlational research is most
appropriate when variables are complex and do not lend themselves to manipulation. This
type of research permits the measurement of several variables and their interrelationships
in a realistic setting (Isaac & Michael, 1981, p. 49). Also, the analysis of the relationships
among a large number of variables can be accomplished in a single study. It allows the
researcher to analyze how several variables either singly or in combination might effect a
particular pattern of behavior. And it provides information concerning the degree of
relationship between the variables being studied.

There are limitations to correlational research. Correlations cannot establish cause
and effect. Gay (1992) states, correlational research as an attempt "to understand a
complex variable by identifying and analyzing variables related to it, has been more productive for some complex variables than for others” (p. 269). Gay (1992) recognizes that when trying to “break down” a complex variable, some “wholes are greater than the sum of their parts, or all the relevant parts have not yet been identified” (p. 270).

Models of those factors that may have potential influence on student achievement on the Work and Family Life Personal Development and Resource Management tests were developed. These models represent the variables discussed in the review of literature (Figures 3.1 and 3.2).
Figure 3.1: Predictors of student achievement on the Work and Family Life Personal Development test
Personal Characteristics
- age
- grade level
- gender
- previous courses taken in Work and Family Life
- school attendance

Future Orientation
- certainty about career choice
- certainty about future family (e.g. marriage, children, home life)

Perceived Parental Involvement
- values/interest in schoolwork
- involvement in school functions

Student Attitude About School Climate
- satisfaction with schoolwork
- commitment to classwork
- reactions to teachers

School Characteristics
- school size
- school location

Curricular Factors
- time spent on curriculum
- score counts for grade

Student Achievement
- posttest score
- gain score

Figure 3.2: Predictors of student achievement on the Work and Family Life Resource Management test
Instrumentation

The Personal Development pretest (PDP), the Personal Development posttest (PDT), the Resource Management pretest (RMP) and the Resource Management posttest (RMT) were developed by The Ohio State University Vocational Instructional Materials Laboratory to determine student cognitive gains in the Personal Development and Resource Management courses. The Parent Involvement Measure (PIM) was developed by Sharon Paulson, associate professor of psychology at Ball State University in Muncie, Indiana to measure parent involvement in school. The Quality of School Life Scale (QSL) was developed by Joyce L. Epstein and James M. McPartland (1978) of The John Hopkins University to measure student reactions toward school.

**Personal Development pretest (PDP) and posttest (PDT) and Resource Management pretest (RMP) and Resource Management posttest (RMT)**

The Personal Development test and the Resource Management test were developed to assess student cognitive gains in the Ohio Work and Family Life semester courses of Personal Development and Resource Management. Each test consists of 40 multiple choice items measuring student knowledge of process competencies and content competencies.

Pretest and posttest bank items for the Personal Development test and Resource Management test were developed by Barbara Newman, Professor of Family Relations and Human Development and Phillip Newman, Adjunct Professor of Home Economics Education at The Ohio State University. Items were reviewed and revised by subject matter experts including: Ruth Dohner, Professor, Home Economics Education, The Ohio State University; Denise Sharp, Supervisor for Child and Family Programs, Springfield City Schools; Sandra Laurenson and Lynne Hall, State Supervisors, Vocational Home Economics; Heather Boggs, Educational consultant; and Debra Tartell-Matthews, teacher, Lancaster City Schools.
A group of 20 Work and Family Life teachers reviewed the questions for content validity. Test questions were piloted with Work and Family Life students in the winter and spring, 1995. Cronbach's alpha for the Personal Development test was established at .91. Cronbach's alpha for the Resource Management test was established at .89.

The Ohio Department of Education chose to administer equivalent forms of the Personal Development test and Resource Management test. Equivalent forms were developed to assist in the pretest/posttest design and to avoid testing effects on the posttest.

For this study Cronbach's alpha for the Personal Development Pretest process competencies were .72 and .90 for the content competencies. Cronbach’s alpha for the total test was .91. Cronbach’s alpha for the Personal Development Posttest process competencies were .82 and .86 for the content competencies. Cronbach’s alpha for the total posttest was .91. The subscales are as follows:

**Process Competencies**
- Balancing work and family life
- Practical reasoning
- Communication
- Leadership/citizenship

**Content Competencies**
- Personal development
- Stress/conflict management
- Career planning
- Human relationships
- Parenting

Cronbach’s alpha for the Resource Management Pretest process competencies
was .73 and .87 for the content competencies. Cronbach's alpha for the total pretest was .89. Cronbach's alpha for the Personal Development Posttest process competencies were .82 and .83 for the content competencies. Cronbach's alpha for the total posttest was .90. The subscales are as follows:

**Process competencies**
- Balancing work and family life
- Practical reasoning
- Communication
- Leadership/citizenship

**Content competencies**
- Resource management
- Housing
- Living environment
- Clothing decisions
- Foods and nutrition

It is important to note that while subscales for the process competencies and the content competencies are reported, only the total scores for the tests were used in this study.

**Parent Involvement Measure (PIM)**

Paulson's Parent Involvement Measure (PIM) was developed as a measure of parental involvement in adolescents' achievement (1994). Separate subscales of values towards achievement, parental interest in school work and homework, and parental involvement in school activities were created. The Parental Involvement Measure was derived from an extensive review of the literature. The Parental Involvement Measure was a 22-item instrument of simple descriptive statements. Both adolescents' and parents' (mothers' and fathers') versions of the scale were created. Responses were on a five-point
Validity. The three subscales created to measure specific dimensions of parent involvement were achievement values (8 items), interest in school work and homework (9 items), and involvement in school functions (5 items). Principal components factor analysis revealed two factors with the items from the achievement values and interest in school work loading with one factor and the items from the school functions subscale loading on the other factor.

Correlations of the achievement scale with the Family Environment Scales (cited in Paulson, 1994) were obtained to assess construct validity. For the n=247 sample, the PIM values subscale were correlated with the FES Achievement Scale for a maternal correlation of $r = .49$ and paternal correlation of $r = .36$ ($p < .01$).

Reliability. Cronbach’s alphas for adolescents’ reports of maternal and paternal involvement were .86 and .82 respectively. Alphas for mothers’ and fathers’ reports of their own involvement were .83 and .77 respectively. Cronbach’s alphas for the adolescents’ report on maternal involvement for the three subscales were .79, .77 and .72 respectively. Alphas for the paternal involvement were .78, .71 and .71 respectively.

Cronbach’s Alpha for this study were .83 for student’s perceptions of maternal values and interest in school and .87 for student’s perception of paternal values and interest in school. Cronbach’s Alpha for students’ perception of parent involvement in school function was .49 for mothers and .52 for fathers. The Cronbach’s Alpha for the total Parent Involvement Measure was .81 for mothers and .86 for fathers.

Student Perception of Parental Involvement. Youniss states that “once the term perception is introduced, the issue of validity becomes important” (1989, p. 61). He contends that a family member’s expression of a perspective is valid in that it “faithfully represents that individual’s viewpoint which is constructed from experiences within the family” (1989, p. 61). He believes such differences are to be expected, especially from adolescents and parents, who might readily view the same family actions distinctively.
The Quality of School Life Scale (QSL)

The QSL was developed by Epstein and McPartland (1978) to assess the attitudes and reaction to school life of students in grades 4-12. The QSL is a 27-item instrument that contains 14 true/false items, nine multiple choice items, and four items to which respondents make a selection from always to never. The three subscales include the Satisfaction (SAT) subscale which measures general well-being in school; the Commitment to Classwork (COM) subscale which deals with the level of student interest in assignments and curricular activities; and the Reactions to Teachers (TCH) subscale which measures student-teacher relations.

Validity. Student interpretation of items were solicited to ensure that students understood what was being asked. Items were revised using item analyses. The authors correlated scores on this measure to other factors which seemed to relate attitude toward school. Relationships were small to moderate in the directions predicted. The factor structure lends credibility to the subscales. Reactions to teachers was divided into two parts: personal and instructional interactions. There is evidence that the scores related to adjustment to school problems.

Reliability. Internal consistency reliability of the QSL was calculated on the scores of 4,266 elementary and secondary students. The overall Kuder-Richardson Formula 20 reliability for the QSL is .87 for secondary students. The KR-20 subscale reliabilities for secondary students are as follows:

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with School</td>
<td>.79</td>
</tr>
<tr>
<td>Commitment to Classwork</td>
<td>.80</td>
</tr>
<tr>
<td>Reactions to Teachers</td>
<td>.73</td>
</tr>
</tbody>
</table>

Cronbach's Alpha for the Satisfaction with School scale for this study was .77. Cronbach's Alpha for the Commitment to Classwork scale was .76 and .79 for Reactions
to Teachers. The Cronbach’s Alpha for the Quality of School Life survey for this study was .89.

Human Subjects Information

The researchers requested an expedited review procedure from The Ohio State University Human Subjects Institutional Review Board on the basis that the study incorporated existing data from the Ohio Department of Education, the investigators did not manipulate subjects’ behavior, and the research did not involve stress to subjects.

Included in the information for the Human Subjects Institutional Review Board were the following: a brief description of the background and purpose of the research; the conditions of the study; all measures in the study consisting of the Personal Development Pretest (PDP), the Resource Management Pretest (RMP), the Perceived Parent Involvement Measure (PIM), and the School Climate Survey (QSL); letter to teachers; Information Form for parents; Teacher Script to be read at the administration of the test and surveys; and assurances that participation in the study was voluntary. The description of the existing data used in the study stated:

These data were collected by the Division of Vocational and Adult Education, Family and Consumer Sciences Education under the direction of Dr. Joanna Kister, director and Mrs. Delores Allenspach, assistant director. These data were collected in vocationally funded Work and Family Life classes. These data are the property of the Ohio Department of Education. These data consist of Educational Management Information Systems (EMIS) data regarding enrollment, pretest and posttest achievement scores on the Work and Family Life tests, and quantitative data on two surveys: one perceived parental involvement survey, and one Quality of School Life survey (White, R.A. & Redick, S.S, 1996).

In addition, a complete copy of the proposal was submitted to the Human Subjects Institutional Review Board.

The Human Subject Institutional Review Board approved the study with the provision that parents be informed of the Parent Involvement Measure and the Quality of
School Life survey.

Sampling Procedures

The population for this study included Ohio secondary students in grades 9 through 12 enrolled in Work and Family Life Personal Development and Resource Management courses in the fall of 1996. Because fall enrollment figures were not available for the fall semester, 526 teachers estimated the number of students in their courses based on the previous year's enrollment and ordered 25,330 Personal Development pretests (PDP) and 22,450 Resource Management pretests (RMP) for their students. All orders were placed with The Ohio State University Vocational Instructional Materials Laboratory (VIML) in the spring of 1996.

The Ohio Department of Education funding guidelines permit Personal Development (PD) and Resource Management (RM) classes to be taught as either semester courses or combined and taught as year-long courses. Since there were no means to determine whether the courses were being offered as semester courses or year-long courses, only the 57 Resource Management teachers and the 130 Personal Development teachers who ordered these tests exclusively were selected for this study. Table 3.1 illustrates the number of teachers who ordered tests from the VIML. Only one teacher ordered tests for each school. In schools with several teachers, only the teacher placing the order was assigned a random number.
The sample size in this study was determined by guidelines suggested by Krejcie and Morgan (1970). For a population of 25,000, a sample size of 378 students was needed. A random cluster sample was chosen to reach the appropriate numbers of students. The random cluster sample was chosen from teachers who self-selected to order the testing materials. The researcher estimated the number of tests each teacher needed based on average class size. The average class size for Personal Development and Resource Management classes was 20 students (Ohio Department of Education, 1996). A large sample of teachers was chosen because the frame included teachers who were ordering tests, but not teaching either Personal Development or Resource Management, this study required the willingness of teachers, students and parents to volunteer. In addition, four separate instrument administrations were required over a five month period. Students self-selected to participate based on their willingness and their parents’ permission to respond to the Parent Involvement Measure and the Quality of School Life survey.

The researcher chose 40 Personal Development and 40 Resource Management teachers to be included in the sample, with the anticipation of reaching 800 Personal Development and 800 Resource Management students. The 40 Personal Development teachers ordered 2037 Personal Development pretests and the 40 Resource Management
teachers ordered 1835 Resource Management pretests for all Personal Development and Resource Management teachers and students in their respective schools.

Of the 40 Resource Management teachers 27 chose to participate in the study. Of the 40 Personal Development teachers, 31 chose to participate in the study. Teacher nonrespondents were surveyed to determine their reasons for nonresponse. Reasons for nonresponse included incorrect mailing information for teachers (n = 4), problems with school schedules (n = 3), objections from community (n = 1), too much time needed for tests and surveys (n = 1), teacher job change (n = 1). Twelve teachers did not respond to test or follow-up surveys.

Data collection

Teachers and their administrators received letters informing them of the test and order forms in May, 1996. Teachers were asked to base their test orders on previous year’s enrollment in Personal Development and Resource Management courses. The Vocational Instructional Materials Laboratory requested that only one teacher order from each school building.

Letters were sent on August 28, 1996 inviting teachers who had ordered tests to participate in this study. In addition to the pretests and posttests for Personal Development and Resource Management, participating student subjects were asked to complete a Parent Involvement Measure (PIM) and Quality of School Life (QSL) scale. The PIM was administered with the pretests. The QSL was administered in January with the posttests. All students received a Parent Information form to inform parents of the study. Parents who objected to their child’s participation in the study were asked to sign the form and return it to the teacher. Students who parents objected were not permitted to complete surveys. Only student volunteers whose parents did not object competed the Parent Involvement Measure and the Quality of School Life instrument.

A total of 2,037 Personal Development Pretests and 1835 Resource Management
Pretests and 3,872 Perceived Parent Involvement surveys were coded and mailed with on September 3, 1996. Included were tests and surveys for teachers other than the ordering teacher.

The Ohio State University Vocational Instructional Materials Laboratory (VIML) was the agent contracted by the Ohio Department of Education to develop, administer, and score the pretests and the posttests. All pretests and posttests became part of the data base developed by the VIML. All handling and mailing procedures were done according to VIML guidelines. The Vocational Instructional Materials Laboratory allowed the researchers to include Parent Involvement Measures and Quality of School Life instruments with their materials, but all handling, mailing and scoring of tests were done through the VIML. The VIML provided a 4-week time period for teachers to return pretests and a January 30, 1997 deadline for teachers to return posttests. The VIML did not accept teacher data after the 4-week period for pretest and the deadline for posttests.

Each student score sheet for the PDP and RMP had a code number that corresponded to a code number on the PIM survey. Teachers were instructed to match student code numbers for the pretests with the code numbers for the PIM survey. In January, 1997, teachers received coded student score sheets for the PDT and RMT and coded QSL surveys. Teachers were again instructed to match surveys with student score sheets. In order to maintain the anonymity of students participating in the study, the researcher entered the data from the surveys and matched survey scores with coded pretest and posttest student scores obtained from the Vocational Instructional Materials Laboratory. The VIML matched the pretests linked to the Parent Involvement surveys to posttests linked to the Quality of School Life surveys. Due to the volunteer nature of the study on the part of students, parents, and teachers, considerable losses were anticipated to link all four data sets.

Table 3.2 illustrates the valid linkages among the data collection instruments.
While teachers ordered 2,037 Personal Development pretests (PDP) and 1,835 Resource Management pretests (RMP), the VIML received only 987 PDPs and 702 RMPs and a total of 1,328 PIMs following the administration of the pretests. Researchers were able to link 751 PDPs to PIMs and 418 RMPs to PIMs. Letters were sent to teachers who returned pretests and surveys to thank them for their cooperation and encourage their further participation in the study.

<table>
<thead>
<tr>
<th></th>
<th>Personal Development</th>
<th>Resource Management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Pretests returned</td>
<td>987</td>
<td>100.0</td>
</tr>
<tr>
<td>PIM linkages to pretests</td>
<td>751</td>
<td>76.0</td>
</tr>
<tr>
<td>Posttest linkages to pretests</td>
<td>653</td>
<td>66.2</td>
</tr>
<tr>
<td>QSL linkages to posttests</td>
<td>452</td>
<td>45.8</td>
</tr>
<tr>
<td>Pretest, PIM, posttest, and QSL linkages</td>
<td>185</td>
<td>18.7</td>
</tr>
</tbody>
</table>

Table 3.2: Quantities of data collection instruments ordered, received and linkages made

Encoded posttests and encoded QSL surveys were sent in November, 1996 to teachers who had returned pretests. Seven hundred eighty-nine PDT, 643 RMT and a total of 926 QSL surveys were received. Researchers were able to link 452 PDTs and 319 RMT to QSL surveys. Researchers were able to make linkages for valid pretests, posttests, parent involvement surveys and quality of school life surveys for 185 Personal Development students and 151 Resource Management students. The linkages that include all four data sets represent 19 percent of the students who took the pretest for Personal Development and 22 percent of the students who took the pretest for Resource Management.
Researchers were able to match 653 students’ Personal Development pretests and posttests. Matches were made for 421 Resource Management pretests and posttests. Table 3.3 illustrates the gender, age, grade, previous semesters taken in Work and Family Life and the average school attendance of the student participants.

As indicated in Table 3.3, 362 females and 262 males completed the pretest and posttest for Personal Development and 240 females and 148 males completed the pretest and posttest for Resource Management. An additional 29 students completed the pretest and posttest for Personal Development and 33 students completed the pretest and posttest for Resource Management, but gender identification was not given.

Students who took the Personal Development tests ranged in age from 12 to 20 and students who took the Resource Management tests ranged in age from 12 to 19. Sixty-three percent of the students who identified their age on the Personal Development tests were fifteen years or younger. Forty-five percent of the students who identified their age on the Resource Management tests were 15 or younger. Forty percent of the Resource Management students identified their age as 16 or 17, while only 33 percent of the Personal Development students fell into this age range.

Of the students who took the Personal Development test, 57.1 percent were ninth graders, 21.4 percent were tenth graders, 9.5 percent were in the eleventh grade, and 6.7 percent were in the twelfth grade. Thirty-four percent of the Resource Management students were ninth graders, 18.1 percent were tenth graders, 15.2 percent were eleventh graders and 24.9 percent were in grade twelve. While the majority of students in the Personal Development course were ninth-graders, Resource Management students tended to be either ninth graders or twelfth graders.

Most students enrolled in Personal Development and Resource Management had taken a previous semester in Work and Family Life. Only 16.2 percent of the Personal
Table 3.3: Characteristics of male and female student participants on the Personal Development and Resource Management test by age, grade and number of previous semesters taken in Work and Family Life.
Development students and 21.6 percent of the students enrolled in Resource Management had no previous courses in Work and Family Life. In Personal Development, 41.8 percent of the students had taken one previous semester and in Resource Management, 31.6 percent of the students had taken one previous course.

