A study to determine the level of emphasis on middle school career awareness and exploration

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A STUDY TO DETERMINE THE LEVEL OF EMPHASIS ON MIDDLE
SCHOOL CAREER AWARENESS AND EXPLORATION

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ABSTRACT

A STUDY TO DETERMINE THE LEVEL OF EMPHASIS ON MIDDLE SCHOOL CAREER AWARENESS AND EXPLORATION

This study's purpose was to determine the extent of emphasis teachers place in the middle school curriculum on career awareness and exploration. The study sought to determine if significant differences in emphasis can be demonstrated, and to determine if there were significant differences between levels of emphasis.

The study was limited to the staff at one middle school in a rural area of Southern California. Teachers were administered a career education emphasis questionnaire. Findings related to the research questions revealed that there is some emphasis given to career education in the awareness and exploratory phases in middle school. The differences in the emphasis are not statistically significant. Findings also revealed a significant difference in levels of emphasis by teachers. Findings can not be generalized to a larger population. Further research may be done to investigate whether the differences in the levels of emphasis are significant in other middle school settings.
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CHAPTER I

INTRODUCTION

A STUDY TO DETERMINE THE LEVEL OF EMPHASIS ON MIDDLE SCHOOL CAREER AWARENESS AND EXPLORATION

Overview

A constant media topic is the unfitness of young people entering the job market. The banage is continuous; rarely is the news good. How bad is it? Marland (1971) stated:

Of those students currently enrolled in high school, only 3 out of 10 will go on to academic college level work, and one third of those will drop out before getting a baccalaureate degree. That means that 8 out of 10 present high school students should be getting occupational training of some sort, but only about 2 out of 10 are, in fact, getting such training. Consequently, half our high school students - a total of approximately a million and a half a year - are being offered what amounts to irrelevant, general educational pap!

Small wonder so many drop out, not because they have failed, but because we have failed them. Who would not at the earliest convenient and legal moment leave an environment that is neither satisfying, entertaining, nor productive? (p. 23)
According to the U.S. Department of Health, Education, and Welfare (1971) the numbers are even higher. The department's report on Career Education states, "Nearly 2.5 million students leave the formal education system of the U.S. each year without adequate preparation for careers" (p. 8). These people are unfit for employment and unable or unwilling to go on to college. In the school year 1970-71 for example, there were:

850,000.............. Elementary & Secondary School dropouts; many found school irrelevant

750,000.............. General curriculum high school graduates who did not attend college

850,000.............. High school students who entered college in 1967, but did not complete the baccalaureate or an organized occupational program

TOTAL 2,450,000 (est.) (DHEW, 1971, p. 11).

The California Business Roundtable (1991) stated in the results of a survey that four out of five business executives flatly declared California schools a failure. These business leaders met with Governor Pete Wilson to forward the results of the survey. Wilson was told by Sam Ginn, the chairman and
chief executive officer of Pacific Telesis, that 60 percent of the company's job applicants cannot pass a basic exam that is keyed to a seventh grade education. "We need workers with skills that will allow us to be competitive into the next century," Ginn told reporters. "Those aren't skills that we're getting out of the public education system" (Weintraub, 1991, p. 3).

Some critics have identified what they consider the culprit. Marland (1971) said:

All public school educators share the guilt for the generalized failure of our system of education to equip our people to get and hold decent jobs.... Education's most serious failing is its self-induced, voluntary fragmentation. The most grievous example of this is the false dichotomy it makes between things academic and things vocational. (p. 22)

Shoemaker (1972) criticized the present system of education for simply not keeping up with the changes occurring in our nation in terms of social and economic needs. He observed that schools offer single cultured, non-experience-centered education at the elementary level. At the secondary level, education is geared to the college preparatory and subject centered curriculum. Somewhere in the middle is the junior high school.

It is argued by some that in the technical workplace,
basic academic skills are the most important prerequisites for success, because employers today are not interested in occupational skills. Today's employers want individuals who are trainable and they will provide on-the-job training as needed (Gray, 1991). The reality is that 60 percent of all young workers work for firms that employ fewer than 100 people; 40 percent work in firms employing fewer than 20 (Haber, 1988). These small firms simply cannot afford the cost of on-the-job training. According to Gray (1991), the consequences of this were:

Marketable occupational skills are as valuable as ever in competing for preferred jobs. An education system that does not enable students to acquire such skills seriously limits their opportunity for equal access to promising occupations; this is particularly true for disadvantaged students. (p. 441)