Table 3.4 indicates that students in Work and Family Life programs are absent from school on average from 3.89 days for males in Resource Management classes to 5.25 days for males in Personal Development classes. Boys have more average days absent in Personal Development classes (5.25) than girls (4.90) and girls have more average days absent (4.04) than boys in Resource Management classes (3.89). All students in Personal Development classes average 1.16 more days absent than all students in Resource Management classes.

<table>
<thead>
<tr>
<th></th>
<th>Personal Development</th>
<th>Resource Management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n range</td>
<td>x SD</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>184 0 - 42 4.90 5.73</td>
<td>137 0 - 30 4.04 4.53</td>
</tr>
<tr>
<td>Male</td>
<td>122 0 - 25 5.25 4.91</td>
<td>75 0 - 20 3.89 4.20</td>
</tr>
<tr>
<td>All students</td>
<td>318 0 - 54 5.27 5.61</td>
<td>225 0 - 30 4.11 4.68</td>
</tr>
</tbody>
</table>

*Note.* All students includes males, females and participants who did not identify gender.

Table 3.4: Number of absences for students enrolled in Personal Development and Resource Management classes
Data Analysis Techniques

Table 3.5 describes the levies of statistical analyses used in this study. Data from the Personal Development Pretest and Posttest, the Resource Management Pretest and Posttest, the Parent Involvement Measure and the Quality of School Life scale were sent to The Ohio State University Vocational Instructional Materials Laboratory for analyses. For each of the variables examined, descriptive statistics were computed including frequencies and measures of central tendency.

The Statistical Package for Social Sciences (SPSS) computer program was used to analyze the data. Table 3 indicates the statistical techniques employed in this investigation included descriptive statistics, t test for comparison of means, analysis of variance to determine the differences among group means, Pearson Product Moment for determining relationships among variables. Multivariate analysis was done to analyze multiple measurements related to student achievement. The multivariate analyses included stepwise multiple regression and hierarchical regression.
### Table 3.5: Summary of research questions and analysis procedures

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Variables</th>
<th>Collection Instruments</th>
<th>Analysis Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Is there a student achievement gain from pretest to posttest on the Personal Development and the Resource Management tests after instruction under the Ohio Work and Family Life program?</td>
<td></td>
<td></td>
<td>Analysis of Variance (ANOVA)</td>
</tr>
</tbody>
</table>

Note. PDP = Personal Development Pretest  
PDT = Personal Development Posttest  
RMP = Resource Management Pretest  
RMT = Resource Management Posttest

(table continues)
<table>
<thead>
<tr>
<th></th>
<th>Research Questions</th>
<th>Independent Variables</th>
<th>Dependent Variables</th>
<th>Collection Instruments</th>
<th>Analysis Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Are variations in scores related to school location category?</td>
<td>School location category</td>
<td>Achievement scores on the Personal Development test and the Resource Management test</td>
<td>PDP PDT RMP RMT</td>
<td>Descriptive Statistics Analysis of Variance</td>
</tr>
<tr>
<td>7.</td>
<td>Are curricular factors, specifically time spent on the Ohio Work and Family Life curriculum and whether the score counts for a grade, related to student achievement scores on Personal Development test and the Resource Management test?</td>
<td>Time spent on the curriculum Whether score counts for a grade</td>
<td>Achievement scores on the Personal Development test and the Resource Management test</td>
<td>Curriculum Outline PDP PDT RMP RMT QSL</td>
<td>Correlation Pearson Product Moment</td>
</tr>
</tbody>
</table>

**Note.** PDP = Personal Development Pretest  
PDT = Personal Development Posttest  
RMP = Resource Management Pretest  
RMT = Resource Management Posttest  
QSL = Quality of School Life Survey
Table 3.5 continued

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Variables</th>
<th>Collection Instruments</th>
<th>Analysis Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Is student reaction to school climate related to student scores on the Personal Development test and the Resource Management test?</td>
<td>Student reaction to school climate</td>
<td>Achievement scores on the Personal Development test and the Resource Management test</td>
<td>QSL</td>
</tr>
<tr>
<td>10. Which independent variables are the best predictors of the dependent variable?</td>
<td>-</td>
<td>-</td>
<td>Stepwise</td>
</tr>
</tbody>
</table>

Note. PDP = Personal Development Pretest  
PDT = Personal Development Posttest  
RMP = Resource Management Pretest  
RMT = Resource Management Posttest  
PIM = Parent Involvement Measure
CHAPTER 4

FINDINGS AND DISCUSSION

The purpose of this study was to determine what selected factors are related to student achievement on the Work and Family Life tests in the areas of the Personal Development and Resource Management. This study examined the elements of parental involvement, school climate, school location category, school size, curricular factors and student personal characteristics as they relate to student scores on the competency tests in the Work and Family Life areas of Personal Development and Resource Management.

This chapter presents a description of the findings related to student achievement on the Personal Development and Resource Management tests. This chapter concludes with the identification of the variance explained relative to student achievement on the Work and Family Life tests.

The independent variables of the study were students' perceived parental involvement and students' reactions to school climate. Additional independent variables were student characteristics, including: age, grade, gender, number of previous courses taken in Work and Family Life, and number of days absent from school, the type of school, the size of the school, and the amount of time spent on the curriculum. The dependent variables were the achievement scores on the Personal Development and the Resource Management tests. The research questions for the study were used to organize the findings and discussion presented in this chapter.
Research Question One

Is there a student achievement gain from pretest to posttest on the Personal Development test and the Resource Management test after instruction under the Ohio Work and Family Life program?

Achievement scores were measured on a 40-item multiple choice test for Personal Development and a 40-item multiple choice test for Resource Management. Student scores ranged from four (10 %) to 35 (87.5 %) on the Personal Development pretest and from one (2.5 %) to 39 (97.5 %) on the Personal Development posttest. The mode on the posttest was 29 (72.5 %), while the median score on the Personal Development posttest was 25 (62.5 %). The scores on the Resource Management pretest ranged from three (7.5 %) to 36 (90 %). The scores on the Resource Management posttest ranged from two (5 %) to 40 (100 %). The mode on the Resource Management posttest was 25 (62.5 %) and the median score for this test was 26 (65 %).

As illustrated in Table 4.1, students scored an average of 21.92 (54.80 %) on the pretest and an average of 23.85 (59.63 %) on the posttest for Personal Development. The students enrolled in Resource Management scored 21.38 (54.45 %) on the pretest and 25.16 (62.90 %) on the posttest for Resource Management. Using raw scores, students showed an overall gain in Personal Development of 1.93 points (4.83 %) on the 40-item (40 points) test. Also using raw scores, students showed an overall gain of 1.59 points (3.98) on the 40-item (40 points) Resource Management test.

Large standard deviations indicated a wide variance in scores. The standard deviations for pretest scores on the Personal Development test was 6.83 (17.08%) and on the posttest was 7.84 (19.60%). The standard deviation on the pretest score for Resource Management was 6.81 (17.03%) and the posttest was 6.81 (17.03%).
### Table 4.1: Student pretest and posttest scores on the Personal Development test and the Resource Management test

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>range</th>
<th>Mean</th>
<th>Median</th>
<th>Mode</th>
<th>Mean %</th>
<th>SD</th>
<th>SD%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>653</td>
<td>4-35</td>
<td>21.92</td>
<td>23</td>
<td>26</td>
<td>54.80</td>
<td>6.83</td>
<td>17.01</td>
</tr>
<tr>
<td>Posttest</td>
<td>653</td>
<td>1-39</td>
<td>23.85</td>
<td>25</td>
<td>29</td>
<td>59.63</td>
<td>7.84</td>
<td>19.60</td>
</tr>
<tr>
<td>Gain</td>
<td>653</td>
<td></td>
<td>1.93</td>
<td>2</td>
<td>3</td>
<td>4.83</td>
<td>1.93</td>
<td>4.83</td>
</tr>
<tr>
<td><strong>Resource Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>421</td>
<td>3-36</td>
<td>21.38</td>
<td>22</td>
<td>23*</td>
<td>53.45</td>
<td>6.81</td>
<td>17.03</td>
</tr>
<tr>
<td>Posttest</td>
<td>421</td>
<td>2-40</td>
<td>25.16</td>
<td>26</td>
<td>25</td>
<td>62.90</td>
<td>7.34</td>
<td>18.35</td>
</tr>
<tr>
<td>Gain</td>
<td>421</td>
<td></td>
<td>3.78</td>
<td>3</td>
<td>3</td>
<td>9.45</td>
<td>6.16</td>
<td>15.40</td>
</tr>
</tbody>
</table>

* Multiple modes exist. The smallest value is shown.

An analysis of variance (ANOVA) shown in Tables 4.2 and 4.3 revealed that the posttest scores were significantly higher than pretest scores for Personal Development (F = 46.06) (p < .001) and that the posttest scores were significantly higher than the pretest scores for Resource Management (F = 158.64) (p < .001).

### Table 4.2: Analysis of variance of Personal Development pretest and posttest scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within subjects</td>
<td>652</td>
<td>17235.95</td>
<td>26.44</td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>1</td>
<td>1217.55</td>
<td>1217.55</td>
<td>46.06**</td>
</tr>
</tbody>
</table>

** p < .001

Table 4.2: Analysis of variance of Personal Development pretest and posttest scores
Table 4.3: Analysis of variance of Resource Management pretest and posttest scores

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Within subjects</td>
<td>420</td>
<td>7959.23</td>
<td>18.95</td>
<td></td>
</tr>
<tr>
<td>Between groups</td>
<td>1</td>
<td>3006.27</td>
<td>3006.27</td>
<td>158.64**</td>
</tr>
</tbody>
</table>

** p < .001

Although there was statistical significance between these two scores, posttest achievement gains were small. There are several possible reasons for such marginal performances by students overall on the posttest. While the testing program was introduced statewide in January, 1996, for many teachers and students, this was their first experience with a state-wide competency test in Work and Family Life classes. As teachers and students become more familiar with the expectations of the program, student performance should improve.

It is possible that the time allotted is not sufficient time to cover the material in the Personal Development and Resource Management classes. In that the total class contact time in these courses range from 60 to 75 clock hours, it is possible that students do not have the opportunity to internalize the course content.

Another reason for weak performance could be the nature of the test itself. These courses are based on a critical science perspective. Students are taught to take action based on practical reasoning. While a technical understanding is fundamental to the critical science approach, it is not the sole focus. A multiple choice test tends to assess technical knowledge and not the critical science outcomes promoted by this curriculum.
Research Question Two

Are student personal characteristics related to student scores on the Personal Development test and the Resource Management test?

a. gender
b. age
c. grade
d. previous family and consumer sciences classes
e. school attendance

Gender. As presented in Table 4.4, 362 females and 262 males completed the pretest and posttest for Personal Development. Table 4.5 indicates that 240 females and 148 males completed the pretest and posttest for Resource Management. Twenty-nine additional students completed the pretest and posttest for Personal Development and 33 students completed the pretest and posttest for Resource Management, but these students did not give gender identification.
### Personal Development

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>Posttest Mean</th>
<th>SD</th>
<th>t</th>
<th>Gain</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>362</td>
<td>62.88</td>
<td>17.80</td>
<td>3.98</td>
<td>16.75</td>
<td>-4.397**</td>
<td>1.623</td>
</tr>
<tr>
<td>Male</td>
<td>262</td>
<td>55.87</td>
<td>20.85</td>
<td>6.43</td>
<td>19.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender not stated</td>
<td>29</td>
<td>59.63</td>
<td>19.60</td>
<td>4.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>653</td>
<td>59.63</td>
<td>19.60</td>
<td>4.83</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Scores reported in percentages

** p < .001

Table 4.4: Student scores on the Personal Development test by gender

### Resource Management

<table>
<thead>
<tr>
<th>Gender</th>
<th>n</th>
<th>Posttest Mean</th>
<th>SD</th>
<th>t</th>
<th>Gain</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>240</td>
<td>66.15</td>
<td>16.13</td>
<td>7.73</td>
<td>13.73</td>
<td>-3.54**</td>
<td>2.77*</td>
</tr>
<tr>
<td>Male</td>
<td>148</td>
<td>59.15</td>
<td>20.40</td>
<td>12.40</td>
<td>17.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender not stated</td>
<td>33</td>
<td>59.15</td>
<td>20.40</td>
<td>12.40</td>
<td>17.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>421</td>
<td>62.90</td>
<td>18.35</td>
<td>9.45</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** All scores reported in percentages

** p < .001

* p < .01

Table 4.5: Student scores on the Resource Management test by gender
Subsequent analysis revealed that males and females had significantly different scores on the posttest for Personal Development. Males and females scored differently on the posttest and on the gain score for Resource Management. Scores were higher for females on both tests. The t-statistic for the posttest for Personal Development was significant at -4.397 (p<0.001). The differences in gain between males and females on the Personal Development test was not significant. The t-statistic for the posttest for Resource Management was significant at -3.542 (p<0.001). These data also indicate that males made greater gains on the Resource Management test than females with significant t at 2.77 (p<0.05).

Eccles (1993) found that parents' perceptions of their children's competencies in various domains are influenced by the sex of the child and by the parents' gender-role stereotyped beliefs about which sex is naturally more talented in these domains. In that the content of family and consumer sciences is often considered gender stereo-typed (Van Buren, 1996), based on Eccles research, it is possible that parents attribute girls' success in the area as being associated with natural talent. It is also possible that parents offer more support for girls' participation in family and consumer sciences courses as evidenced both by higher enrollment by females and by higher posttest scores.

**Age.** Students who took the Personal Development tests ranged in age from 12 to 20 and students who took the Resource Management tests ranged in age from 12 to 19. Sixty-three percent of the students taking the Personal Development tests were 15 years or younger. Forty-five percent of the students who took the Resource Management tests were 15 or younger. Forty percent of the Resource Management students identified their age as 16 or 17, while only 33 percent of the Personal Development students fell into this age range.
Tables 4.6 and 4.7 show that posttest scores tend to increase as students mature in age from 15 to 17, however, posttest scores tend to fall when students are over 17 years of age. It is interesting to note that the highest average scores on both the Personal Development test and the Resource Management test were earned by students under 14 years of age.

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>%</th>
<th>Posttest Mean</th>
<th>SD</th>
<th>Gain %</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 14</td>
<td>2</td>
<td>.3</td>
<td>67.50</td>
<td>19.43</td>
<td>11.25</td>
<td>8.84</td>
</tr>
<tr>
<td>14</td>
<td>86</td>
<td>13.2</td>
<td>58.34</td>
<td>10.61</td>
<td>3.87</td>
<td>20.00</td>
</tr>
<tr>
<td>15</td>
<td>147</td>
<td>22.5</td>
<td>57.86</td>
<td>19.59</td>
<td>5.12</td>
<td>18.31</td>
</tr>
<tr>
<td>16</td>
<td>76</td>
<td>11.6</td>
<td>61.55</td>
<td>19.74</td>
<td>5.86</td>
<td>18.72</td>
</tr>
<tr>
<td>17</td>
<td>47</td>
<td>7.2</td>
<td>63.56</td>
<td>19.37</td>
<td>6.65</td>
<td>14.51</td>
</tr>
<tr>
<td>Over 17</td>
<td>15</td>
<td>2.4</td>
<td>58.00</td>
<td>22.23</td>
<td>7.00</td>
<td>19.98</td>
</tr>
<tr>
<td>Age not reported</td>
<td>280</td>
<td>42.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>653</td>
<td>100.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. All scores reported in percentages

Table 4.6: Student scores on the Personal Development test by age
### Resource Management

<table>
<thead>
<tr>
<th>Age</th>
<th>n</th>
<th>%</th>
<th>Posttest Mean</th>
<th>SD</th>
<th>Gain %</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 14</td>
<td>2</td>
<td>.4</td>
<td>78.75</td>
<td>1.78</td>
<td>7.50</td>
<td>0.00</td>
</tr>
<tr>
<td>14</td>
<td>53</td>
<td>12.8</td>
<td>59.10</td>
<td>16.15</td>
<td>8.96</td>
<td>13.17</td>
</tr>
<tr>
<td>15</td>
<td>59</td>
<td>14.0</td>
<td>59.20</td>
<td>17.00</td>
<td>7.29</td>
<td>11.45</td>
</tr>
<tr>
<td>16</td>
<td>51</td>
<td>12.1</td>
<td>61.72</td>
<td>18.47</td>
<td>6.38</td>
<td>14.66</td>
</tr>
<tr>
<td>17</td>
<td>51</td>
<td>12.1</td>
<td>72.17</td>
<td>17.37</td>
<td>9.45</td>
<td>17.05</td>
</tr>
<tr>
<td>Over 17</td>
<td>37</td>
<td>8.8</td>
<td>68.63</td>
<td>14.25</td>
<td>13.63</td>
<td>17.20</td>
</tr>
<tr>
<td>Age not reported</td>
<td>167</td>
<td>39.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>421</td>
<td>99.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** All scores reported in percentages

Table 4.7: Student scores on the Resource Management test by age

Table 4.8 shows that there was no significant association between age and either posttest or gain scores on the Personal Development tests when all students were aggregated. However, as shown in Table 4.8, a low positive association ($r = .19$) ($p < .01$) was seen between age and posttest on the Personal Development test among female students when viewed alone. Table 4.8 illustrates the low positive association ($r = .19$) ($p < .01$) that was determined between age and posttest achievement on the Resource Management tests. The association was higher ($r = .21$) ($p < .05$) when males were viewed alone.

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Table 4.8: Relationship between age and student achievement scores on the Personal Development test and the Resource Management test

<table>
<thead>
<tr>
<th></th>
<th>Posttest</th>
<th></th>
<th>Gain</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>r</td>
<td>p</td>
<td>r</td>
</tr>
<tr>
<td><strong>Personal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development Age*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>153</td>
<td>.018</td>
<td>.824</td>
<td>.034</td>
</tr>
<tr>
<td>Female</td>
<td>208</td>
<td>.192</td>
<td>.006**</td>
<td>.051</td>
</tr>
<tr>
<td>All students</td>
<td>373</td>
<td>.070</td>
<td>.179</td>
<td>.047</td>
</tr>
<tr>
<td><strong>Resource</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management Age*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>88</td>
<td>.213</td>
<td>.047*</td>
<td>.130</td>
</tr>
<tr>
<td>Female</td>
<td>149</td>
<td>.199</td>
<td>.015*</td>
<td>.046</td>
</tr>
<tr>
<td>All students</td>
<td>254</td>
<td>.193</td>
<td>.002**</td>
<td>.058</td>
</tr>
</tbody>
</table>

Note. All students includes males, females and participants who did not identify gender
** p < .01
* p < .05
PP = Pearson Product Moment Correlation

Based on the available data, it appears that more younger students take Personal Development, while more older students take Resource Management classes. While 36 percent of the students enrolled in Personal Development were 15 years of age or younger, only 27.2% of the students enrolled in Resource Management were in that age range. Twenty-one percent of the students in Resource Management were 17 years of age or older, yet only 7.9 percent of the students in Personal Development were in that group.

It is possible that students of different ages enroll in Personal Development and
Resource Management courses for different reasons. Personal Development includes human relationship content while resource management is focused on practical living skills including family resource management, housing and clothing. It is possible that older students who are closer to moving from their parents' homes are more concerned with independent living issues. This might also explain a higher association between achievement scores on Resource Management for older students.

In that daily living skills are included in the course content for Resource Management, it is likely that older students, having more experience, would score higher on this test. It is also possible that older students have more experience taking standardized test and as such would have higher scores.

**Grade Level.** Although the Personal Development and Resource Management courses were designed to be introductory high school courses for ninth graders, the students in this sample were in grades 9 through 12. As indicated in Table 4.9, 57 percent of the students enrolled in Personal Development were in the ninth grade, 21.4 percent were tenth graders, 9.5 percent were in the eleventh grade, and 6.7 percent were in the twelfth grade. Table 4.10 shows 34 percent of the students enrolled in Resource Management were in the ninth grade, 18.1 percent were tenth graders, 15.2 percent were eleventh graders and 24.9 percent were in grade twelve. While the majority of students in the Personal Development course were enrolled in the ninth-grade, the majority of Resource Management students were either ninth graders (34.2 %) or twelfth graders (24.9 %).
### Personal Development

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>n</th>
<th>%</th>
<th>Posttest Mean %</th>
<th>SD %</th>
<th>Gain %</th>
<th>SD %</th>
</tr>
</thead>
<tbody>
<tr>
<td>09</td>
<td>373</td>
<td>57.1</td>
<td>58.15</td>
<td>19.54</td>
<td>5.08</td>
<td>17.79</td>
</tr>
<tr>
<td>10</td>
<td>140</td>
<td>21.4</td>
<td>61.52</td>
<td>17.71</td>
<td>6.91</td>
<td>17.94</td>
</tr>
<tr>
<td>11</td>
<td>62</td>
<td>9.5</td>
<td>65.81</td>
<td>20.69</td>
<td>1.45</td>
<td>18.97</td>
</tr>
<tr>
<td>12</td>
<td>44</td>
<td>6.7</td>
<td>61.65</td>
<td>21.10</td>
<td>4.03</td>
<td>20.97</td>
</tr>
<tr>
<td>Level not reported</td>
<td>34</td>
<td>5.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>653</td>
<td>99.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** All scores reported in percentages

Table 4.9: Student scores on the Personal Development test by grade level

### Resource Management

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>n</th>
<th>%</th>
<th>Posttest Mean %</th>
<th>SD %</th>
<th>Gain %</th>
<th>SD %</th>
</tr>
</thead>
<tbody>
<tr>
<td>09</td>
<td>144</td>
<td>34.2</td>
<td>55.71</td>
<td>16.64</td>
<td>6.82</td>
<td>13.84</td>
</tr>
<tr>
<td>10</td>
<td>76</td>
<td>18.1</td>
<td>59.64</td>
<td>18.28</td>
<td>5.82</td>
<td>12.39</td>
</tr>
<tr>
<td>11</td>
<td>64</td>
<td>15.2</td>
<td>70.23</td>
<td>15.25</td>
<td>12.58</td>
<td>15.74</td>
</tr>
<tr>
<td>12</td>
<td>105</td>
<td>24.9</td>
<td>72.74</td>
<td>16.42</td>
<td>13.33</td>
<td>17.49</td>
</tr>
<tr>
<td>Level not reported</td>
<td>32</td>
<td>7.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>421</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** All scores reported in percentages

Table 4.10: Student scores on the Resource Management test by grade level
As illustrated in Tables 4.11, when correlated with posttest scores for student achievement, the grade level of students showed a low positive correlation \((r = .10)\) \((p < .01)\) for students enrolled in Personal Development and a moderate positive association \((r = .40)\) \((p < .001)\) for students enrolled in Resource Management.

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Posttest</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Development&lt;br&gt;Male</td>
<td>258</td>
<td>.148</td>
</tr>
<tr>
<td>Female</td>
<td>357</td>
<td>.116</td>
</tr>
<tr>
<td>All students</td>
<td>619</td>
<td>.105</td>
</tr>
<tr>
<td>Resource Management&lt;br&gt;Male</td>
<td>145</td>
<td>.453</td>
</tr>
<tr>
<td>Female</td>
<td>239</td>
<td>.394</td>
</tr>
<tr>
<td>All students</td>
<td>389</td>
<td>.404</td>
</tr>
</tbody>
</table>

Note. All students includes males, females and participants who did not identify gender  
** \(p < .001\)  
* \(p < .05\)  
PP = Pearson Product Moment Correlation

Table 4.11: Relationship between grade level and student achievement scores on the Personal Development test and the Resource Management test

Again, the higher positive associations between grade level and posttest scores for students enrolled in Resource Management classes could be attributed to the
perceived relevance of the course content to students who are closer to living on their own. Student gain scores for Resource Management indicated a low association ($r = .19$) ($p < .001$) with grade level of students. When male and female students were viewed separately, male students showed a moderate positive association ($r = .31$) ($p < .001$) between grade level and gain scores. The association between grade level and gain scores for female students was not significant. It appears that males in higher grades showed more gains than males in lower grades. It could be that the male students who are closer to taking responsibility for their own resource management attend more seriously to course content.

**Previous Semesters in Work and Family Life.** The majority of students enrolled in Personal Development and Resource Management had taken one previous semester in Work and Family Life. As shown in Tables 4.12 and 4.13, only 16.2 percent of the Personal Development students and 21.6 percent of the students enrolled in Resource Management had no previous courses in Work and Family Life. In Personal Development, 41.8 percent of the students had taken one previous semester and in Resource Management, 31.6 percent of the students had taken one previous course.
### Personal Development

<table>
<thead>
<tr>
<th>Semesters</th>
<th>n</th>
<th>%</th>
<th>Posttest Mean</th>
<th>SD</th>
<th>Gain %</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>106</td>
<td>16.2</td>
<td>58.49</td>
<td>18.92</td>
<td>2.57</td>
<td>16.16</td>
</tr>
<tr>
<td>1</td>
<td>273</td>
<td>41.8</td>
<td>63.67</td>
<td>18.72</td>
<td>7.99</td>
<td>17.30</td>
</tr>
<tr>
<td>2</td>
<td>93</td>
<td>14.2</td>
<td>55.30</td>
<td>20.45</td>
<td>2.42</td>
<td>19.53</td>
</tr>
<tr>
<td>3</td>
<td>110</td>
<td>16.8</td>
<td>56.48</td>
<td>20.33</td>
<td>3.75</td>
<td>19.98</td>
</tr>
<tr>
<td>4</td>
<td>29</td>
<td>4.4</td>
<td>56.03</td>
<td>20.91</td>
<td>2.50</td>
<td>17.98</td>
</tr>
<tr>
<td>5</td>
<td>27</td>
<td>4.1</td>
<td>59.44</td>
<td>17.03</td>
<td>- .06</td>
<td>17.94</td>
</tr>
<tr>
<td>5 +</td>
<td>15</td>
<td>2.4</td>
<td>51.33</td>
<td>19.08</td>
<td>.33</td>
<td>19.65</td>
</tr>
<tr>
<td>Total</td>
<td>653</td>
<td>99.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note.** All scores reported in percentages

Table 4.12: Student scores on the Work and Family Life Personal Development test by previous semesters taken in Work and Family Life
The highest mean score on the Personal Development test was achieved by students who had taken one previous semester in Work and Family Life. While the next highest mean was scored by students who had taken five semesters in Work and Family Life, students who had taken more than five semesters had the lowest average score on the posttest in Personal Development. As shown in Table 4.12 the highest gain scores on the Personal Development test were made by students who had one previous semester in Work and Family Life.

On the Resource Management posttest, the highest mean scores were made by students who had two previous semesters in Work and Family Life. The next highest
means on the Resource Management test were scored by students who had one and four previous semesters respectively. The highest gain scores on the Resource Management test were made by students who had five previous semesters in Work and Family Life.

As illustrated in Table 4.14, when all Personal Development students were viewed together, there was a low negative correlation (r = -.11) (p < .01) between both posttest scores and previous semesters taken in Work and Family Life as well as gain scores (r = -.08) (p < .05) and previous semesters taken in Work and Family Life. When all Resource Management students were viewed together, there was a low positive association (r = .10) (p < .05) for posttest gain score only. When males and females were viewed separately for Resource Management, there was no significant relationship between achievement scores and number of previous semesters taken. When viewed separately for Personal Development, there was a low association (r = .11) (p < .01) between posttest score and number of previous semesters taken for males.
Table 4.14: Relationship between previous semesters taken in Work and Family Life and student achievement on the Personal Development test and the Resource Management test

<table>
<thead>
<tr>
<th></th>
<th>Posttest</th>
<th></th>
<th>Gain</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>r</td>
<td>p</td>
<td>r</td>
</tr>
<tr>
<td><strong>Personal Development Semesters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>262</td>
<td>-.167</td>
<td>.007**</td>
<td>-.084</td>
</tr>
<tr>
<td>Female</td>
<td>362</td>
<td>-.113</td>
<td>.031*</td>
<td>-.098</td>
</tr>
<tr>
<td>All students</td>
<td>653</td>
<td>-.110</td>
<td>.005**</td>
<td>-.080</td>
</tr>
<tr>
<td><strong>Resource Management Semesters</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>148</td>
<td>.099</td>
<td>.229</td>
<td>.133</td>
</tr>
<tr>
<td>Female</td>
<td>240</td>
<td>.014</td>
<td>.832</td>
<td>-.001</td>
</tr>
<tr>
<td>All students</td>
<td>421</td>
<td>.098</td>
<td>.045*</td>
<td>.065</td>
</tr>
</tbody>
</table>

Note. All students includes males, females and participants who did not identify gender

** p < .01  
* p < .05

PP = Pearson Product Moment Correlation

Pestle (cited in Gritzmacher & Tooke, 1996) compared students who had taken home economics and those who had not and found that the mean scores on behaviors in the areas of parenting, nutrition, and consumer education tended to increase with the number of semesters taken. These data suggest that previous courses in Work and Family are negatively associated with student achievement scores on the Personal Development test.

It is assumed that courses in family and consumer sciences build on the content
from previous courses. The core process competencies of Managing Work and Family Responsibilities, Solving Personal and Family Problems, Relating to Others and Assuming a Leadership Role are to be integrated into every Work and Family Life course. The Ohio Work and Family Life Middle School curriculum has comparable course content developmentally appropriate for the middle school learner. Perhaps the course content does not build from one course to another as previously thought. Perhaps different teachers emphasize different content and thus influence student achievement differently.

It is also possible that students who take college preparatory courses do not have opportunities for “electives” in the school day. Students who must take foreign language and advanced courses in math and science typically do not have time in their schedules to take elected family and consumer sciences courses until their eleventh or twelfth grade year. It is possible that students enrolled in multiple semesters of family and consumers sciences are not students preparing for college.

Number of Days Absent. A total of 318 students enrolled in Personal Development and 225 students enrolled in Resource Management provided information about the number of days they were absent from school during the semester the tests were given. An examination of the residuals revealed outliers. After removing outliers, Personal Development and 190 Resource Management students provided information to determine the relationship between number of days absent and student achievement. As shown in Table 4.15 the mode scores for all students in Personal Development and Resource Management classes was zero indicating that most students were not absent during the fall semester.
<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>days absent range</th>
<th>Mean</th>
<th>SD</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>292</td>
<td>0 - 54</td>
<td>5.27</td>
<td>6.21</td>
<td>0</td>
</tr>
<tr>
<td><strong>Resource Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>190</td>
<td>0 - 30</td>
<td>4.11</td>
<td>4.68</td>
<td>0</td>
</tr>
</tbody>
</table>

*Note.* All students includes males, females and participants who did not identify gender

Table 4.15: Means, modes and standard deviation for the number of days absent in fall semester for males and females on the Personal Development test and the Resource Management test

Not surprisingly, as shown in Table 4.16, there was a low negative correlation ($r = -.19$) ($p < .01$) between student scores on the Resource Management posttest. The more days students were absent, the lower their scores on the Resource Management test. There was no significant correlation between number of days absent and student scores on the posttest on the Personal Development test. There was no significant correlation between number of days absent and student gain scores on the Personal Development test. There was no significant correlation between number of days absent and gain scores on the Resource Management test.
The fact that there was no significant relationship between number of days absent and student achievement scores on the Personal Development test and student gain scores on the Resource Management test could be explained by the large number of students with zero days absent during fall semester. As such, there would not be a linear relationship between days absent and student scores. It is also likely that a few days absence over a 90 day semester would not have a great impact on a students' achievement.
In summary, Tables 4.17 and 4.18 show the relationships between student scores on the Personal Development test and the Resource Management test by gender, age, grade level, number of previous semesters taken in Work and Family Life and days absent. As indicated on Table 4.17 there was a significant low positive relationship \( (r = .192) \) \( (p < .01) \) between female scores on the Personal Development posttest and age, and a significant low positive relationship \( (r = .10) \) \( (p < .01) \) for all students between Personal Development posttest and grade level. There was a significant low negative relationship \( (r = -.11) \) \( (p < .001) \) for all students between number of previous semesters taken in Work and Family Life and the posttest score for Personal Development test. There was a low negative association between number of previous semesters in Work and Family Life and gain score on the Personal Development test. Thus when considering all students, factors associated with higher achievement scores on the Personal Development posttest are grade level, previous semesters taken in Work and Family Life.
### Personal Development

#### Posttest vs. Gain

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>r</th>
<th>p</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong>&lt;sup&gt;PP&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>153</td>
<td>0.018</td>
<td>0.824</td>
<td>0.034</td>
<td>0.676</td>
</tr>
<tr>
<td>Female</td>
<td>208</td>
<td>0.192</td>
<td>0.006**</td>
<td>0.051</td>
<td>0.463</td>
</tr>
<tr>
<td>All students</td>
<td>373</td>
<td>0.070</td>
<td>0.179</td>
<td>0.047</td>
<td>0.360</td>
</tr>
</tbody>
</table>

| **Grade Level**<sup>PP</sup> |    |     |     |     |     |
| Male  | 258 | 0.148 | 0.017* | 0.013 | 0.832 |
| Female | 357 | 0.116 | 0.028* | -0.096 | 0.071 |
| All students | 619 | 0.105 | 0.009** | -0.031 | 0.442 |

| **Semesters**<sup>PP</sup> |    |     |     |     |     |
| Male  | 262 | -0.167 | 0.007** | -0.084 | 0.173 |
| Female | 362 | -0.113 | 0.031* | -0.098 | 0.062 |
| All students | 653 | -0.110 | 0.005** | -0.080 | 0.041* |

| **Days Absent**<sup>PP</sup> |    |     |     |     |     |
| All students | 292 | -0.110 | 0.060 | -0.030 | 0.610 |

**Note.** All students includes males, females and participants who did not identify gender  
**  ** p < .01  
*  p < .05  
<sup>PP</sup> = Pearson Product Moment Correlation

Table 4.17: Relationship between student scores on the Personal Development test by gender, age, grade level, number of previous semesters taken in Work and Family Life and days absent
Table 4.18 shows a low positive relationship \((r = .19)\) \((p < .01)\) between student age and the posttest on the Resource Management test. There was a moderate positive relationship \((r = .40)\) \((p < .001)\) between grade level and student scores on the Resource Management posttest. There was also a low positive relationship \((r = .19)\) \((p < .001)\) between grade level and gain score on the Resource Management test for all students. There was a low negative relationship \((r = -.10)\) \((p < .05)\) between number of previous semesters taken in Work and Family Life and the posttest on the Resource Management test. There was a low negative relationship \((r = -.19)\) \((p < .01)\) between number of days absent and posttest scores on the Resource Management test. When all students are grouped together, factors associated with posttest achievement scores are age, grade level, previous semesters taken and attendance. For students as a total group, grade level was the single significant factor affecting gain scores.
### Resource Management

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>r</th>
<th>p</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age PP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>88</td>
<td>.213</td>
<td>.047*</td>
<td>.130</td>
<td>.227</td>
</tr>
<tr>
<td>Female</td>
<td>149</td>
<td>.199</td>
<td>.015*</td>
<td>.046</td>
<td>.575</td>
</tr>
<tr>
<td>All students</td>
<td>254</td>
<td>.193</td>
<td>.002**</td>
<td>.058</td>
<td>.357</td>
</tr>
<tr>
<td><strong>Grade Level PP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>145</td>
<td>.453</td>
<td>.000***</td>
<td>.315</td>
<td>.000***</td>
</tr>
<tr>
<td>Female</td>
<td>239</td>
<td>.394</td>
<td>.000***</td>
<td>.089</td>
<td>.172</td>
</tr>
<tr>
<td>All students</td>
<td>389</td>
<td>.404</td>
<td>.000***</td>
<td>.194</td>
<td>.000***</td>
</tr>
<tr>
<td><strong>Semesters PP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>148</td>
<td>.099</td>
<td>.229</td>
<td>.133</td>
<td>.108</td>
</tr>
<tr>
<td>Female</td>
<td>240</td>
<td>.014</td>
<td>.832</td>
<td>-.001</td>
<td>.993</td>
</tr>
<tr>
<td>All students</td>
<td>421</td>
<td>.098</td>
<td>.045*</td>
<td>.065</td>
<td>.184</td>
</tr>
<tr>
<td><strong>Days Absent PP</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>190</td>
<td>-</td>
<td>.188</td>
<td>.009**</td>
<td>.053</td>
</tr>
</tbody>
</table>

**Note.** All students includes males, females and participants who did not identify gender  
***  p < .001  
**   p < .01  
*    p < .05  
PP  = Pearson Product Moment Correlation

Table 4.18: Relationship between student scores on the Resource Management test by gender, age, grade level, number of previous semesters taken in Work and Family Life and days absent
Research Question Three

Does certainty of future career choice relate to student scores on the Personal Development test and Resource Management test?