In order to meet the career demands of this complex technological society it is crucial that equal emphasis be placed upon preparation for the world of work for the majority as is now placed on preparation for college for the academically elite minority. According to Vaughan (1991), 3 out of 4 employees in the year 2000 will not have college degrees. Today, 70 percent of technicians, four out of five sales workers, and noncollege graduates earn about three-fourths of all wages and salaries paid in this country.
Background

In the United States, schooling about and for the vocations was transplanted from Europe. In 1630, Franciscan monks taught practical arts in curriculum for Indian and white children in the Southwest. Thomas Budd, a Quaker, in 1685 suggested that public schools teach useful trades together with other subjects, though his ideas did not catch on because of the sectarian religious traditions (Butts, 1955). In 1745, an industrial school was opened by a Moravian sect near Philadelphia. Dr. Benjamin Rush, a signer of the Declaration of Independence praised a number of practical schools during his era (1745-1813). One in particular, an agricultural school in South Carolina, operated independently until 1919, when it became part of the higher education system of the State of South Carolina, and is believed to be the oldest agricultural school in the United States (Bailey, 1973). Many schools since that time have emphasized practical studies that included both occupational and academic subjects.

Starting in 1862, with the Morrill Act, or land-grant colleges act, the Federal government aided the development of collegiate level education in agriculture and mechanical arts. Other acts expanded federal support of these colleges until 1907. During the last half of the nineteenth century vocational education in the United States was fostered by
individuals and trade associations greatly influenced by the Russian system of training mechanics (Bailey, 1973). This system was developed by Victor Della Vos of the Imperial Technical School, Moscow. Della Vos perfected a system of analyzing and teaching trades in the late 1860s and displayed it at an exposition in Vienna in 1873 and at the Centennial Exposition in Philadelphia in 1876. It was widely accepted because it had several admirable features:

1. It involved careful analysis of specific trades and the ordering of tasks from simple to complex;

2. It facilitated a much larger student-teacher ratio than had been practiced;

3. It recognized the values of group, small group and individualized instruction;

4. It recognized the value of application and immediate knowledge of results;

5. It established the value of teachers who are expert in their occupation and in pedagogy;

6. It had a military like regimen which was compatible with the thinking of many schoolmen and the temperament of the youth of the era (Bennett, 1937).

By 1900, proponents of vocational education believed that by including vocational programs the schools would become more democratic for all. Vocational training was viewed as an alternative that would provide a reason for
youth to stay in school past age 14. More than 90% of students dropped out of high school before receiving their diploma, in fact the majority of them did not complete the sixth grade (U.S. Department of Labor, 1968). Furthermore, the majority of those who stayed to complete high school were females (Miller, 1990). Traditional liberal education did not prepare youth for the life's work they would face.

The controversy became how and why vocational education should be developed, not whether it should be developed. Some argued that vocational education, or occupations should be the central theme around which education should be organized. Others claimed that vocational education should not be restricted to the classroom, but should be expanded to the work site.

In 1906, two events caused the beginning of the public vocational education movement. The first was the report of a Massachusetts Commission that recommended that elementary education for boys and girls include instruction and practice in the elements of productive industry, and that instruction in other subjects show application in industrial life. The Commission also recommended that high schools offer elective courses in agriculture, mechanical, and domestic arts, and further, that academic subjects such as science and math show application and use in local industries (Bailey, 1973). The second event that affected public education was the
formation of the National Society for the Promotion of Industrial Education. This organization issued bulletins, secured the support of labor leaders, and dealt with management-labor differences, apprenticeship patterns, trade education for girls, and state and federal legislation (Bailey, 1973). By 1926, the society joined with the Vocational Education Association to become the American Vocational Association.

The Smith-Hughes Act: Public Law No. 347, 64th Congress, in 1917, funded federal legislation to support vocational education as a part of the education system. This act set the direction for the separate funding of vocational education. The intent was that if vocational education was not provided with separate funding to get it started, it would not become part of the school curriculum. The profound effect of this intent was to cause vocational education to be considered that "other type" of education. This law, which had been presented, debated, and delayed since 1906 was the first in which public education for occupations required less than the baccalaureate degree. In the years since 1917, federal legislation has continued to enact laws that support the separate funding nature of vocational education.

There is no national work force policy or any central planning agency. As a result there is confusion, waste, competition, and duplication among the many organizations
attempting to prepare people for the world of work. The impact of the legislative acts has been an attempt to be "everything for everybody" within a limited list of occupations. Furthermore, large cities and towns, particularly those with political clout have many more approved vocational programs, smaller centers are generally approved for agriculture and homemaking and the smallest schools have no vocational education programs at all. (Bailey, 1973).