Using a Likert type scale, 633 Personal Development and 387 Resource Management students indicated their degree of certainty about their future career choice. As indicated in Table 4.19, a majority of students (61.3%) enrolled in Personal Development classes indicated that they were either certain (42.8%) or very certain (18.5%) about their future career choice. Similarly, Table 4.20 shows that a majority of students (61.7%) enrolled in Resource Management classes indicated they were either certain (40.3%) or very certain (21.4%) about their future career choice. It should be noted that specific career choice was not asked.

<table>
<thead>
<tr>
<th>Certainty About Future Career</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Career Choice</td>
<td>14</td>
<td>13</td>
<td>29</td>
<td>4.6</td>
</tr>
<tr>
<td>Very uncertain</td>
<td>11</td>
<td>22</td>
<td>33</td>
<td>5.2</td>
</tr>
<tr>
<td>Uncertain</td>
<td>76</td>
<td>100</td>
<td>183</td>
<td>28.9</td>
</tr>
<tr>
<td>Certain</td>
<td>106</td>
<td>154</td>
<td>271</td>
<td>42.8</td>
</tr>
<tr>
<td>Very Certain</td>
<td>52</td>
<td>59</td>
<td>117</td>
<td>18.5</td>
</tr>
<tr>
<td>Total</td>
<td>259</td>
<td>348</td>
<td>633</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.19: Male and female student participants on the Personal Development test by certainty about future career
The Ohio Work and Family Life curriculum is based on the assumptions that knowledge of work and family life is important to individuals and society both now and in the future and that students need to understand work and family roles in order to make informed decisions regarding their future work lives and family lives (Kister et al., 1993). Having a degree of certainty about their future work lives and family lives might make family and consumer sciences content more meaningful for learners.

As illustrated in Table 4.21, there is no significant relationship between certainty about future career choice and student achievement on the Personal Development or the Resource Management tests. Although the relationship to student achievement is
insignificant, a recognition that high school students have a degree of certainly about future career choice would provide a basis for contextual instruction for all high school teachers. This information would be most beneficial to Personal Development teachers responsible for teaching career planning and to Resource Management teachers responsible for teaching family resource management.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Posttest</th>
<th></th>
<th>Gain</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>r</td>
<td>p</td>
<td>r</td>
</tr>
<tr>
<td><strong>Personal Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>259</td>
<td>.089</td>
<td>.151</td>
<td>.069</td>
<td>.268</td>
</tr>
<tr>
<td>Females</td>
<td>348</td>
<td>.072</td>
<td>.182</td>
<td>.024</td>
<td>.651</td>
</tr>
<tr>
<td>All students</td>
<td>633</td>
<td>.073</td>
<td>.068</td>
<td>.029</td>
<td>.471</td>
</tr>
<tr>
<td><strong>Resource Management</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>137</td>
<td>.019</td>
<td>.828</td>
<td>-.076</td>
<td>.379</td>
</tr>
<tr>
<td>Females</td>
<td>231</td>
<td>.020</td>
<td>.761</td>
<td>.006</td>
<td>.926</td>
</tr>
<tr>
<td>All students</td>
<td>387</td>
<td>.064</td>
<td>.210</td>
<td>-.042</td>
<td>.406</td>
</tr>
</tbody>
</table>

*Note.* All students includes males, females and participants who did not identify gender. 

PP = Pearson Product Moment Correlation

Table 4.21: Relationship between certainty about future career choice and student achievement on the Personal Development test and the Resource Management test
Research Question Four

Does certainty of future family life (e.g., marriage, children, home life, etc.) relate to student scores on the Personal Development test and the Resource Management test?

Students indicated their degree of certainty about their future family life using a Likert type scale from very uncertain (1) to very certain (4). Six hundred twenty-six Personal Development students and 385 Resource Management students provided this information. Tables 4.22 and 4.23 show that of the students who took the Personal Development test, 65.3 percent indicated that they were certain or very certain about their future family lives, and of the students who took the Resource Management test, 62.1 percent indicated that they were certain or very certain about their future family lives. Descriptors of future family life provided on the questionnaire included marriage, children and home life, although students were not asked to describe their future family lives.
<table>
<thead>
<tr>
<th></th>
<th>male</th>
<th>female</th>
<th>total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td></td>
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</tr>
<tr>
<td>not reported</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>626</td>
<td>362</td>
<td>626</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certainty About Future Family Life</th>
<th>Very uncertain</th>
<th>Uncertain</th>
<th>Certain</th>
<th>Very Certain</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>17</td>
<td>89</td>
<td>113</td>
<td>35</td>
<td>262</td>
</tr>
<tr>
<td>female</td>
<td>21</td>
<td>83</td>
<td>175</td>
<td>67</td>
<td>362</td>
</tr>
<tr>
<td>not reported</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>39</td>
<td>179</td>
<td>299</td>
<td>109</td>
<td>626</td>
</tr>
</tbody>
</table>

Table 4.22: Male and female student participants on the Personal Development test by certainty about future family life

---

<table>
<thead>
<tr>
<th></th>
<th>male</th>
<th>female</th>
<th>total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>female</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>not reported</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>385</td>
<td>332</td>
<td>385</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certainty About Future Family Life</th>
<th>Very uncertain</th>
<th>Uncertain</th>
<th>Certain</th>
<th>Very Certain</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>male</td>
<td>12</td>
<td>57</td>
<td>49</td>
<td>18</td>
<td>148</td>
</tr>
<tr>
<td>female</td>
<td>13</td>
<td>56</td>
<td>114</td>
<td>47</td>
<td>240</td>
</tr>
<tr>
<td>not reported</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27</td>
<td>119</td>
<td>171</td>
<td>68</td>
<td>385</td>
</tr>
</tbody>
</table>

Table 4.23: Male and female student participants on the Resource Management test by certainty about future family life

99
Kister (1989) stated that home economics knowledge is structured in relationship to the home and family environment. The Work and Family Life curriculum was based on the mission “to prepare youth and adults for the work of the family” with the aim of strengthening families and “empowering individuals to take action for self and others in the home” (Ohio Department of Education, 1994). Having a degree of certainty about future family life might make family and consumer sciences content more relevant to learners.

As shown in Table 4.24, there were no significant relationships between students’ certainty about future family and achievement scores on the Personal Development test, however there was a low positive association (r = .15) (p < .01) between certainty about future family and the Resource Management posttest for all students. When male students and female students were viewed separately, there was a low positive relationship (r = .17) (p < .05) between certainty about future family and student achievement on the Resource Management posttest.

This finding could suggest that male students in Resource Management classes have a higher interest in the content of the course because of their degree of certainty about their future family lives.
<table>
<thead>
<tr>
<th></th>
<th>Posttest</th>
<th></th>
<th></th>
<th>Gain</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>r</td>
<td>p</td>
<td></td>
<td>r</td>
</tr>
<tr>
<td><strong>Personal Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>254</td>
<td>- .009</td>
<td>.889</td>
<td>- .017</td>
<td>.786</td>
</tr>
<tr>
<td>Females</td>
<td>346</td>
<td>.056</td>
<td>.296</td>
<td>.034</td>
<td>.524</td>
</tr>
<tr>
<td>All students</td>
<td>626</td>
<td>.038</td>
<td>.348</td>
<td>- .006</td>
<td>.885</td>
</tr>
<tr>
<td><strong>Resource Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>136</td>
<td>.174</td>
<td>.043*</td>
<td>.086</td>
<td>.320</td>
</tr>
<tr>
<td>Females</td>
<td>230</td>
<td>.089</td>
<td>.176</td>
<td>- .027</td>
<td>.686</td>
</tr>
<tr>
<td>All students</td>
<td>385</td>
<td>.146</td>
<td>.004**</td>
<td>- .008</td>
<td>.879</td>
</tr>
</tbody>
</table>

Note. All students includes males, females and participants who did not identify gender
** p > .01
* p > .05
PP = Pearson Product Moment Correlation

Table 4.24: Relationship between certainty about future family life and student achievement on the Personal Development test and the Resource Management test
Research Question Five

Are student scores on the Personal Development test and the Resource Management test related to school location category?

As indicated in Table 4.25, the majority of students (45.2%) in the Personal Development sample were enrolled in schools located in suburban counties as defined by McCracken and Peasley (1995) (For definitions of school location categories, see Chapter 1, pgs. 10 - 11). Students in rural schools represented 19.3% of the sample and students in urban schools represented 22.7%. The lowest enrollments in this sample were in semi-rural and rural suburban schools.

Table 4.26 indicates that the majority of the students represented in the Resource Management sample were enrolled in schools located in urban counties (47.7%). One hundred thirty seven (32.5%) of the students in the Resource Management sample were students from suburban county schools. The lowest representations were from semi-rural (8.8%), rural suburban (5.7%), and rural (5.2%) counties.
### Personal Development

<table>
<thead>
<tr>
<th>School Location Category</th>
<th>n</th>
<th>%</th>
<th>Mean %</th>
<th>SD%</th>
<th>Gain %</th>
<th>SD%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>126</td>
<td>19.3</td>
<td>58.17</td>
<td>18.77</td>
<td>5.24</td>
<td>17.21</td>
</tr>
<tr>
<td>Semi-Rural</td>
<td>63</td>
<td>9.6</td>
<td>51.87</td>
<td>19.66</td>
<td>3.93</td>
<td>14.39</td>
</tr>
<tr>
<td>Rural Suburban</td>
<td>21</td>
<td>3.2</td>
<td>57.02</td>
<td>18.81</td>
<td>3.21</td>
<td>15.45</td>
</tr>
<tr>
<td>Suburban</td>
<td>295</td>
<td>45.2</td>
<td>63.32</td>
<td>18.87</td>
<td>4.66</td>
<td>19.20</td>
</tr>
<tr>
<td>Urban</td>
<td>148</td>
<td>22.7</td>
<td>57.18</td>
<td>20.41</td>
<td>5.42</td>
<td>18.85</td>
</tr>
<tr>
<td>Total</td>
<td>653</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4.25:** Mean scores and standard deviations of student participants on the Personal Development test by school location category

### Resource Management

<table>
<thead>
<tr>
<th>School Location Category</th>
<th>n</th>
<th>%</th>
<th>Mean %</th>
<th>SD%</th>
<th>Gain %</th>
<th>SD%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>22</td>
<td>5.2</td>
<td>59.00</td>
<td>12.17</td>
<td>2.95</td>
<td>11.09</td>
</tr>
<tr>
<td>Semi-Rural</td>
<td>37</td>
<td>8.8</td>
<td>61.35</td>
<td>18.01</td>
<td>10.41</td>
<td>15.25</td>
</tr>
<tr>
<td>Rural Suburban</td>
<td>24</td>
<td>5.7</td>
<td>57.71</td>
<td>16.08</td>
<td>.93</td>
<td>11.72</td>
</tr>
<tr>
<td>Suburban</td>
<td>137</td>
<td>32.5</td>
<td>69.41</td>
<td>17.73</td>
<td>11.66</td>
<td>16.80</td>
</tr>
<tr>
<td>Urban</td>
<td>201</td>
<td>47.7</td>
<td>59.78</td>
<td>18.57</td>
<td>9.49</td>
<td>14.77</td>
</tr>
<tr>
<td>Total</td>
<td>421</td>
<td>99.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4.26:** Mean scores and standard deviations of student participants on the Resource Management test by school location category
Table 4.27 represents an analysis of variance (ANOVA) of student posttest scores on the Personal Development test by school location category. This analysis reveals a significant difference \(F = 6.13\) \((p < .001)\) among the total student scores depending on school location. The ANOVA represented in Table 4.24 does not show significant differences on the gain scores among students in different school location categories for students enrolled in Personal Development.

Table 4.29 shows a significant difference \(F = 6.95\) \((p < .001)\) in student posttest scores on the Resource Management test when classified by school location categories. Table 4.30 indicates a significant difference \(F= 3.56\) \((p < .05)\) on gain scores on the Resource Management test when students are viewed according to school location categories.

The Tukey test for Honest Significant Difference (HSD) showed that students in suburban schools scored significantly higher than students from urban and semi-rural schools on the Personal Development posttest \((p < .05)\).

The HSD test for Resource Management posttest indicated that student scores for suburban schools were significantly higher than scores from students in urban and rural suburban schools \((p < .05)\). When Resource Management gain scores were compared there was a significant difference between suburban and rural suburban schools.
** **  

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>1458.93</td>
<td>364.73</td>
<td>6.13**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>648</td>
<td>38571.67</td>
<td>59.52</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>652</td>
<td>40030.59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.27: Analysis of variance of student posttest scores on Personal Development test by school location category

** p < .001

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
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</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>29.97</td>
<td>7.49</td>
<td>.1410</td>
</tr>
<tr>
<td>Within Groups</td>
<td>648</td>
<td>34441.92</td>
<td>53.15</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>652</td>
<td>34471.90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.28: Analysis of variance of student gain scores on Personal Development test by school location category
<table>
<thead>
<tr>
<th>Source</th>
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<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>1416.40</td>
<td>354.10</td>
<td>6.95**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>416</td>
<td>21193.25</td>
<td>50.95</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>420</td>
<td>22609.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p < .001

Table 4.29: Analysis of variance of student posttest scores on Resource Management test by school location category

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4</td>
<td>539.34</td>
<td>134.83</td>
<td>3.65*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>416</td>
<td>15379.12</td>
<td>36.97</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>420</td>
<td>15918.46</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .01

Table 4.30: Analysis of variance of student gain scores on Resource Management test by school location category

These data support Odden’s (1992) notion that there are inequities in schools based on school location. As was shown in the Office of Educational Research and Improvement study (Appalachia Educational Laboratory, 1988) there appears to be lower achievement in rural districts. McCracken and Peasley’s (1995) finding that semi-rural and rural schools seem to lag behind in areas of achievement is supported by these data. Although McCracken and Peasley (1995) found rural suburban students to have higher
rates of achievement on the Ohio ninth grade proficiency test, these data indicate that suburban students scored higher on Work and Family Life tests. McCracken and Peasley (1995) associated lower achievement with lower rates of taxation and per pupil expenditure. They also suggested proximity to an urban area might be important to reaching levels of student achievement.
Research Question Six

Are student scores on the Personal Development test and the Resource Management test related to school size?

The size of schools based on enrollment included in the Personal Development sample ranged from 245 to 1,319 students. For the Resource Management sample school size ranged from 397 to 1,277 students.

As indicated in Table 4.31, 32.2 percent of the students in the Personal Development sample were enrolled in schools with student populations under 500. Two hundred thirty three or 35.7 percent of the students in this sample were enrolled in schools with populations from 501 to 700 students. Schools with populations from 751 to 1000 were represented in this sample by 22.7 percent. Only 9.5 percent of the students in the Personal Development sample were students enrolled in schools with populations over 1,001.

<table>
<thead>
<tr>
<th>Personal Development</th>
<th>n = 653</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>School Size</td>
<td></td>
</tr>
<tr>
<td>Under 500</td>
<td>210</td>
</tr>
<tr>
<td>501 to 750</td>
<td>233</td>
</tr>
<tr>
<td>751 to 1000</td>
<td>148</td>
</tr>
<tr>
<td>Over 1001</td>
<td>62</td>
</tr>
<tr>
<td>Total</td>
<td>653</td>
</tr>
</tbody>
</table>

Table 4.31: Student mean scores and standard deviations on the Personal Development test by school size

108
Table 4.32 shows that only 12.6% of the students in the Resource Management sample were enrolled in schools with populations under 500 students. Approximately one-fourth (25.9%) of the students in this sample were from schools with populations of 501 to 750. One hundred thirteen or 26.8% percent of the students in the Resource Management sample were from schools with populations from 751 to 1,000. The majority of the students represented in this sample were from schools with populations over 1,001.

<table>
<thead>
<tr>
<th>School Size</th>
<th>n</th>
<th>%</th>
<th>Mean %</th>
<th>SD %</th>
<th>Gain %</th>
<th>SD %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 500</td>
<td>53</td>
<td>12.6</td>
<td>65.94</td>
<td>16.79</td>
<td>9.58</td>
<td>14.52</td>
</tr>
<tr>
<td>501 to 750</td>
<td>109</td>
<td>25.9</td>
<td>65.30</td>
<td>13.88</td>
<td>3.83</td>
<td>11.91</td>
</tr>
<tr>
<td>751 to 1000</td>
<td>113</td>
<td>26.8</td>
<td>67.28</td>
<td>21.01</td>
<td>13.43</td>
<td>17.31</td>
</tr>
<tr>
<td>Over 1001</td>
<td>146</td>
<td>34.7</td>
<td>56.60</td>
<td>18.06</td>
<td>10.51</td>
<td>15.37</td>
</tr>
<tr>
<td>Total</td>
<td>421</td>
<td>100.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.32: Student mean scores and standard deviations on the Resource Management test by school size

The ANOVAs in Tables 4.33 and 4.34 indicate that there is a significant relationship between school size and posttest scores (F = 24.32) (p < .001) and a significant relationship between school size and gain scores (F = 16.00) (p < .001) on the Personal Development test. The subsequent Tukey test for Honest Significant Difference (HSD) revealed that the schools with populations from 501 to 750 were significantly different when compared on posttest scores for the Personal Development test with school having populations from 751 to 1000 and with schools with fewer than 500
students. This test also showed that schools with over 1,000 students were significantly different (p < .05) from schools with populations under 500 and with schools with populations between 751 and 1,000. The Tukey HSD showed that schools with populations from 501 to 750 were significantly different (p < .05) when compared on gain scores for the Personal Development test with schools having populations under 500. The Tukey HSD revealed that schools with populations over 1,001 were significantly different (p < .05) from all other schools in the sample when compared on gain scores.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>4045.69</td>
<td>1348.56</td>
<td>24.32**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>649</td>
<td>35984.90</td>
<td>55.45</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>652</td>
<td>40030.59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p < .001

Table 4.33: Analysis of variance of student scores on Personal Development test by school size
Table 4.34: Analysis of variance of student gain scores on Personal Development test by school size

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>2373.44</td>
<td>791.15</td>
<td>16.00**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>649</td>
<td>32098.46</td>
<td>49.46</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>652</td>
<td>34471.90</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p < .001

Table 4.35 displays the ANOVA for student scores on Resource Management test by size of school. Table 4.36 shows the ANOVA for student gain scores on the Resource Management test by size of school. As indicated in Table 4.35, there is a significant difference (F = 9.56) (p < .001) on student scores on the Resource Management test when students are compared based on size of their schools. Likewise, there is a significant difference (F = 7.97) (p < .001) on gain scores for the Resource Management test among students enrolled in schools of varying size.

Tukey's HSD test revealed that there is a significant difference (p < .05) between schools with under 500 students and schools with over 1,001 students when compared on posttest scores for Resource Management. Tukey's HSD test also showed that there is a significant difference (p < .05) between schools with 501 to 750 students and schools with over 1,001 students, and there is a significant difference (p < .05) between schools of 751 to 1,000 with schools of over 1,001.
Table 4.35: Analysis of variance of student posttest scores on Resource Management test by school size

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3</td>
<td>1454.88</td>
<td>484.96</td>
<td>9.56**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>417</td>
<td>21154.78</td>
<td>50.73</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>420</td>
<td>22609.65</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** p < .001

These data support Gabarino's (1980) research suggesting that school size does matter. Similar to Gabrino's study it was determined that the relationship to school size and student achievement is not linear. In the Personal Development sample, students with the highest posttest scores and the greatest gain scores attended schools with populations
over 1,001, while in the Resource Management sample, students with the lowest posttest scores attended schools with populations over 1,001.

Barker and Gump (1964) suggested that school size affects the participatory role students have in school. While large schools have more opportunities for students to participate, there are proportionately more students to take advantage of those opportunities. Lindsay (cited in Fowler & Walberg, 1991) found that increased school size had a negative effect on student participation in extra-curricular activities, student satisfaction and school attendance. When schools are too small, there are often fewer opportunities for to participate. Too small schools might also have a negative effect on the student’s attitude about school.

When comparing Personal Development and Resource Management scores on school size, these data indicate that there is a relationship to school size and student achievement. However, relative to optimum size, the relationships are inconclusive. It appears that schools with over 1,001 and students are associated with higher achievement in Personal Development and schools with populations under 1,000 are associated with higher achievement in Resource Management.
Research Question Seven

Are curricular factors, specifically time spent on the Ohio Work and Family Life curriculum and whether the score is counted for a grade, related to student scores on the Personal Development test and the Resource Management test?

Table 4.37 shows that teachers reported spending an average of 82.84 days on Personal Development content. The standard deviation for the number of days spent on Personal Development was 12.66 days indicating a wide variance among teachers on the number of days spent on the curriculum. Resource Management teachers reported spending an average of 80.49 days on Resource Management course content. The standard deviation for Resource Management was 7.13. In Ohio, a high school semester is usually 90 days. The typical vocational Work and Family Life class period is 40 to 50 minutes a day. Semester Personal Development and Resource Management classes range between 60 to 75 clock hours per semester.

<table>
<thead>
<tr>
<th></th>
<th>Range</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Development</td>
<td>25-90</td>
<td>82.84</td>
<td>12.66</td>
</tr>
<tr>
<td>Resource Management</td>
<td>60-90</td>
<td>80.49</td>
<td>7.13</td>
</tr>
</tbody>
</table>

Table 4.37: Number of days spent on Personal Development and Resource Management curricula

Table 4.38 shows the number of students who indicated whether the Personal Development or the Resource Management test counted for a grade.

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Table 4.38: Student indication as to whether Personal Development test and Resource Management test counts for a grade

Table 4.39 indicates a moderate positive association \((r = .32)\) \((p < .001)\) between amount of time spent on the curriculum and student posttest scores on the Personal Development test. There was also a low positive association \((r = .26)\) \((p < .001)\) between amount of time spent on the curriculum and student gain scores on this test. When males and females were viewed separately, males showed a moderate positive association \((r = .34)\) \((p < .001)\) between time spent on curriculum and posttest scores and females showed a low positive association \((r = .30)\) \((p < .001)\). However, as shown in Table 4.40, there was a moderate negative association \((r = -.32)\) \((p < .001)\) on gain scores for females and a low association \((r = -.26)\) \((p < .001)\) on gain scores for all students on the Resource Management test.

There is a significant positive moderate association \((r = .32)\) \((p < .001)\) between posttest scores for Personal Development and whether or not the test counts for a grade. There is also a significant positive moderate association \((r = .39)\) \((p < .001)\) between gain scores on the Personal Development test and whether or not the test counts for a grade.
As indicated on Table 4.40, there is a low positive association (r = .16) (p < .01) between Resource Management posttest and whether or not the test counted as grade.

### Personal Development

<table>
<thead>
<tr>
<th></th>
<th>Posttest</th>
<th></th>
<th>Gain</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>r</td>
<td>p</td>
<td>r</td>
</tr>
<tr>
<td>Time spent on curriculum PP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>156</td>
<td>.339</td>
<td>.000**</td>
<td>.203</td>
</tr>
<tr>
<td>Females</td>
<td>221</td>
<td>.295</td>
<td>.000**</td>
<td>.317</td>
</tr>
<tr>
<td>All students</td>
<td>393</td>
<td>.315</td>
<td>.000**</td>
<td>.261</td>
</tr>
</tbody>
</table>

Score counts for a grade P

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>88</td>
<td>.320</td>
<td>.000**</td>
<td>.385</td>
</tr>
<tr>
<td>Females</td>
<td>156</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>244</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. All students includes males, females and participants who did not identify gender

** p < .001
* p < .05
PP = Pearson Product Moment Correlation
P = Point Biserial Correlation Coefficient

Table 4.39: Relationship between curricular factors of number of days spent on curriculum and whether the score is counted for a grade and student achievement scores on the Personal Development test

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It is likely that the increased amount of time spent on the curriculum would lead to higher achievement and gain scores as is evidenced on the Personal Development posttest posttest and gain scores. It is curious, however, that increased time on the curriculum would lead to lower gain scores on the Resource Management test. It is possible that while teachers reported they spent an average of 80.49 days on the curriculum, they may have placed unequal emphasis on the curricular subsets. It is possible that teachers might continue to emphasize these areas while de-emphasizing other curricular components.
These data indicate that whether the score counts for a grade has a relationship to posttest scores for both Work and Family Life tests as well as gain scores for the Personal Development test. It is possible that whether the score counts for a grade determines the attention students give to statewide competency testing. McClelland (cited in Beck, 1978) recognized that achievement behaviors are reinforced if achievement situations lead to positive affects. Students who are motivated by grades and students for whom a test score might produce positive results relative to their final grades might be more motivated to achieve on the test.
Research Question Eight

Is student reaction to school climate related to student scores on the Personal Development test and the Resource Management test?

Schools generate a social environment or school climate through the elements they comprise including programs, classwork and teacher student interactions. The Quality of School Life survey (Epstein & McPartland, 1978) was administered as a measure of school climate to student volunteers in this study. It was considered that the quality of the school experience may influence student behaviors and attitudes. "Thinking positively about school, classwork and teachers...may enhance school-related behaviors and learning (Epstein & McPartland, 1978, p. 2)." Wright and Jenses (1981) determined that the Quality of School Life (QSL) survey appeared to be a fair measure of student affective response to the school.

The Quality of School Life survey is a 27-item survey based on three dimensions of school life. The Satisfaction with School subscale investigates a student's general reaction to school. The Commitment to Classwork subscale examines the level of interest students have in their classwork and the Reactions to Teachers subscale explores students' evaluations of their instructional and personal interactions with their teachers.

Table 4.41 reports student responses to the Quality of School Life Survey. Table 4.41 shows 313 students enrolled in Personal Development classes responded to the total QSL survey. Students in the Personal Development sample had a mean score of 1.89 (1.76 SD) on Satisfaction with School. The Satisfaction with School scale was zero to five. The mean score for these students on Commitment to Classwork was 4.34 (2.88 SD) on a zero to eleven scale. The mean score for all students in the sample was 5.75 (3.10 SD) on Reactions to Teachers. The mean score for all Personal Development
students' Reactions to School Climate was 11.92 (6.92 SD) on a zero to twenty-seven point scale. The mean score for girls on the Reaction to School Climate was higher at 13.19 (6.91 SD) than the mean score for boys at 10.08 (6.54 SD) in the Personal Development sample.

Table 4.41 shows that 224 students in the Resource Management sample completed the total Quality of School Life survey. The mean score for Resource Management students on Satisfaction with School was 1.81 (1.60 SD) on a zero to five scale. Resource Management students' mean score on Commitment to Classwork was 4.37 (2.64 SD) on a zero to eleven scale. Their mean score on Reactions to Teachers was 6.29 (2.76 SD) on a zero to eleven scale. The mean score for Reactions to School Climate for the Resource Management sample group was 12.46 on a zero to twenty-seven scale.
### Table 4.41: Mean scores on Quality of School Life (QSL) survey for students enrolled in Personal Development and Resource Management classes by gender

<table>
<thead>
<tr>
<th></th>
<th>Personal Development</th>
<th></th>
<th>Resource Management</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>range</td>
<td>Mean</td>
</tr>
<tr>
<td><strong>Satisfaction with School</strong> (Scale 0 - 5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>131</td>
<td>0-5</td>
<td>1.46</td>
</tr>
<tr>
<td>Females</td>
<td>196</td>
<td>0-5</td>
<td>2.19</td>
</tr>
<tr>
<td>All students</td>
<td>341</td>
<td>0-5</td>
<td>1.89</td>
</tr>
<tr>
<td><strong>Commitment to Classwork</strong> (Scale 0 - 11)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>128</td>
<td>0-11</td>
<td>3.73</td>
</tr>
<tr>
<td>Females</td>
<td>195</td>
<td>0-11</td>
<td>4.73</td>
</tr>
<tr>
<td>All students</td>
<td>336</td>
<td>0-11</td>
<td>4.34</td>
</tr>
<tr>
<td><strong>Reactions to Teachers</strong> (Scale 0 - 11)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>125</td>
<td>0-11</td>
<td>5.02</td>
</tr>
<tr>
<td>Females</td>
<td>188</td>
<td>0-11</td>
<td>6.29</td>
</tr>
<tr>
<td>All students</td>
<td>327</td>
<td>0-11</td>
<td>5.75</td>
</tr>
<tr>
<td><strong>Reactions to School Climate</strong> (Scale 0 - 27)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>119</td>
<td>0-27</td>
<td>10.08</td>
</tr>
<tr>
<td>Females</td>
<td>181</td>
<td>0-27</td>
<td>13.19</td>
</tr>
<tr>
<td>All students</td>
<td>313</td>
<td>0-27</td>
<td>11.92</td>
</tr>
</tbody>
</table>

*Note.* All students includes males, females and participants who did not identify gender.
In general, students in the Personal Development sample and students in the Resource Management sample scored lower than the research norm group on Satisfaction with School, but higher than the research norm group on Reactions to Teachers. The research norm for ninth-graders on the Satisfaction with School scale is 2.94 (1.78 SD) and for twelfth-graders is 2.09 (1.78 SD). On the Commitment to Classwork subscale students in the Personal Development and the Resource Management samples scored closer to the research norm group. The research norms for Commitment to Classwork were 4.49 (2.92 SD) and 4.18 (3.03 SD) for ninth and twelfth-grade students respectively. The research norms for Reactions to Teachers were 5.01 (2.79 SD) for ninth-graders and 5.34 (2.69) for twelfth-graders. The ninth grade students in the research norming group scored 11.84 (6.45 SD) on the Quality of School Life survey while the twelfth-grade students scored 11.54 (6.53) on the total survey.

Tables 4.42 and 4.43 depict the relationship between school climate and student achievement scores on the Personal Development test and the Resource Management test. Table 4.42 shows no relationship between student achievement and student satisfaction with school, commitment to classwork, reactions to teachers or reactions to school climate.

Table 4.43 also shows no correlation between student achievement scores on the Resource Management posttest and students' satisfaction with school, student commitment to classwork, and student reactions to school climate. There is, however, a low negative association ($r = .22$) ($p < .01$) between student gain scores and reaction to teachers for females. There is also a low negative association ($r = .20$) ($p < .01$) between student gain scores and reaction to teachers for all students.
### Table 4.42: Relationship between student reactions to school climate and student achievement on the Personal Development test

<table>
<thead>
<tr>
<th></th>
<th>Posttest</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>r</td>
</tr>
<tr>
<td>Satisfaction with School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>131</td>
<td>.009</td>
</tr>
<tr>
<td>Females</td>
<td>196</td>
<td>.012</td>
</tr>
<tr>
<td>All students</td>
<td>341</td>
<td>.053</td>
</tr>
<tr>
<td>Commitment to Classwork</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>128</td>
<td>.055</td>
</tr>
<tr>
<td>Females</td>
<td>195</td>
<td>-.052</td>
</tr>
<tr>
<td>All students</td>
<td>336</td>
<td>.023</td>
</tr>
<tr>
<td>Reactions to Teachers</td>
<td></td>
<td></td>
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<tr>
<td>Males</td>
<td>125</td>
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<tr>
<td>Females</td>
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<tr>
<td>All students</td>
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<td>.078</td>
</tr>
<tr>
<td>Reactions to School Climate</td>
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<td></td>
</tr>
<tr>
<td>Males</td>
<td>119</td>
<td>.056</td>
</tr>
<tr>
<td>Females</td>
<td>181</td>
<td>-.015</td>
</tr>
<tr>
<td>All students</td>
<td>313</td>
<td>.059</td>
</tr>
</tbody>
</table>

Note. All students includes males, females and participants who did not identify gender

** p < .001

PP = Pearson Product Moment Correlation
### Table 4.43: Relationship between student reactions to school climate and student achievement on the Resource Management test

<table>
<thead>
<tr>
<th></th>
<th>Posttest</th>
<th></th>
<th>Gain</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>r</td>
<td>p</td>
<td>r</td>
</tr>
<tr>
<td><strong>Satisfaction with School</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>84</td>
<td>.057</td>
<td>.605</td>
<td>-.015</td>
</tr>
<tr>
<td>Females</td>
<td>143</td>
<td>.037</td>
<td>.661</td>
<td>-.041</td>
</tr>
<tr>
<td>All students</td>
<td>243</td>
<td>.053</td>
<td>.413</td>
<td>-.033</td>
</tr>
<tr>
<td><strong>Commitment to Classwork</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>82</td>
<td>.067</td>
<td>.552</td>
<td>.076</td>
</tr>
<tr>
<td>Females</td>
<td>138</td>
<td>-</td>
<td>.647</td>
<td>-.009</td>
</tr>
<tr>
<td>All students</td>
<td>235</td>
<td>-</td>
<td>.820</td>
<td>.029</td>
</tr>
<tr>
<td><strong>Reactions to Teachers</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>80</td>
<td>.103</td>
<td>.363</td>
<td>-.171</td>
</tr>
<tr>
<td>Females</td>
<td>140</td>
<td>.044</td>
<td>.605</td>
<td>-.218</td>
</tr>
<tr>
<td>All students</td>
<td>125</td>
<td>.075</td>
<td>.255</td>
<td>-.199</td>
</tr>
<tr>
<td><strong>Reactions to School Climate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>78</td>
<td>.115</td>
<td>.316</td>
<td>-.044</td>
</tr>
<tr>
<td>Females</td>
<td>131</td>
<td>-</td>
<td>.954</td>
<td>-.119</td>
</tr>
<tr>
<td>All students</td>
<td>224</td>
<td>.044</td>
<td>.515</td>
<td>-.087</td>
</tr>
</tbody>
</table>

**Note.** All students includes males, females and participants who did not identify gender
* p ≤ .01
** p< .001
PP = Pearson Product Moment Correlation
Brookover et al. (1979) contends that teachers play a prominent role in the school climate. He suggests that school climate is influenced by teachers who care about their (students') academic performance" and "are committed to their (students') high achievement" (1979, p. 143 - 144). Gnagey's (1981) research indicated that disruptive students, as described by teachers, had comparatively low QSL/TCH subscale scores. He suggests that students who are considered disruptive by teachers have generalized their negative reactions to their school experience. It is interesting to note that in the Personal Development and Resource Management samples, students had higher mean scores on the Reactions to Teacher subscale than the norm group. These data suggest that students in these samples had a comparatively favorable reaction to teachers.

These data correspond with Epstein's conclusion that "there is no important causal relationship between school achievement-test scores and attitudes toward school, or vice versa" (1981, p. 107). She suggests that longitudinal data may be more important than cross-sectional studies. Epstein (1981) suggests that student attitudes are more closely related to report card grades than to student achievement scores.
Research Question Nine

Is student perceived parental involvement related to scores on the Personal Development test and the Resource Management test?

Henderson (1987) suggests that "programs designed with strong parent involvement produce students who perform better (academically) than otherwise identical programs that do not involve parents as thoroughly, or that do not involve them at all" (p. 1). Hollifield (1994) noted that parent involvement declines as students move through middle school and high school, although he believes students still want and need their parents' support to reach their educational goals.

Students in this study volunteered to take the Parent Involvement Measure developed by Sharon Paulson at Ball State University. This 22-item measure was designed to assess students' perspectives of parental values towards achievement and interest in schoolwork, and parental involvement in school activities. Using a Likert type scale from "very unlike" (1) to "very like" (5), students described their perceptions of their parents' behaviors regarding values and interest in school and involvement in school functions.

Table 4.44 reports student responses to the Parent Involvement Measure (PIM). The mean score for females on the Achievement/Values Scale was 73.65 (9.45 SD) for Personal Development students and 73.51 (8.49 SD) for Resource Management students, while the mean for Personal Development males was 70.97 (9.15 SD) and Resource Management was 72.32 (8.93 SD). The mean score for female students in Personal Development classes on the School Functions Scale was 16.78 (3.92 SD) and 16.83 (4.41 SD) for females in the Resource Management sample. The mean score for Personal Development males on the School Functions subscale was 16.60 (4.03 SD) and 16.79 (4.21 SD) for Resource Management males.
A careful examination of these data indicate relatively high scores for all students on the Parent Involvement Measure (PIM). The students enrolled in Personal Development classes who volunteered to respond to this survey scored 89.19 with a standard deviation of 11.36, meaning that 68 percent of the students scored between 77.8 and 100.6 on a 22 to 110-point scale. Similarly, Resource Management students had a mean score of 89.69 on the Parent Involvement Measure (PIM) with a standard deviation of 11.15, indicating a range of 78.5 to 100.8 for 68 percent of the students.