Specific purposes of vocational education are still debated, as well as the future role of federal legislation. Proponents of vocational education believe that by integrating vocational programs, the schools would be more democratic for all. John Dewey (1916) sought vocational education as a means to induce changes that would improve all of education. Dewey believed that since occupations were central to life, so should they be central to educational activity. Education which focuses on preparation for more education is not an adequate provision for the future.

Today, American public education is based on the assumption that schooling (intervention) during the formative years of childhood and adolescence prepares individuals for adulthood and their roles in society (Bailey, 1973). The emergence of career education is the combination of these factors, legislation, and leaders whose ideas and
recommendations overlap in time and interaction.

Career Education

Systematic career planning must begin at the elementary school level. Youngsters must be exposed to experiences which are meaningful in terms of individual characteristics and to information which is accurate if they are not to carry occupational stereotypes into later decision processes (Bailey & Nystrom, 1972). Career development then, should begin in the work routines of childhood. This includes the child's observations and imitation of the work roles of various family members. Then in school age, career development continues to be emphasized in study, social, and play activities as well as hobbies, clubs, and part time work (Rosenthal, 1969).

Career education represents a composite of what might be described as education for productivity (employability skills) and education for choosing (career development). Career education must focus on developing characteristics important to choosing, planning, and employability in as many students as possible (Herr, 1972).

In reality, today it is believed to be rare that middle school students get any consistent exposure to career development. It is also believed that the level of teacher emphasis in career education is dependent on personal factors, not on a unifying concept or belief of the school
system. There is relatively no information on what is actually being done today in the middle school. Neither does there appear to be any central advocacy with much weight to influence the importance of this emphasis.

The distinction between career education and vocational education was made by Robert M. Worthington, Associate Commissioner for Adult Vocational and Technical Education, in a paper presented in Tokyo (1972). He said, "...vocational education is targeted at producing specific job skills at the high school level and up to but not including the baccalaureate level. Career Education embraces all occupations and professions and can include individuals of all ages whether in or out of school" (Bailey & Stadt, 1972, p. 269).

Rumpf, in preparing a conference discussion paper in 1971, started with the assumption that vocational education should be lifelong career development for each person, presented six objectives of career education:

1. To provide every young person who completes high school with a salable skill and assured entry to further education or training.
2. To provide those students who leave high school before graduating with a salable skill and reentry opportunities into education or training.
3. To provide career orientation starting in Kindergarten and guidance, counseling, and placement services to all students at all levels of education to assist them in career choices in making job changes.

4. To assure every person the opportunity to obtain career-related skills throughout life, within or outside of schools, with employers assuming a greater role.

5. To emphasize and enlarge post-secondary and adult vocational and technical education programs, including pre-technical programs for the academically handicapped, so that a much higher proportion of specific skills training will occur at the post-secondary level.

6. To assure that every individual is prepared by education, regardless of curriculum, to lead a productive and self-fulfilling life. (Bailey & Stadt, 1973, p. 270)

A model of career development has been proposed that emphasizes autonomy, commitment, career maturity, and good match of developing interests with career roles (Healy and Mourt, 1984). The fundamental concept of career education is that all educational experiences, curriculum, instruction and counseling should be geared to preparation for economic independence and an appreciation for the dignity of work.

The case for exploration and awareness of careers was made through all the literature on this subject (Herr, 1969;
there does not seem to be a case or study in which a career education curriculum had negative effects. In fact, students who didn't get it for whatever reason, tended to have more trouble later on. Determining to what extent teachers emphasize career awareness and orientation will help to illuminate current classroom attitudes and progress.

Significance of the Study

Despite the large outlay of public funds for education - Federal, state, and local - amounting to 6 percent of America's gross national product, millions of youth, on leaving school, find themselves lacking skills needed for employment. The need to orient the educational system towards the manpower requirements of economic development should become a priority.

Acquiring occupational skills is essential in modern society. In view of the changing nature of the work force and increasing technological requirements, it becomes necessary to train workers to a higher degree than in the past. The increasing focus on academic requirements leaves little time for students to enroll in vocational courses. These courses are considered by some to be used primarily for students who do not succeed in the academic curriculum. In this country there is a need to have people who want to work, who are prepared to work, and who regard work as a meaningful part of
their lives. For this reason, vocational education is no longer an alternative to academic skills and has become vital for everyone's career preparation.

Career education, particularly career awareness and exploration at the middle school levels can help the student develop awareness of the knowledge and skills required in the work world for various occupations, wholesome attitudes and proper work habits, and the ability to consider possible educational and occupational alternatives, other than traditional, general education.

This study has the potential to provide information that can be valuable in recommending and/or determining a course of action for teachers to facilitate the acquisition of knowledge and the overall benefits regarding career education.