<table>
<thead>
<tr>
<th>Personal Development</th>
<th>Resource Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>n = 389</td>
<td>n = 215</td>
</tr>
<tr>
<td>n range Mean SD</td>
<td>n range Mean SD</td>
</tr>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Achievement Value/Interest</th>
<th>(Scale = 17 - 85)</th>
<th></th>
<th>School Functions</th>
<th>(Scale = 5 -25)</th>
<th></th>
<th>Parental Involvement</th>
<th>(Scale = 22 - 110 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>146 40-85 70.97 9.15</td>
<td>77 41-85 72.32 8.93</td>
<td>Males</td>
<td>159 5-25 16.60 4.03</td>
<td>80 7-25 16.79 4.21</td>
<td>Males</td>
<td>143 51-110 87.53 10.84</td>
</tr>
<tr>
<td>Females</td>
<td>233 40-85 73.65 9.46</td>
<td>123 52-85 73.51 8.49</td>
<td>Females</td>
<td>240 5-25 16.78 3.92</td>
<td>129 5-25 16.83 4.41</td>
<td>Females</td>
<td>229 54-110 90.36 11.30</td>
</tr>
<tr>
<td>All students</td>
<td>396 40-85 72.60 9.49</td>
<td>218 40-85 72.92 8.71</td>
<td>All students</td>
<td>419 5-25 16.66 4.05</td>
<td>227 5-25 16.59 4.42</td>
<td>All students</td>
<td>389 51-110 89.19 11.36</td>
</tr>
</tbody>
</table>

Note. All students includes males, females and participants who did not identify gender

Table 4.44: Mean scores on Parent Involvement Measure (PIM) for students enrolled in Personal Development and Resource Management classes by gender
Tables 4.44 and 4.45 show few associations between parent involvement and student achievement on the Personal Development test and the Resource Management test. There is a low negative association \( r = -0.14 \) \( (p < 0.05) \) for females between their perception of their parents' achievement values and interest in their school work and their gain scores on the Personal Development test. There is a low negative association \( r = -0.10 \) \( (p < 0.05) \) for all students in the Personal Development sample between their perceptions of their parents' achievement values and interest in their school work and gain scores on the Personal Development test.

Likewise there is a low negative association \( r = -0.18 \) \( (p < 0.01) \) between females' perception of their parents participation in school functions and gain scores on the Personal Development test. There is a low negative association \( r = -0.12 \) \( (p < 0.05) \) for all students on the Personal Development test between student perception of their parents participation in school functions and gain scores.

There is a low negative association \( r = -0.19 \) \( (p < 0.01) \) between female gain scores and the total Parent Involvement Measure for student volunteers in the Personal Development sample. There is a low negative association \( r = -0.12 \) \( (p < 0.05) \) for all students between the Parent Involvement Measure and student gain scores on the Personal Development test.
<table>
<thead>
<tr>
<th></th>
<th>Posttest</th>
<th></th>
<th></th>
<th>Gain</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>r</td>
<td>p</td>
<td>r</td>
<td>p</td>
<td></td>
</tr>
</tbody>
</table>

**Achievement Value/Interest**

<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Males</td>
<td>146</td>
<td>.006</td>
<td>.946</td>
<td>-</td>
<td>.085</td>
<td>.311</td>
</tr>
<tr>
<td>Females</td>
<td>233</td>
<td>.019</td>
<td>.770</td>
<td>- .144</td>
<td>.028*</td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>396</td>
<td>.052</td>
<td>.302</td>
<td>- .107</td>
<td>.034*</td>
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</tbody>
</table>

**School Functions**

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<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>159</td>
<td>-.052</td>
<td>.512</td>
<td>- .040</td>
<td>.614</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>240</td>
<td>-.007</td>
<td>.915</td>
<td>- .183</td>
<td>.004**</td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>419</td>
<td>-.022</td>
<td>.649</td>
<td>- .117</td>
<td>.017*</td>
<td></td>
</tr>
</tbody>
</table>

**Parental Involvement**

<p>| | | | | | | |</p>
<table>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>143</td>
<td>-.006</td>
<td>.945</td>
<td>- .053</td>
<td>.531</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>229</td>
<td>.015</td>
<td>.823</td>
<td>- .186</td>
<td>.005**</td>
<td></td>
</tr>
<tr>
<td>All students</td>
<td>389</td>
<td>.042</td>
<td>.404</td>
<td>- .118</td>
<td>.020*</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** All students includes males, females and participants who did not identify gender

**PP** = Pearson Product Moment Correlation

Table 4.45: Relationship between perceived parent involvement and student achievement on the Personal Development test

Table 4.46 indicates a low positive (r = .14) (p < .05) association between the Resource Management sample students' perception of their parents' achievement values and interest in school in and posttest scores on the Resource Management test. There is a low positive association (r = .26) (p < .05) between males' perception of their parents' involvement in school functions and their achievement on the posttest score for Resource Management. There is a low positive association (r = .15) (p < .03) between
student perceptions of parent involvement and student achievement on the Resource Management test.

When student gain scores on the Resource Management test are viewed, there is a low positive association ($r = .26$) ($p < .05$) between males' perceptions of their parents' participation in school functions and their gain on the Resource Management test. However, there is a low negative association between females' perception of their parents' participation in school functions and their gain scores on the Resource Management test.

Similarly, there is a low positive association ($r = .26$) ($p < .05$) for males between the total score on the Parent Involvement Measure and gain scores on the Resource Management test and a low negative association ($r = -.21$) ($p < .05$) between female scores on the Parent Involvement Measure and gain scores on the Resource Management test.
Table 4.46: Relationship between perceived parent involvement and student achievement on the Resource Management test

These results appear to be inconclusive regarding parental involvement and student achievement scores on the Work and Family Life tests. There is a possibility of a range restriction due to consistently high scores on the first subscale and the total Parent Involvement Measure. It is likely that students who participate in such a survey are students whose parents value and are involved in their education.

There is an indication that parent involvement is associated with males' achievement in Resource Management classes. This supports the work of McDill and
Rigsby (1969) who identified parent involvement as a critical factor in the achievement and aspirations of high school students.

The low negative association between parental involvement and female scores might be associated with too much parental involvement. Eccles (1993) suggests that excessive efforts to influence children's interests might backfire and lead to a decrease in children's interests.

It is surprising that the association between parent involvement and student achievement on the gain scores for both Personal Development test and the Resource Management test are negative for females and positive for males in the Resource Management sample. While it was stated earlier that based on Eccles (1993) research it is possible that parents offer more support for girls' participation in family and consumer sciences courses. These data, however, suggest that parent involvement might not be associated with higher achievement gains on the Work and Family Life tests for females.
Research Question Ten

Which independent variables are the best predictors of the dependent variable?

Stepwise regression analyses were completed to determine which independent variables are the best predictors of student achievement on the posttest and the gain scores for the Personal Development test and the Resource Management tests. Three criteria were used to determine inclusion into the stepwise regression. The first was the independent variable’s impact on the dependent variable. All independent variables which correlated significantly at .10 or higher with the dependent variable were considered for inclusion in the stepwise regression analysis. The second criterion was the independent variable’s coherence with the dependent variable. That is, there was a linear relationship between the independent variable and the dependent variable. Finally, an independent variable was entered into the regression equation if there was no intercorrelation with another independent variable.

A stepwise regression analysis was completed to determine which independent variables could best predict student achievement on the posttest for the Personal Development test. Age was not entered into the stepwise regression due to its relationship with grade level. Number of semesters taken in Work and Family Life was not entered into the regression equation since the results of the correlation showed a low negative relationship with Personal Development student achievement while the data indicated that students with the highest means were those with one semester of Work and Family Life. An analysis of the number of days absent revealed no significant relationship to Personal Development posttest scores. Certainty about future career and future family life were not considered for inclusion into the regression equation due to their lack of impact on the dependent variable. School size was not entered into the stepwise regression because of its nonlinear relationship to student achievement scores.
Satisfaction with school, commitment to classwork, reactions to teachers and reaction to school climate were not included since these showed no relationship to the dependent variable. The perceived parental involvement measures were not included in the Personal Development posttest regression equation due to the lack of impact these independent variables had on the dependent variable.

Gender and grade level were entered in the stepwise regression due to their relationships to the dependent variable. Additional variables entered into the regression equation were school location category, amount of time spent on the curriculum and whether the score counted for a grade.

As shown in Table 4.47, these variables and their multiple correlation coefficient accounted for 31.1 percent of the variance related to student achievement on the Personal Development posttest.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>b^k</th>
<th>R^2</th>
<th>R^2Change</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Grade level</td>
<td>1.452</td>
<td>.081</td>
<td>.081</td>
<td>9.025*</td>
</tr>
<tr>
<td>2. Gender</td>
<td>2.910</td>
<td>.119</td>
<td>.038</td>
<td>6.827*</td>
</tr>
<tr>
<td>3. School location (suburban)</td>
<td>2.665</td>
<td>.242</td>
<td>.123</td>
<td>10.653**</td>
</tr>
<tr>
<td>4. School location (urban)</td>
<td>5.812</td>
<td>.282</td>
<td>.040</td>
<td>9.736**</td>
</tr>
<tr>
<td>5. School location (rural)</td>
<td>3.742</td>
<td>.311</td>
<td>.029</td>
<td>8.865**</td>
</tr>
</tbody>
</table>

** p < .001  
* p < .01

n = 104

4.47: Stepwise regression of factors related to posttest scores on the Personal Development test
Grade level and gender were significant predictors of posttest score on the Personal Development test accounting for 8.1 percent ($p < .01$) and 3.8 percent ($p < .01$) of the variance respectively. Suburban school location category accounted for an additional 12.3 percent ($p < .001$) of the variance. Urban school location accounted for additional 4.0 percent ($p < .001$) of the variance and rural school location accounted for an additional 2.9 percent ($p < .001$) of the variance in the model.

However, in that the partial correlation coefficient was negative, these data suggest that not being in suburban school was a significant predictor of student achievement. An examination of these data revealed that of the 104 subjects in this subset, only 29 students represented two suburban schools. The mean score for these suburban students was 19.79 (49.48%). The mean score for the suburban students in the full model was 25.33 (63.32%).

As shown in Table 4.48 a stepwise regression analysis was completed to determine a regression equation which could best predict student achievement on the gain score on the Personal Development test. Age was not entered into the stepwise regression due to its relationship with grade level. Number of semesters taken in Work and Family Life was not entered into the regression equation since the results of the correlation showed an low negative relationship with Personal Development student achievement while the data indicate that students with the highest means were those with one semester of Work and Family Life. An analysis of the number of days absent revealed no significant relationship to Personal Development gain scores. Certainty about future career and future family life were not considered for inclusion into the regression equation due to their lack of impact on the dependent variable. School size was not entered into the stepwise regression because of its nonlinear relationship to student achievement scores. Satisfaction with school, commitment to classwork, reactions to teachers and reaction to school climate
were not included since these showed no relationship to the dependent variable. The perceived parental involvement measures were not included in the Personal Development gain scores regression equation due to lack of impact these independent variables had on the dependent variable.

Gender and grade level were entered in the stepwise regression due to their relationships to the dependent variable. Additional variables entered into the regression equation were school location category, amount of time spent on the curriculum and whether the score counted for a grade.

As shown in Table 4.48, these variables and their multiple correlation coefficient accounted for 33.6 percent of the variance explained in the dependent variable, student achievement on the Personal Development gain score.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>b&lt;sub&gt;k&lt;/sub&gt;</th>
<th>R&lt;sup&gt;2&lt;/sup&gt;</th>
<th>R&lt;sup&gt;2&lt;/sup&gt;Change</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Grade level</td>
<td>- .868</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>2. Gender</td>
<td>- .377</td>
<td>.009</td>
<td>.009</td>
<td>.461</td>
</tr>
<tr>
<td>3. School location (suburban)</td>
<td>- 8.146</td>
<td>.232</td>
<td>.223</td>
<td>10.077***</td>
</tr>
<tr>
<td>4. Score counts for a grade</td>
<td>6.021</td>
<td>.336</td>
<td>.104</td>
<td>12.524***</td>
</tr>
</tbody>
</table>

*** p < .001
n = 104

4.48: Stepwise regression of factors related to gain scores on the Personal Development test

Suburban school location category accounted for 22.3 percent (p < .001) of the variance on the Personal Development gain score for this sample. An additional 10.4 percent (p < .001) of the variance was accounted for by whether the score counted for a
grade.

Again, suburban school location had a negative partial correlation coefficient, indicating that not being in a suburban school is a predictor of student achievement. An examination of these data revealed that of the 104 subjects in this subset, only 29 students represented two suburban schools. The mean gain score for these students was - 4.45 (-11.13 %). The mean gain score for suburban students in the full model was 1.86 (4.66 %).

A stepwise regression analysis was completed to determine which independent variables could best predict student achievement on the posttest for the Resource Management test. Age was not entered into the stepwise regression due to its relationship with grade level. Number of semesters taken in Work and Family Life was not entered into the regression equation since the results of the correlation showed a low negative relationship with Resource Management student achievement while the data indicate that students with the highest means are those with two semesters of Work and Family Life. Certainty about future career was not considered for inclusion into the regression equation due to its lack of impact on the dependent variable. School size was not entered into the stepwise regression because of its nonlinear relationship to student achievement scores. Time spent on the curriculum was not included in the stepwise regression since it showed no relationship to the dependent variable. Satisfaction with school, commitment to classwork, reactions to teachers and reaction to school climate were not included since these showed no relationship to the dependent variable. Perceived parental values was not included due to its lack of impact on the dependent variable.

Gender and grade level were entered in the stepwise regression due to their relationships to the dependent variable. Additional variables entered into the regression
equation were school location category, amount of time spent on the curriculum and whether the score counted for a grade, number of days absent, certainty about future family life, and perceived parent involvement in school functions and perceived parental involvement.

As shown in Table 4.49, these variables and their multiple correlation coefficient accounted for 17.9 percent of the variance explained in the dependent variable, student achievement on the Resource Management posttest.

Table 4.49 illustrates the predictors of student achievement on the Resource Management posttest. Grade level accounted for 9.1 percent (p < .01) of the variance on the Resource Management posttest in the sample. An additional 4.7 percent (p < .001) was attributed to gender. Whether the grade counted for a score accounted for an additional 4.1 percent (p < .001) of the variance. Additional variables did not contribute significantly to the model.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>$b^k$</th>
<th>$R^2$</th>
<th>$R^2_{\text{Change}}$</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Grade level</td>
<td>1.507</td>
<td>.091</td>
<td>.091</td>
<td>11.076*</td>
</tr>
<tr>
<td>2. Gender</td>
<td>2.435</td>
<td>.138</td>
<td>.046</td>
<td>8.692**</td>
</tr>
<tr>
<td>3. Score counts as grade</td>
<td>2.835</td>
<td>.179</td>
<td>.041</td>
<td>7.827**</td>
</tr>
</tbody>
</table>

** $p < .001$
* $p < .01$

n = 112

4.49: Stepwise regression of factors related to posttest scores on the Resource Management test
A stepwise regression analysis was completed to determine which independent variables could best predict student achievement on the gain for the Resource Management test. Age was not entered into the stepwise regression due to its relationship with grade level. Number of semesters taken in Work and Family Life and number of days absent were not entered into the regression equation since the results of these correlations showed a no relationships with Resource Management gain scores. Certainty about future career and future family life were not considered for inclusion into the regression equation due to their lack of impact on the dependent variable. School size was not entered into the stepwise regression because of its nonlinear relationship to student achievement scores. Number of days spent on the curriculum was not entered into the regression equation since it lacked coherence with the model. Satisfaction with school, commitment to classwork, and reaction to school climate were not included since there was no relationship to the dependent variable. Reactions to teachers was not included due to its lack of coherence to the model. Parent involvement measures were not included since these data had no relationship to gain scores for all Resource Management students.

Gender and grade level were entered in the stepwise regression due to their relationships to the dependent variable. Additional variables entered into the regression equation were school location category, and whether the score counted for a grade.

Table 4.50 reports that suburban school location category was the only significant variable accounting for 6.3 percent (p < .05) of the variance explained for gain scores on the Resource Management test. No other variable in the model was significant.

The partial correlation coefficient for suburban school location was negative, indicating that not being in a suburban school was a predictor of student gain on the Resource Management test. An examination of these data indicated that of the 156 students in the subset, 76 represented four suburban schools. The mean gain score for

139
these students was 2.32 (5.8%). The mean gain score for suburban students in the full model was 4.66 (11.66%).

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>$b^k$</th>
<th>$R^2$</th>
<th>$R^2_{\text{change}}$</th>
<th>$F$</th>
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</thead>
<tbody>
<tr>
<td>1. Grade level</td>
<td>.504</td>
<td>.015</td>
<td>.015</td>
<td>2.279</td>
</tr>
<tr>
<td>2. Gender</td>
<td>-2.017</td>
<td>.037</td>
<td>.022</td>
<td>2.928</td>
</tr>
<tr>
<td>3. School location (suburban)</td>
<td>1.888</td>
<td>.063</td>
<td>.026</td>
<td>3.407*</td>
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</tbody>
</table>

* $p < .05$

$n = 156$

4.50: Stepwise regression of factors related to gain scores on the Resource Management test
CHAPTER 5

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Summary

The Ohio Work and Family Life curriculum was designed to prepare students "for the challenging and ever-changing work of the family" (Ohio Department of Education, 1994). This curriculum is based on the practical problems of work and family that individuals and families face daily. This curriculum includes individual semester courses in Personal Development, Resource Management, Nutrition and Wellness, Parenting, Family Relations and Life Planning. A statewide assessment system was developed by the Ohio Department of Education and The Ohio State University Vocational Instructional Materials Laboratory to assess student achievement on the Personal Development and Resource Management courses.

The purpose of this study was to determine what selected factors are related to student achievement on the Work and Family Life tests in the areas of the Personal Development and Resource Management. This study examined the elements of parental involvement, school climate, school location category, school size, time spent on the curriculum and student personal characteristics as they relate to student scores on the competency tests in the Work and Family Life areas of Personal Development and Resource Management.

The objectives of this study were: (a) determine student achievement on the Personal Development and Resource Management tests; (b) identify personal
characteristics of students enrolled in Personal Development and Resource Management courses; (c) identify students' perceptions of parents involvement in their education; (d) identify students' reactions towards school climate; (e) investigate relationships between student achievement on the Personal Development and Resource Management tests, students perceptions of parent involvement, and school climate; (f) determine if a relationship exists between student achievement, perceived parent involvement, school climate and school location category; and (g) identify predictors of student achievement on the Personal Development and Resource Management tests.

The following research questions were to be answered:

1. Is there a student achievement gain from pretest to posttest on the Personal Development test and the Resource Management test after instruction under the Ohio Work and Family Life program?

2. Are student personal characteristics related to student scores on the Personal Development test and the Resource Management test?
   a. gender
   b. age
   c. grade
   d. previous family and consumer sciences classes
   e. school attendance

3. Does certainty of future career choice relate to student scores on the Personal Development test and the Resource Management test?

4. Does certainty of future family life (e.g., marriage, children, home life, etc.) relate to student scores on the Personal Development test and the Resource Management test?
5. Are student scores on the Personal Development test and the Resource Management test related to the school location category?

6. Are student scores on the Personal Development test and the Resource Management test related to school size?

7. Are curricular factors, specifically time spent on the Ohio Work and Family Life curriculum and whether the score is counted for a grade, related to student scores on the Personal Development test and the Resource Management test?

8. Is student reaction to school climate related to student scores on the Personal Development test and the Resource Management test?

9. Is student perceived parental involvement related to scores on the Personal Development test and the Resource Management test?

10. Which independent variables are the best predictors of the dependent variable?

The design of the study was ex post facto/correlational. The intent of this study was to determine the proportion of variance in the dependent variable accounted for by the independent variables. A model of factors having potential influence on the student achievement scores in Personal Development and Resource Management classes was developed. The model represented the variables of interest identified in the review of literature.

The population of the study was Ohio secondary students during the fall semester of 1996. A random cluster sample of students was drawn consisting of 40 Personal Development classrooms and 40 Resource Management classrooms.

Parent Involvement Measure and Quality of School Life data were collected through numbered surveys encoded to match the numbered pretests developed and sent by The Ohio State University Vocational Instructional Materials Laboratory (VIML). All pretest materials and Parent Involvement Measures were sent to teachers from the VIML
on September 3, 1996 with instructions that they be returned in the addressed envelopes by September 30, 1996. Letters were sent to teachers who returned pretests and Parent Involvement Measures to thank them for their cooperation and encourage their continued participation. The VIML sent posttest materials in November, 1996 with instructions that materials be returned by January 30, 1997. The researchers included numbered Quality of School Life surveys to match the numbered posttest materials.

Nine hundred eighty seven Personal Development pretests and 702 Resource Management pretests were returned to the VIML. Seven hundred fifty one Personal Development pretests and 702 Resource Management pretests were linked to the Parent Involvement Measure. The student respondents with useable pretest and posttest matches included 653 Personal Development students and 421 Resource Management students. One hundred eighty five matches were made that included the Personal Development pretest, Parent Involvement Measure, Personal Development posttest and Quality of School Life Survey. One hundred fifty-one Resource Management linkages were made including all four instruments. Four hundred fifty-two QSL surveys were matched to Personal Development posttests and 319 QSL surveys were matched to Resource Management posttests. Only 56 Personal Development and 72 Resource Management students with pretests and posttest matches provided information for the 17 independent variables used in the study.

All pretests and posttests became part of the data base developed by the VIML. All handling and mailing procedures were done according to VIML guidelines. The Vocational Instructional Materials Laboratory allowed the researchers to include Parent Involvement Measures and Quality of School Life instruments with their materials, but all handling, mailing and scoring of tests were done through the VIML.

A range of statistical analyses was used in this study. For each of the variables of
interest, descriptive statistics were computed including frequencies and measures of central tendency. Various correlation coefficients were used to determine relationships between variables. Regression analysis and multivariate statistics were used to determine variance accounted for by the model.

Findings related to the variables of interest are as follows:

**Gain Scores.** The student mean score on the Personal Development pretest was 54.80% and 59.63% on the Personal Development posttest (gain score = 4.83%). The mean percentage for the Resource Management pretest was 53.45% and 62.90% for the Resource Management posttest (gain score = 9.45%). An analysis of variance (ANOVA) revealed that the posttest scores were significantly higher than pretest scores for Personal Development and that the posttest scores are significantly higher than the pretest scores for Resource Management. Although there is statistical significance between these two scores, posttest achievement gains are small. Large standard deviations indicated a wide variance in scores.

**Gender.** Three hundred sixty-two females and 262 males completed the pretest and posttest for Personal Development. Two hundred forty females and 148 males completed the pretest and posttest for Resource Management. Twenty-nine additional students completed the pretest and posttest for Personal Development and 33 students completed the pretest and posttest for Resource Management, but these students did not give gender identification. Analysis revealed that scores were higher for females on both tests. Differences in male and female scores were significant on the Personal Development posttest total and on both the posttest total and gain score for Resource Management. Males had significantly higher gain scores on the Resource Management test.

**Age.** Based on the available data, it appears that more younger students take Personal Development, while more older students take Resource Management classes.
There was no significant association between age and the posttest total on the Personal Development test and there was no significant association between age and gain scores on the Personal Development test. However, a low positive association was seen between age and posttest total among female students on the Personal Development test. There was a low positive association between age and posttest total on the Resource Management test. This association was slightly higher when males were viewed alone.

**Grade Level.** Although the Personal Development and Resource Management courses were designed to be introductory high school courses for ninth graders, the students in this sample were in grades 9 through 12. The majority of students in the Personal Development course were enrolled in the ninth grade. About one-third of the students in the Resource Management sample were ninth graders and about one-fourth of the Resource Management students were in the twelfth grade.

The grade level of students showed a low positive correlation with posttest total on the Personal Development test. Grade level had moderate positive association between posttest total scores on the Resource Management test. There was no significant relationship between posttest total and gain score for Personal Development. There was, however, a significant positive moderate association between grade level and gain score for all students on the Resource Management test.

**Previous Semesters in Work and Family Life.** Students with one semester of Work and Family Life had the highest mean scores on the Personal Development test. Students with three semesters in work and Family Life showed the greatest gain on the Personal Development test. Students with one semester in Work and Family Life had the highest mean scores on the Resource Management test. Students with five semesters in Work and Family Life showed the greatest gain on the Resource Management test. There was a low negative association between previous semesters taken in Work and Family Life and
posttest total scores. There was also a low negative correlation between previous semesters taken in Work and Family Life and gain scores on the Personal Development test. There was a low positive association between previous semesters taken in Work and Family Life and student scores on the Resource Management posttest total. There was also a low positive association between previous semesters taken in Work and Family Life and the Resource Management gain score.

**Number of Days Absent.** There was a low negative correlation between number of days students were absent from school and student scores on the Resource Management posttest total. The mode scores for students in both Personal Development and Resource Management classes were zeroes, indicating that most students were absent no days from Personal Development or Resource Management classes.

**Certainty About Future Career.** A majority of students enrolled in Personal Development classes indicated that they were either certain or very certain about their future career choice. A majority of students enrolled in Resource Management classes indicated they were either certain or very certain about their future career choice. There was no relationship between certainty about future career choice and student achievement on the Personal Development or the Resource Management tests.

**Certainty About Future Family Life.** There were no significant relationships between students’ certainty about future family and achievement scores on the Personal Development test, however there was a low positive association between certainty about future family and the Resource Management posttest total for all students.

**School Location.** Students in suburban schools scored significantly higher than students from urban and semi-rural schools on the Personal Development posttest total. Students in suburban schools scored significantly higher than students from urban and rural suburban schools on the Resource Management posttest. When Resource
Management gain scores were compared suburban students had significantly higher gains than students from rural suburban schools.

**Size of School.** The size of schools based on enrollment included in the Personal Development sample ranged from 245 to 1,319 students. For the Resource Management sample school size ranged from 397 to 1,277 students.

There was a significant relationship between school size and student scores on the Personal Development test. Students in schools with populations from 501 to 750 and students in schools with populations over 1,001 scored significantly higher when compared to students in schools with populations under 500 and with students in schools between 751 and 1,000 on posttest total scores for the Personal Development test. Students in schools with populations between 501 to 750 and students in schools with populations over 1001 also had higher gains on the Personal Development test when compared with students in the other two school size classification categories.

Students in schools with populations from 751 to 1,000 students had higher test scores and made greater gains on the Resource Management test than students in schools over 1,001 and students in schools under 750.

**Time Spent on Curriculum.** Of a possible 90 days, teachers reported spending an average of 82.84 days on Personal Development content and an average of 80.49 days on Resource Management course content. There was a moderate positive association between amount of time spent on the curriculum and student posttest total scores on the Personal Development test. There was also a low positive association between amount of time spent on the curriculum and student gain scores on the Personal Development test. However, there was a moderate negative association between time spent on the curriculum and gain scores for females and a low negative association between times spent on the curriculum and gain scores for all students on the Resource Management test.
**Score Counts for a Grade.** There was a significant positive moderate association between posttest total scores on the Personal Development test and whether the score counts for a grade. There was also a significant positive moderate association between gain scores on the Personal Development test and whether the score counts for a grade. There was a low positive association between Resource Management posttest total and whether the score counts for a grade.

**School Climate.** There appeared to be no relationship between student satisfaction with school, commitment to classwork, reactions to teachers or reactions to school climate and the Personal Development posttest total. There appears to be no association between Resource Management posttest total scores and student satisfaction with school, commitment to classwork, reactions to teachers and reactions to school climate. There was no significant association between student gain scores on the Resource Management and students’ satisfaction with school, student motivation and student reactions to school climate. There was, however, a low negative association between student gain scores and reaction to teachers for females. Students in the two sample groups had mean scores higher than the norm group on the Reactions to Teachers subscale.

**Parent Involvement.** There are few associations between parent involvement and student achievement on the Personal Development test. There was a low negative association between student perceptions of their parents’ values and interest in their school work and posttest total scores on the Personal Development test. There was a low negative association between Personal Development gain scores and students’ perceptions of their parents participation in school functions.

There was a low positive association between the students’ perception of their parents’ involvement in school and the posttest total on the Resource Management test.

There was a low positive association between males perceptions of their parents...
involvement in school functions and gain scores on the Resource Management test.
There appears to be a low negative association between females' perception of their
parents' participation in school functions and their gain scores on the Resource
Management test. There was a low positive association for males between the total score
on the Parent Involvement Measure and gain scores on the Resource Management test
and a low negative association between female scores on the Parent Involvement Measure
and gain scores on the Resource Management test. It is important to note that high mean
scores on the Values/ Interest subscale and Parent Involvement Measure suggest a
possible range restriction.

Predictors. Figure 5.1 illustrates the significant predictors related to student
achievement on the Personal Development posttest. Grade level and gender were
significant predictors of the posttest score on the Personal Development test accounting
for 8.1 percent (p < .01) and 3.8 percent (p < .01) of the variance respectively. Not being
in a suburban school location category accounted for an additional 12.3 percent (p < .001)
of the variance. Urban school location accounted for additional an 4.0 percent (p < .001)
of the variance and rural school location accounted for an additional 2.9 percent (p <
.001) of the variance in the model. It is important to note that suburban school location
was positively associated with student achievement for the full sample (n=653), however,
when the regression analysis was applied to this sample (n=104), not being in a suburban
school was the predictor of achievement. As shown in Figure 5.1, these variables and
their multiple correlation coefficient accounted for 31.1 percent of the variance related to
student achievement on the Personal Development posttest.

Figure 5.2 shows the revised model of predictors of student gain scores on the
Personal Development test. Not being in a suburban school location category accounted
for 22 percent (p < .001) of the variance on the Personal Development gain score for this
sample. An additional 10.4 percent (p < .001) of the variance was accounted for by
Figure 5.1: Revised model of predictors of student achievement on the Personal Development posttest

**Personal Characteristics**

- grade: $R^2$ change = 0.081
- gender: $R^2$ change = 0.038

**School Characteristics**

- school location: $R^2$ change = 0.123
  - non-suburban
  - urban: $R^2$ change = 0.040
  - rural: $R^2$ change = 0.029

$R^2$ for the model = 0.311

Figure 5.2: Revised model of predictors of student achievement on Personal Development gain score

**School Characteristics**

- non-suburban: $R^2$ change = 0.223

$R^2$ for the model = 0.336

**Curricular Factors**

- score counts for grade: $R^2$ change = 0.104
whether the score counted for a grade. As shown in 5.2, these variables and their multiple correlation coefficient accounted for 33.6 percent of the variance explained in the dependent variable, student gain on the Personal Development test. It is important to note that suburban school location was positively associated with student achievement for the full sample (n=653), however, when the regression analysis was applied to this sample (n=104), not being in a suburban school was the predictor of achievement.

Figure 5.3 illustrates the significant predictors related to the Resource Management posttest score. Grade level accounted for 9.1 percent (p < .01) of the variance on the Resource Management posttest in the sample. An additional 4.7 percent (p < .001) was attributed to gender. Whether the grade counted for a score accounted for an additional 4.1 percent (p < .001) of the variance. Additional variables did not contribute significantly to the model. These variables and their multiple correlation coefficient accounted for 17.9 percent of the variance explained in the dependent variable, student achievement on the Resource Management posttest.

Figure 5.4 shows the predictor variables related to student gain scores on the Resource Management test. Of the seventeen independent variables studied, only suburban school location accounted for 6.3 percent (p < .05) of the variance explained for gain scores on the Resource Management test. This sample suggested not being in a suburban school location was a predictor of student achievement. Suburban school location was positively associated with student achievement in the full sample (n = 421), however, when the regression analysis was applied to this sample (n=156), not being in a suburban school was the predictor of achievement.

Conclusions

As a result of analyzing the findings from this study, some conclusion can be drawn. There were significant gains from the pretest to the posttest on both the Personal Development and the Resource Management tests. Based on this fact, it can be
Curricular Factors
score counts
for grade \( R^2 \) change = .041

Student Achievement
Resource Management
posttest score

Personal Characteristics
a. grade \( R^2 \) change = .091
b. gender \( R^2 \) change = .046

\[ R^2 \text{ for the model} = .179 \]

Figure 5.3: Revised model of predictors of student achievement on the Resource Management posttest

School Characteristics
non-suburban location \( R^2 \) change = .026

Student Achievement
Resource Management
gain score

\[ R^2 \text{ for the model} = .063 \]

Figure 5.4: Revised model of predictors of student achievement on Resource Management gain score
concluded that student achievement is occurring in these two classes.

The Personal Development and Resource Management tests have been demonstrated to be valid and reliable measures of student achievement in these two courses. In that different variables are associated with student achievement in Personal Development and Resource Management, it can be concluded that these two courses are different. Generalizations regarding one cannot be made to the other.

Student achievement in Personal Development and Resource Management is associated with student personal characteristics. Either students enroll in Personal Development and Resource Management courses for different reasons or factors associated with student enrollment are different. More females are enrolled than males. Female scores are generally higher on both posttests, while males made greater gains. It can be concluded that both males and females benefit from enrollment in these two courses.

Age and grade level had positive associations with student achievement on both the Personal Development and Resource Management tests. It can be concluded that older students in higher grade levels show greater achievement in Personal Development and Resource Management classes than younger students in lower grades.

Previous semesters taken in Work and Family Life did not have a positive linear relationship with student achievement. However, students with one previous semester in Work and Family Life had the highest scores on the Personal Development test and showed the greatest gains. Students with two previous semesters in associations between previous semesters taken in Work and Family Life had the highest mean score on the Resource Management test and students with four previous semesters in Work and Family Life showed the greatest gains. Based on these facts, it can be concluded that students benefit from previous semesters in Work and Family Life.
Most students enrolled in Personal Development and Resource Management classes were not frequently absent from school, however the more days students were absent in Resource Management class, the lower their total score on the Resource Management test. It can be concluded that students benefit from being in school daily.

Although there were few associations between student achievement and future orientation, most students indicated they were certain or very certain about their future careers and future families. It can be concluded that most students are certain about their future lives.

There were relationships between school characteristics and student achievement on the Work and Family Life tests. School location was related to student achievement on these tests. Highest mean scores were achieved by students from suburban schools on Personal Development and Resource Management posttest totals. Students from suburban schools showed the highest gains on the Personal Development and Resource Management tests. Based on data from the Personal Development and Resource Management entire samples, can be concluded that suburban school location contributes to student achievement on the Personal Development and Resource Management tests. School size did not show a linear relationship to student achievement on the Personal Development and the Resource Management tests.

Curricular factors were associated with student achievement on the Work and Family Life tests. Time spent on curriculum was associated with student achievement in Personal Development, but negatively associated with student gain in Resource Management. Students who spend more time on the curriculum in Personal Development have better scores. It cannot be concluded that more time spent on the Resource Management curriculum will result in higher achievement scores on the Resource Management test.
Whether or not the score counts for a grade is related to higher posttest total scores in both Personal Development and Resource Management and higher gain scores in Personal Development. It can be concluded that when students understand that the score on the Personal Development and Resource Management tests count for grades, they have higher achievement scores.

Based on these data, there were no significant positive relationships between school climate and student achievement in either Personal Development or Resource Management. It cannot be concluded that school climate is associated with student achievement on the Personal Development or the Resource Management tests.

There were no significant positive relationships between perceived parental involvement and student achievement on the Personal Development tests. There was a low positive association between perceived parental involvement and student posttest totals on the Resource Management tests. Based on these data, it cannot be concluded that parental involvement is associated with student achievement on the Personal Development and Resource Management tests, however, it can be concluded that students in this sample perceive their parents to be involved in school.

Implications

The findings of this study lead to several implications for Family and Consumer Sciences teachers, teacher educators, school administrators and state supervisors. Students show significant gains in both Personal Development and Resource Management classes. In that these gains are small, continued efforts are needed to promote student achievement in these areas. A critical analysis of the state assessment program is needed. Given that the curriculum is based on solving practical problems faced by individuals and families, multiple assessment procedures should be considered. An objective test is beneficial in determining cognitive gains, however a curriculum which is designed to empower "individuals to take action for self and others in the home, the workplace, the
community and the world” (Kister et al., 1993, p. v.) might be better assessed through alternative means.

Female students scored higher on both the Personal Development test and the Resource Management test, suggesting that teachers may need to seek additional ways to challenge female students. Males made greater gains in the area of Resource Management demonstrating that males are benefiting from enrollment in this course. It is important to continue to reach male students and recruit them into Family and Consumer Sciences programs.

This study demonstrated an association between achievement scores and higher grade levels. A possible examination of the appropriateness the Personal Development course and the Resource Management course for students in grade nine is needed. Consideration might be given to course redesign for ninth grade learners.

Although there was a low negative association between number of previous semesters taken in Work and Family Life and student achievement (posttest and gain scores) on the Personal Development test, there was a positive association between previous semesters taken in Work and Family Life and student achievement on the Resource Management posttest. Consideration should be given to providing a better understanding of the framework for Work and Family Life classes enabling teachers to build on course content from one course to another.