Statement of the Problem

Vaughan (1991) asserted that vocational education is no longer an alternative to academic training, it is vital for everyone's career preparation. He said, "The primary economic problem in most communities is no longer finding enough jobs for people - it is finding enough people who have the skills for the new jobs" (p. 447).

During the middle school years, it is exploration in career development that helps students build a core of responsible attitudes toward their personal future. A review
of literature identified the necessity of early intervention and its implications. Therefore, the problem was to determine the starting point of teacher's current emphasis of career education in the middle school in order to assess current attitudes and to recommend appropriate interventions to meet the career development needs of the middle school student.

Research Questions

Do teachers emphasize career education in the middle school curriculum? Since career education encompasses a lifelong process, and since awareness of careers and exploration of careers are the first two levels of this process, do teachers in the middle school emphasize the first two levels of career education and to what extent? This study proposes to examine this area by posing the following specific research questions for which answers will be sought:

1. To what extent do teachers emphasize career awareness in the middle school curriculum as demonstrated by responses to a career education emphasis survey?

2. To what extent do teachers emphasize career exploration in the middle school curriculum as demonstrated by responses to a career education emphasis survey?

3. Can significant differences be demonstrated using scores derived from a career education emphasis
survey administered to middle school teachers when career awareness items and career exploration items are compared?

4. Can significant differences be demonstrated using scores derived from a career education emphasis survey administered to middle school teachers when levels of responses are compared?

Questions 1 and 2 will be answered by examination of the data (see Table 2). The answers to questions 3 and 4 will be determined using appropriate statistical methodology (see Table 4).

Purpose of the Study

This study will examine current levels of emphasis on career education in one middle school. Emphasis will be determined in two areas; career awareness and career exploration. The curricular areas represented are: Spanish, Math, Language Arts, Social Science, Science, Industrial Arts, Physical Education, and Special Education in the 6th, 7th, and 8th grades.

Limitations

The sample is limited to one school district located in the San Bernardino mountains. Conditions and regional practices might limit the generalizability of the findings. Use of these measures in other settings should be accompanied by information addressing issues of reliability and validity.
Scope of the Study

This study is limited to the teachers of the Rim of the World School District at the Mary Putnam Henck Middle School. It is located in the San Bernardino Mountains approximately 70 miles east of Los Angeles.

Definition of Terms

For purposes of this study, the following terms will be utilized:

**Ability** - refers to learned qualities or skills principally confined to the cognitive realm of human behavior.

**Awareness Phase** - is the stage when an individual becomes familiar with the values of a work-oriented society (Hoyt, 1972).

**Career** - a way of living; an occupation or profession; a general course of action or progress through life.

**Career Adaptability** - the living interaction between worker and work environment.

**Career Awareness (1)** - knowledge and understanding of one's career options and capabilities

**Career Awareness (2)** - arousal, or recognition of a need.

**Career Development** - is the sum of all educational experiences, curriculum, instruction and counseling geared to preparation for economic independence.
Career Education (1) - is the total effort of public education and the community aimed at helping all individuals to become familiar with the values of a work-oriented society, to integrate these values into their personal value systems and to implement these values in their lives in such a way that work becomes possible, meaningful, and satisfying to each individual (Hoyt, 1972).

Career Education (2) - totality of educational experiences through which one learns about work, both in and out of school.

Career Exploration - the process of becoming able to cope with the tasks of career decision making; the crystallizing of and specifying an occupational preference.

Career Maturity - one's readiness to make well-informed, age-appropriate career decisions.

Career Orientation - the motivative and instructive functions that encourage students to begin career-planning, know something about occupations as they relate to the subject matter being discussed, and develop a proper balance between self and career aspirations.

Career Pattern - The life sequence formed when an individual makes choices and the manner in which he
enacts the resultant roles.

**Education** - knowledge, skills, abilities and characteristics developed by teaching, training, study, or experience.

**Exploratory Phase** - is the stage when an individual thinks about himself and about work values, decides the meanings various work values have for him, accepts those that are congenial to his total personal value system and rejects those that are not (Hoyt, 1972).

**Interest** - the levels of liking or disliking an object or an activity.

**Job** - paid employment, or work undertaken for a price.

**Job Cluster** - is the arrangement of occupations systematically by industry, product, job content, skill transferability or physical and psychological characteristics. The United States Office of Education clusters were developed along industry lines so that they would be helpful at the awareness stage of youth (Hoyt, 1972).

**Locus of control** - the degree to which an individual believes that reinforcements are either internally or externally derived.

**Middle School** - is a school between elementary and high school, housed separately and ideally, in a building freshly designed for its purpose, and covering at least
three of the middle school years, beginning with grades five or six (Murphy, 1965).

Vocation - A calling or a career.

Vocational Behavior - that which develops over time through processes of growth and learning.

Vocational Education - a lifetime process that helps people when they enter the work force, supports them as they move up the career ladder, and helps them retool when their old skills are no longer sufficient.

Vocational Maturity - the readiness to cope with the specific vocational tasks that are associated with an individual's stage of life. (Blustein, 1987).

Work - includes unpaid activities as well as paid employment.

Work values - the internal state or motivating force of a person, more specifically his feelings about outcomes or results, such as the importance, purpose, or worth of an activity.

Description of the Study

To match the constructs of the proposed study, the Career Education Emphasis Questionnaire was chosen as a survey instrument. Teachers in the previously identified district will be given a survey with 46 items to be rated on a graduated scale according to their level of response. The 46 items contain, in no particular order, approximately equal
numbers of career awareness emphasis items and career exploration emphasis items. Data will be examined statistically to determine extent of emphasis. To determine significant differences between awareness emphasis and exploration emphasis, and also in levels of responses, will require a two-way analysis of variance.

Organization of the Study

Chapter 1 provides an overview of the concepts which underlie the significance and purpose of this research. Related research will be detailed in Chapter 2. Investigation methods, description of the population, procedures, and description of the testing instrument will be detailed in Chapter 3. Chapter 4 will disclose the findings of the study and the final Chapter will contain a summary, conclusions, and recommendations for further study.
CHAPTER II

REVIEW OF LITERATURE

History

The roots of vocational education are found in the rearing of the young. Prehistoric peoples taught their young regular skills of providing food, shelter, clothing, protection from animals and the elements, and protection from the unseen powers via worship (Bailey & Stadt, 1973). The crude skills of hunting, cooking, and farming and the more refined skills of making pottery, implements, clothing and domestic items were passed on by simple imitation. For many centuries, the young learned elementary tasks from their elders and made almost no technological improvements.

When man learned to control fire, he became less nomadic and over long periods of time, developed handicrafts, arts, and eventually writing. Early man could cook, shape implements, and melt metals. These skills made possible a simplified division of labor. This could be considered to be the first evidence of planning for separate vocational careers. These practical arts were neither organized nor written during these centuries. Indentured apprenticeships that began in ancient Egypt evolved to informal
apprenticeships that became the principle method of vocational instruction for many centuries to come.

A self-sufficient system of slave industry and agriculture made up the structure of ancient Greece, along with an artisan slave class. That the craftsmanship was highly developed is evident from the treasures that remain, but the ratio of free Greeks to slaves was about 1:10 in some cases, and since the sustenance of that state was largely the job of the slave or near-slave, production was considered for the most part menial. In fact, the citizens of Sparta were forbidden to exercise any mechanical trade. Whatever craftsmanship was needed to support the Spartan citizens was produced by the Perioeci, a group of "dwellers about", who were in a sense slaves once removed (Barlow, 1990).

A definite occupational classification system developed in Athens as the rise of that city and its growing needs brought an increase in the practice of trades. Workers were regulated into a caste system. The industrial workers, though free, were generally second class citizens, as were the artisans, whose work is the best evidence of Greek achievement. After Greece was raised up by manual expression, new leaders that took over felt superior, and gave little or no notice or concern to the large number of craftsmen. Literate Greeks, however, about one tenth of one percent of the population, had organized and written the liberal arts,
which by the Middle Ages had achieved preeminence. This is because "the weight of written materials in a field of human activities is undeniably enormous in commanding respect in the academic and educational world" (Butts, 1955).

Though artisans and craftsmen constructed the great public works of Rome, the aqueducts, buildings and roads, there is little evidence that they were held in high official esteem. Craftsmen and artisans of Rome were a mixture of slaves and freemen, and acquired their skills by the only means possible, family apprenticeships. Under the rule of the Roman emperor Commodus (about 183 A.D.), there is evidence that apprenticeships existed (Barlow, 1990).

Formal occupational instruction has always been associated with several special vocations - military, political, and religious occupations, for example. The Assyrians and the Persians took great care in the preparation of foot soldiers, artillery, and cavalry. This has occurred from the time of the privileged, elite classes of the Greeks to nearly all cultures in modern times. To this day, the armed services are known to provide the very best technical and vocational education. Yet, the idea of combining trade and academic education was not taken seriously until the late 1880s.

By the fourth century A.D. architects and mechanics were trained, at least partly, by school methods. This is the
first reference of the transition from the apprentice to the school system, though it occurred first in the professional vocations, those involving the intellect rather than manual labor (Barlow, 1990).