Continued emphasis should be given to providing funding equity based on school location category. McCracken and Peasley (1995) found that discrepancies exist in the wealth and the quality of schooling in urban, suburban and rural school districts in Ohio. These data suggest that the school location category is associated with student achievement. Special efforts to provide in-service education might be beneficial for teachers in low achieving districts.
Time spent on curriculum was positively associated with student achievement on the Personal Development test, but was negatively associated with student achievement on the Resource Management test. Because the total amount of time in a semester class is limited to 60 to 75 clock hours in Ohio, it is possible that there is not enough time to engage students in a meaningful way with family and consumer sciences content. Additional time might be needed in order for teachers to provide a balanced concentration of the varied Work and Family Life curricular components.

There are implications for teachers, supervisors and school administrators regarding whether the score counts for a grade. Significant relationships were seen between whether the score counted for a grade and student achievement in both Personal Development and Resource Management. Assuming the state test assesses student achievement in family and consumer sciences courses, consideration should be given to including the state test in combination with local assessment measures for report card grades.

Although there appeared to be few associations between school climate and student achievement on the Personal Development test and the Resource Management test, students reactions to teachers were higher in these samples than in the norm group sample. Teachers might use this information to build even more positive relationships with students and their families.

Parent involvement appears to be positively associated with student achievement on the Resource Management posttest total. Relatively high mean scores on the students' perceptions of their parents values and interest in schoolwork as well as relatively high mean scores on the Parent Involvement Measure suggest that students perceive their parents as interested and involved in their education. Family and Consumer Sciences teachers, teacher educators, supervisors and administrators should use this information to positively influence student achievement.
Recommendations

Recommendations for further research can be identified as a result of this study. While this study has examined selected factors related to student achievement, the variables affecting student achievement are complex. Continued research is needed regarding additional factors related to student achievement in family and consumer sciences. Identifying additional predictors of student achievement on the Personal Development and the Resource Management test would be beneficial.

This study examined students' perceptions of parental involvement. A survey of parents might give insight in ways in which they are involved in their children's education. Teachers' perceptions of parental involvement might also provide further understanding of parents' involvement.

Fox and Van Buren (cited in Gritzmacher & Tooke, 1996) found student perceptions of life skill competencies were higher among high school graduates who had taken home economics. Follow-up or lapsed time studies are needed to determine life skill competencies among Work and Family Life students.

Different research methodologies should be employed to investigate student achievement. Control group experimental designs should be considered to further explore the effects of Work and Family Life programs. Observational research rather than survey research would provide opportunities to study Work and Family Life program effectiveness in natural settings. Qualitative research techniques would provide researchers the opportunity to gain rich insights related to student achievement and student "stories."

Additional research using these data should be considered. A comparison of high scoring students to low scoring students in Work and Family Life classes might provide valuable insights into factors associated with student achievement. An examination should
be done of factors related to student achievement on the process competencies and factors related to student achievement on the content competencies. Finally, research is needed on Work and Family Life teacher characteristics and teachers' instructional behaviors as they relate to student achievement.
LIST OF REFERENCES


APPENDIX A

Data collection instruments
The Personal Development and Resource Management tests are copyrighted materials and property of the Ohio Department of Education. These tests cannot be duplicated without the written consent of the Ohio Department of Education.
Permission was granted to use the Parent Involvement Measure by Sharon Paulson, Ph.D., Ball State University provided that the instrument would not be used for purposes other than this research study and that the instrument would not be published within the study. Correspondence regarding the Parent Involvement Measure should be directed to Sharon E. Paulson, Ph.D. Department of Educational Psychology, Ball State University, Muncie, IN 47306-0595.
Permission was granted to use the Quality of Life survey by Lee Cicco, Evaluation and Guidance Specialist, Riverside Publishing, Itasca, Illinois provided that the instrument would not be used for purposes other than this research study and that the instrument would not be published within the study.
The following information will be used in a research study to investigate factors that positively relate to student achievement on the Work and Family Life Personal Development and Resource Management tests. Information will be aggregated and individual data will not be used. If you have questions, please call Robin White at (614) 466-3046.

**CURRICULUM OUTLINE**

Name____________________________ School____________________________

Please complete the following indicating how many days you estimate you will spend on the following areas of the curriculum:

<table>
<thead>
<tr>
<th>Personal Development</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Competencies</strong></td>
<td></td>
</tr>
<tr>
<td>Managing Work and Family Life Responsibilities</td>
<td></td>
</tr>
<tr>
<td>Solving Personal and Family Problems</td>
<td></td>
</tr>
<tr>
<td>Relating to Others</td>
<td></td>
</tr>
<tr>
<td>Assuming a Leadership Role as a Responsible Citizen</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Content Modules</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhancing Personal Development</td>
<td></td>
</tr>
<tr>
<td>Enhancing Self-esteem</td>
<td></td>
</tr>
<tr>
<td>Managing Stress</td>
<td></td>
</tr>
<tr>
<td>Achieving Career Goals</td>
<td></td>
</tr>
<tr>
<td>Forming Family Relationships</td>
<td></td>
</tr>
<tr>
<td>Forming Peer Relationships</td>
<td></td>
</tr>
<tr>
<td>Managing Conflict</td>
<td></td>
</tr>
<tr>
<td>Expressing Sexuality Responsibly</td>
<td></td>
</tr>
<tr>
<td>Parenting Responsibly</td>
<td></td>
</tr>
<tr>
<td>Other (Please list)</td>
<td></td>
</tr>
</tbody>
</table>

171
The following information will be used in a research study to investigate factors that positively relate to student achievement on the Work and Family Life Personal Development and Resource Management tests. Information will be aggregated and individual data will not be used. If you have questions, please call Robin White at (614) 466-3046.

**CURRICULUM OUTLINE**

Name ______________________ School ________________________________

Please complete the following indicating how many days you estimate you will spend on the following areas of the curriculum:

<table>
<thead>
<tr>
<th>Resource Management</th>
<th>Days</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Process Competencies</strong></td>
<td></td>
</tr>
<tr>
<td>Managing Work and Family Life Responsibilities</td>
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<td>Solving Personal and Family Problems</td>
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<td>Relating to Others</td>
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<td>Assuming a Leadership Role as a Responsible Citizen</td>
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<td><strong>Content Modules</strong></td>
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<td>Achieving Personal Goals</td>
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<td>Making Consumer Choices</td>
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<td>Taking Responsibility for a Global Environment</td>
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<td>Making Clothing Decisions</td>
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<td>Maintaining Clothing</td>
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<td>Planning Food Choices</td>
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<td>Preparing and Serving Nutritious Foods</td>
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<td>Other (Please list)</td>
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</tbody>
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APPENDIX B

Letters
August 1996

Dear Work and Family Life Teacher:

Students in your first semester Resource Management class have been randomly selected to participate in a study focused on student achievement in Work and Family Life. As participants in this study, students will take two surveys in addition to the Resource Management pre-test and post-test. The first additional survey, to be administered this fall with the pre-test, is a 22-item questionnaire regarding student perception of parental involvement. The second additional survey, to be administered with the post-test in January, is a 30-item questionnaire regarding student attitude about school climate and level of motivation. Enclosed is a copy of each of these surveys for your review. These are only samples. Numbered surveys will be mailed with your tests.

Student names will not be used on the parent involvement and school climate surveys. Student names will be used on the pre-tests and post-tests for you to record student scores and for the Vocational Instructional Materials Laboratory to match the pre-test to the post-test data. Student names will not be available to the researchers.

In order for students to be permitted to participate in this voluntary study, we will need to inform parents or guardians. Please send copies of the enclosed Parent Information Form home with students. Do not allow students to participate in this study if parents object. Remind students that the parent involvement survey and the student attitude regarding school climate survey are parts of a voluntary study and their participation is not required.

To better inform our study, we are also asking that you report the amount of time you anticipate that you will spend on each module in the curriculum. At the end of the semester we will ask how many days or weeks you actually spent on the curriculum modules. Please complete the Curriculum Outline and return it in the enclosed envelope.

We recognize that your time and your class time is valuable, however, we anticipate that this study will provide important insights into student achievement in Work and Family Life education. We will share the research results with you upon completion of the study. Within a few days, you will receive a packet with the tests you ordered and the numbered parent involvement surveys for administration to your classes. Should you have questions, please contact Robin White at (614) 666-3046. Thank you for your cooperation.

Sincerely,

Dee Allenspach
Assistant Director
Family and Consumer Sciences
Vocational and Adult Education

Robin White
State Supervisor
Family and Consumer Sciences
Vocational and Adult Education
Dear Work and Family Life Teacher:

Thanks for participating in our study by allowing your students to complete the Parent Involvement Survey this fall. We hope you will continue to assist our efforts by having your students complete the School Climate Surveys with their Work and Family Life post tests.

We hope the results of this study will provide support for extended service and will inform our planning for professional development. If you have questions, please call me at (614) 466-3046.

Sincerely,

Robin White
Family and Consumer Sciences
Vocational and Adult Education
December 3, 1996

Dear Work and Family Teacher:

We are most grateful to you and your students for your participation in our research study regarding factors associated with student achievement on the Work and Family Life test. We are hopeful that this study will provide support for our Work and Family Life courses.

Enclosed is a copy of the Work and Family Life Post-test, numbered answer sheets and numbered surveys. Student names will be used on post-tests for you to record student scores and for the Vocational Instructional Materials Laboratory to match the pre-test to the post-test data. Student names will not be used on the school climate survey.

Please read the enclosed Teacher Script with the administration of the test and the school climate survey. Students' school climate surveys and their answer sheet identification numbers should match. Student names will not be available to the researchers.

We recognize that your time and your class time is valuable, however, we anticipate that this study will provide important insights into student achievement in Work and Family Life education. Should you have questions, please contact Robin White at (614)466-3046. Thank you for your cooperation.

Sincerely,

Dee Allenspach
Assistant Director
Family and Consumer Sciences
Vocational and Adult Education

Robin White
State Supervisor
Family and Consumer Sciences
Vocational and Adult Education

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APPENDIX C

Supplemental materials
Dear Parent,

Your son or daughter is currently enrolled in a Personal Development or Resource Management semester course (formerly known as home economics). As a part of this course, the Ohio Department of Education, Division of Vocational and Adult Education administers a pre-test and a post-test to students in order to determine knowledge gains in these areas. The pre-test will be administered on ____________________________.

Students have been asked to voluntarily participate in a research study to investigate the factors that relate to student achievement on these tests. Your son or daughter has been asked to take two surveys about his or her perception of parent involvement in school and his or her attitude about the school climate. Participation is completely voluntary and anonymous. Students names will not be identified. Below are several sample questions from each survey.

If you do not wish for your son or daughter to participate in this study, please sign this form and return it to the Work and Family Life teacher. If you have questions about this research, please contact the Ohio Department of Education, Division of Vocational and Adult Education. The telephone number is (614) 466-3046. Thank you.

I do not wish my son or daughter to participate in this research study.

Signed _______________________

1. Try to get me to do my best on everything.
   - Mother / female guardian
   - Father / male guardian
   - Mother / female guardian
   - Father / male guardian

9. Thinks homework is a very important part of school.
   - Mother / female guardian
   - Father / male guardian
   - Mother / female guardian
   - Father / male guardian

10. Encourages me to try harder when I get poor grades.
    - Mother / female guardian
    - Father / male guardian
    - Mother / female guardian
    - Father / male guardian

Circle T or F if the following statements are TRUE or FALSE to YOU.

1. T F In class, I often count the minutes until it ends.
2. T F I wish I could have some of the same teachers next year.
3. T F I like school very much.

Check one (+) answer that tells best what you think.

15. This term I am eager to get to...
    1. all my classes.
    2. most of my classes.
    3. about half of my classes.
    4. one or two of my classes.
    5. none of my classes.
Dear Parent,

Your son or daughter is currently enrolled in a Personal Development or Resource Management semester course (formerly known as home economics). As a part of this course, The Ohio Department of Education, Division of Vocational and Adult Education administers a pre-test and a post-test to students in order to determine knowledge gains in these areas. The post-test will be administered on [date].

Students have been asked to voluntarily participate in a research study to investigate the factors that relate to student achievement on these tests. Your son or daughter has been asked to take a survey regarding his or her attitude about the school climate. Participation is completely voluntary and anonymous. Students names will not be identified. Below are several sample questions from this survey.

If you do not wish for your son or daughter to participate in this study, please sign this form and return it to the Work and Family Life teacher. If you have questions about this research, please contact the Ohio Department of Education, Division of Vocational and Adult Education. The telephone number is (614) 466-3046. Thank you.

I do not wish my son or daughter to participate in this research study.

Signed ____________________________

Circle T or F if the following statements are TRUE or FALSE to YOU.

1. T F In class, I often count the minutes until it ends.
2. T F I wish I could have some of the same teachers next year.
8. T F Most of my teachers really listen to what I have to say.
11. T F I like school very much.

Check one (✓) answer that tells best what you think.

15. This term I am eager to get to...
   ____ 1. all my classes.
   ____ 2. most of my classes.
   ____ 3. about half of my classes.
   ____ 4. one or two of my classes.
   ____ 5. none of my classes.

20. The work I do in most of my classes is...
   ____ 1. not at all important to me
   ____ 2. not too important to me.
   ____ 3. Pretty important to me.
   ____ 4. very important to me.
TEACHER SCRIPT

Please read at the administration of the test and survey:

“Our class has been randomly selected to participate in a research study to investigate the factors that contribute to student achievement on the Work and Family Life tests. Information from this research will be used to help teachers and administrators work with parents, students and teachers to improve student achievement.

You have been given a test sheet and a student survey on your perceptions of parent involvement. Please check to see that the identification number on the test numbers matches the code number on the survey.

You have been asked to voluntarily and anonymously complete the parent involvement survey. Please do not write your name on this survey as names cannot be identified for this research.

After you have completed the test and the survey, please return your test to me and place the survey in the envelope provided (on my desk).

If your family objects to your participation, or you do not want to participate, please return the unmarked survey in the envelope. Thank you.”
FCS TEACHER SURVEY

The Ohio Department of Education, Division of Vocational and Adult Education strongly believes that teachers can make significant contributions to curriculum development and evaluation. Your ideas and opinions are important to the improvement of the Personal Development and Resource Management curriculum and assessment program. While your ideas and comments will be included in this study, all participants will remain anonymous. Your name or school will not be used in any way. Thank you for your help.

1. Did you teach one of the following classes in fall 1996?  
   Personal Development _____ Yes _____ No  
   Resource Management _____ Yes _____ No

2. If you answered YES to question 1, how many classes and students did you teach in your Personal Development or Resource Management class(es) in fall, 1996?  
   Personal Development _____ # class(es)  
   _____ # total students in Personal Development class(es)  
   Resource Management _____ # class(es)  
   _____ # total students in Resource Management class(es)  
   If you answered NO to question 1, why did you not teach Personal Development or Resource Management in fall, 1996?

3. Did you administer the Work and Family Life Assessment pretest to your students?  
   Personal Development _____ Yes _____ No  
   Resource Management _____ Yes _____ No

4. If you answered YES to question 3, did you send it in to be scored? _____ Yes _____ No  
   If you answered NO to question 3, why did you choose not to administer the pretest?

5. Did you administer the Parent Involvement survey to your students? _____ Yes _____ No

6. If you answered YES to question 5, did you send it in to be scored? _____ Yes _____ No  
   If you answered NO to question 5, why did you choose not to administer the Parent Involvement Survey?

7. Did you administer the Work and Family Life Assessment post-test to your students?  
   Personal Development _____ Yes _____ No  
   Resource Management _____ Yes _____ No

8. If you answered YES to question 7, did you send it in to be scored? _____ Yes _____ No  
   If you answered NO to question 7, why did you choose not to administer the post-test?

9. If you answered YES to question 7, did this test count as a grade for your students?  
   _____ Yes _____ No

10. Did you administer the School Climate survey to your students? _____ Yes _____ No

11. If you answered YES to question 10, did you send it in to be scored? _____ Yes _____ No  
    If you answered NO to question 10, why did you choose not to administer the School Climate Survey?
12. Please an "X" next to the five (5) topics you emphasized the most in each course this fall and a "O" next to any topic(s) you did not cover:

<table>
<thead>
<tr>
<th>Personal Development</th>
<th>Resource Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Work and Family Responsibilities</td>
<td>Managing Work and Family Responsibilities</td>
</tr>
<tr>
<td>Solving Personal and Family Problems</td>
<td>Solving Personal and Family Problems</td>
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<tr>
<td>Relating to Others</td>
<td>Relating to Others</td>
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<tr>
<td>Assuming a Leadership Role</td>
<td>Assuming a Leadership Role</td>
</tr>
<tr>
<td>Enhancing Personal Development</td>
<td>Enhancing Personal Goals</td>
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<tr>
<td>Enhancing Self Esteem</td>
<td>Making Consumer Choices</td>
</tr>
<tr>
<td>Managing Stress</td>
<td>Creating a Living Environment</td>
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<tr>
<td>Achieving Career Goals</td>
<td>Evaluating Types of Housing</td>
</tr>
<tr>
<td>Forming Family Relationships</td>
<td>Maintaining a Living Environment</td>
</tr>
<tr>
<td>Forming Peer Relationships</td>
<td>Taking Responsibility for a Global Environment</td>
</tr>
<tr>
<td>Managing Conflict</td>
<td>Making Clothing Decisions</td>
</tr>
<tr>
<td>Expressing Sexuality Responsibly</td>
<td>Maintaining Clothing</td>
</tr>
<tr>
<td>Parenting Responsibly</td>
<td>Planning Food Choices</td>
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<tr>
<td></td>
<td>Preparing and Serving Nutritious Foods</td>
</tr>
</tbody>
</table>

13. How many days (90 days/semester) did you spend teaching the Work and Family Life Curriculum?
   Personal Development _____ Resource Management _____

How many days did you spend teaching content other than the Work and Family Life curriculum?
   Personal Development _____ Resource Management _____

How many non-teaching (i.e., days for testing, pep rallies, snow days, etc.) days did you spend?
   Personal Development _____ Resource Management _____

14. What strategies seemed most effective in teaching Work and Family Life? (example: role play, cooperative learning, lecture, lab, etc.)

15. Do you believe the Work and Family Life Assessment measured what you taught?
   Personal Development _____ Yes _____ No
   Resource Management _____ Yes _____ No

16. Do you believe you will administer Ohio Department of Education Work and Family Life Assessments in the future?
   Pretest? _____ Yes _____ No
   Post-test? _____ Yes _____ No

17. Do you have any comments regarding the teaching of Personal Development or Resource Management?

18. Do you have any comments regarding the testing of Personal Development or Resource Management?

19. What could the Ohio Department of Education do to assist you in determining student progress?

20. Additional comments or concerns. Please feel free to add additional pages as necessary.

21. Name (Optional) ___________________________