During the thousand or so years of the Middle Ages, education existed primarily for the church, and the masses remained illiterate. Apprenticeships and manual labor were built into the foundations of Christianity, since the monks who copied and distributed large numbers of manuscripts were apprenticed in order to learn the nature of their work. The Benedictine rule established manual labor in an honorable and preferred fashion, requiring seven hours of manual labor of the monks each day. In this fashion, the Scriptoria, founded by Cassiodorus in the early part of the millennia, provided large numbers of manuscripts throughout the Christian world, a major contribution of the monasteries (Barlow, 1990).

Apprenticeships became more formalized as tradesmen and workers formed the guilds and associations. From this came distinctive patterns of teaching industrial processes through guilds which began to control entry into specialties. Thus evolved the apprentice, journeyman, and master titles. The process of instruction was conscious imitation, and the content was refined skills of accomplished workmen and artisans.

A great revival of learning, the Renaissance, lasted
about 250 years beginning in the fourteenth century A.D. For the common man, the rediscovery of Greek and Roman literature and the escape from medievalism were of little importance, since he couldn't read anyway. In fact, the influence of industry, trade, and craftsmanship were stabilizing influences during the contrasts and conflicts of that time. Something like formal industrial education came into being. The guilds had added respectability to craftsmanship, which was also growing with the geographic, economic, and scientific developments of the day. Not until the language barrier was penetrated by Dante Alighieri's The Divine Comedy and Giovanni Bocaccio's Decameron, written in the vernacular, was the spirit of the Renaissance influential in the mores of society (Barlow, 1990).

Society became dependent upon the new burgher class and the arts and crafts guilds, though the process of industrial education was the same as it had been forever—taught by father/son or master/apprentice. By imitation and emulation the apprentice could learn all aspects of his trade from his father or master. Seven years, more or less was the agreed upon time to provide enough learning experiences to acquire the skills required. In some cases, the master was required to teach reading and writing to his apprentice, but it was not until the late 1880s that combining trade and academic education was seriously tried (Barlow, 1990).
The common man became more important in the eyes of the leaders as the literate use of the vernacular spread. In addition, his education became at least a matter of casual notice. In 1762, Jean Jacques Rousseau wrote "Emile", about a boy who was to receive the best education possible. Rousseau desired that the boy gain wisdom not from formal education but from practical interaction with his environment, so Emile learned the trade of carpentry. Emile was to spend one or two whole days a week with a master carpenter, since Rousseau believed that a man needed to work in order to live. Rousseau was concerned that Emile raise himself to the "state" of being a carpenter, though, and not just learn the occupation of a carpenter. Educational reforms were begun during the sixteenth and seventeenth centuries first, in theories. In some cases industrial related instruction was actually taught in programs of formal education (Barlow, 1990).

John Heinrich Pestalozzi, the father of modern elementary education, evolved a system of educational theory and practice, influenced by Rousseau, that became the basis of learning in his school. The child was allowed to "learn by doing", and is precisely what the apprenticeships, tradesmen, and craftspeople had been doing all along. This homespun philosophy and his practical ideas became a center of attraction for educators, and in America, greatly influenced
the direction education was to take (Barlow, 1990).

A philanthropist from the United States, William Maclure, visited a Pestalozzian school in Paris, run by Joseph Nicolas Neef. Maclure was impressed and offered Neef aid in opening a similar school in America. The first one failed, but in 1825, Neef opened a school in Indiana that combined physical labor with moral and intellectual culture (Barlow, 1990). The labor activities in agriculture that were related to school work provided real interest for the students. This industrial education became a natural avenue for educational reform, since it was practical, close to the common experience of man, and therefore, easily understood.

Laws and conditions of apprenticeship were delegated to appropriate authorities, mostly town governments, in colonial America. There were two kinds of apprenticeships: 1) The voluntary form bound the apprentice by his own free will in order to learn a trade; 2) involuntary apprenticeship provided a means of taking care of poor children and orphans. For many, apprenticeship also provided a means of upward mobility. Since paying for an education was a problem for many, apprenticeships held opportunities for the less fortunate. During this time, and in this manner, a large segment of public education was accounted for (Barlow, 1990).

In an attempt to supply the educational advantages of apprenticeships for factory workers, private charity schools
and societies of mechanics came into existence during the early part of the nineteenth century. The concept of equal educational opportunities at public expense was promoted by the labor movement of that time. The General Society of Mechanics and Tradesmen, founded on November 17, 1785 began a full scale education program, and only relaxed its direct participation as public schools became generally available (Barlow, 1990).

Around 1820, enthusiasm for public schools began to develop, but took fifty years to become part and parcel of American culture. Massachusetts, in 1851, was the first state to enact laws requiring attendance of all youth through the eighth grade. In 1872, the legal question of whether a people hold the right to tax themselves for whatever kind of educational system they want was settled by the Kalamazoo Case. High school, known as the "people's college" then became the dominant educational institution in America. A vastly expanded curriculum and many new practical subjects developed soon thereafter. The beginnings of vocational education within the environment of public education started at this point (Barlow, 1990).

A number of mechanics institutes, developed to meet the vocational needs of their members, caused the demise of apprenticeships in this country. Some of the more prominent were the Franklin Institute, Philadelphia, 1824: the Maryland
Institute for the Promotion of the Mechanic Arts, Baltimore, 1826; the Ohio Mechanics Institute, Cincinnati, 1828; and the San Francisco Mechanics Institute, 1854. The demands of the industrial revolution required new institutions for the greatly needed education of the people. As a result, technical institutes were founded within the developing social systems of the day (Barlow, 1990).

After the Civil War, and following the Morrill Act of 1862, which provided land grants for colleges, a system of agricultural and mechanical colleges appeared in each of the states, followed by private trade schools, corporation schools, and the "new education" which reflected American pragmatism. Also the American public education system was struggling to provide educational opportunities for all the people. It was during this time that sons began to have much more say in their choice of occupations than was allowed in the past.

As education for all men became the goal, more and more children were brought into the common school. For a large number of the students the public school was likely to be their only form of education. The majority of children of the working men and laborers had not previously been able to receive an education so the public school curriculum was to be adapted to that class of people. This was the beginning of "general" education, and the controversy and criticism has
raged ever since. Many critics thought that the curriculum was too bookish, and not appropriate for the working class. Various reforms were offered generously, among them:

1. The schools should concentrate on fewer subjects.
2. Schools should distinguish between knowledge and skill.
3. Schools should recognize that skill can only be obtained by practice.
4. Students should be tested to demonstrate what they have learned, not merely tell about it.
5. Only the useful and necessary parts of arithmetic should be taught and the "curious" elements should be avoided (Barlow, 1990, p. 13).

Education was supposed to be like the life for which the students were being prepared. Differences between skilled labor and educated labor were thought to be differences on the degree and kind of education. Industrial education never sought to supplant liberal education, but to combine the liberal and the practical for the benefit of the industrial classes. Their education was supposed to be equivalent to the professional classes. Instead, the decay of the apprenticeship system made industrial education a national necessity. Proponents and critics argued vehemently for and against the emergence of practical education in the
curriculum of common schools.

Between 1875 and 1900, the consideration of practical education in the curriculum of the public school was hotly debated. Calvin M. Woodward, who began his career as a teacher at Washington University, became principal of the O'Fallon Polytechnic Institute in 1866. When the institute became part of the engineering department of Washington University in 1868, Woodward became dean of that department. He decided that engineers should construct models of wood to illustrate mechanical processes, but found that few of the students could use hand tools with any aptitude. By 1871, under Woodward's supervision, a modest workshop was opened at the university. From this, and Woodward's frequent discussions and writings on the subject, the Trustees of Washington University approved and opened the St. Louis Manual Training School for boys at the secondary level on September 6, 1880. The program included two hours of woodshop and one hour each of math, science, Latin or English, and drawing (Barlow, 1990).

Also in 1880, President E. E. White of Purdue University, published his views that trade education should not be taught in schools because this would direct public education away from its primary purpose. This side of the debate came from the so-called guardians of public education who believed that technical education was impractical, a
threat to the intellect, a "deceptive farce", and unacceptable in public schools (Barlow, 1990).

John D. Runkle, one of the first ten faculty members of the Massachusetts Institute of Technology, became President of that school. After spending two weeks at the Centennial Exposition in Philadelphia, he was convinced that he had found the means to solve one of his pressing problems. Until that time, engineers had a good technical education but absolutely no skill in the practical aspects of construction. The exhibit sent by the Imperial Technical School of Moscow showed a way to give practical training to engineering students. Runkle reported to the Corporation of MIT, and recommended instruction shops for engineering students. His plan was approved. He then discussed this new method at the National Education Association (NEA) meeting in 1877 (Barlow, 1990).

At this time, there was a continuum of viewpoints, with many positions in between, ranging from blind faith in manual training to bitter opposition of its introduction in any form or at any place in the curriculum of the public schools. Proponents of manual training argued that public schools were deficient if they lacked practical training, while the "guardians of liberal education" resented the criticism and discouraged efforts at reform (Barlow, 1990).

Mechanics' institutes, mechanics' libraries and
professional associations did not wait for the debate to be solved, because there was a real need to provide a vast number of workers in the work force. Private trade schools were developed that combined trade training with elements of liberal education. One of the first was the Hampton Institute, founded in 1868, with assistance from the American Missionary Society. This vocational institute led the way for the education of Negroes in the belief that education would become a vital factor in their adjustment to a free society. Booker T. Washington was one of its students (Barlow, 1990). For many more years, Negro education was predominantly vocational.

The New York Trade School of 1881, in addition to trade training, gave pre-employment instruction as well as supplementary instruction for employed workers. It was endowed generously in 1892 by J. Pierpont Morgan, and offered specific trade training with directly related scientific instruction. The Hebrew Technical Institute, founded in New York City in November 1883, offered a limited amount of specific trade training, and combined it with a greater range of general subject matter. Then, in 1991, The Williamson Free School of Mechanical Trades in Philadelphia started with a program of manual training for all students, added some general education, and finally offered specific, intensive trade training. The difference in this school was that boys
between 16 and 18 years of age were bound as indentured apprentices to the school trustees for three years (Barlow, 1990). Other schools developed during this time generally followed one of these three plans. The exception are the corporation schools.

In an attempt to revive the old type of apprenticeships to meet their particular needs, corporations established required classes and apprenticeships to combine the activities of shop and classroom. In 1872, the firm of R. Hoe and Company held classes two nights a week and its employees studied English, mechanical drawing, arithmetic, geometry, and algebra—all related to the manufacture of printing presses. In 1900, The General Electric Company of Lynn, Massachusetts, began an apprenticeship program to promote a better understanding of machines and machine parts. This combination of apprenticeships and industrial science was successful and widely copied. In 1901, The Baldwin Locomotive Works of Philadelphia established classes at three different levels depending upon the amount of previous education of the worker (Barlow, 1990).

In spite of these and other efforts the United States still had a shortage of trained mechanics. The issue of whether to have comprehensive high schools or a dual system of 1) college preparatory and 2) vocational schools is a controversy that has been debated ever since. The issue was
forced by necessity despite the conflict of opinion. The Douglas Commission, 1906, appointed by the Governor of Massachusetts, William L. Douglas, reported on the need for public industrial education of a trade nature. The commission recognized the importance of day, part-time, and evening schools, and led to legislation that established industrial schools separate from the public school system. Within a few years, though, vocational education was incorporated into comprehensive schools. With the NEA moving toward adopting industrial educator's points of view, public educators began to gradually support the view that industrial education (please note that in the early part of the century, educators used the term industry to connote any branch of productive endeavor) was indeed within the realm of public education. Support increased in Congress as well until the first federal legislation for vocational education was passed. The Smith-Hughes Act of 1917 signaled the beginning of public vocational education and started a reformation of secondary education that is not yet finished (Miller, 1990).

**Vocational Education in Legislation**

The Smith-Hughes Act: Public Law No. 347, 64th Congress in 1917 funded federal legislation to support vocational education as a part of the education system. This left vocational education in the public schools and settled the issue of whether vocational education should even be a part
of the public school system. This act declared that the nation's schools would include preparing students for earning a living as an integral part of their mission. Each state had to comply with several provisions of this act in order to receive funds. These were:

1. Create or designate a board of not less than three members for vocational education.

2. Prepare a state plan, describing programs that would be conducted.

3. Make an annual report to the Federal Bureau of Vocational Education.

4. Provide a program, only in public schools, for students fourteen years of age or older and of lesser than baccalaureate grade.

5. Provide plant and equipment with state or local funds.


This act remained virtually unchanged for almost half a century. While there were a number of amendments, none changed the original thrust, purposes, or intended outcomes of that legislation. The add-ons did expand the scope of vocational programing and provide additional categorical funding.

According to the Smith-Hughes Act, vocational teachers
needed to be experienced in the occupational area to be taught. Having occupational experience was a prerequisite to becoming a vocational teacher, taking priority over preparation to teach. Prospective teachers were selected from the trades or industry before receiving any teacher education. Preparation for teaching was done on the job as a vocational teacher after some brief formal training may or may not have been given. This model exists today as the dominant prototype for trade and industrial teachers (Miller, 1990). Vocational teacher education redesign is currently underway in many states, not without its criticism, though. Critics believe that there is too much professional education and not enough subject matter content. Others believe that a liberal arts degree should be the base for entering into teacher education with the specialization and professional preparation occurring at the fifth and sixth years of the program (Miller, 1990).

In the years since 1917, federal legislation has continued to enact laws that support the separate funding nature of vocational education. To name a few:

The George-Reed Act: Public Law No. 701, 70th Congress - 1929-1934, further developed vocational agriculture, and moved home economics from trade & industrial areas to agriculture appropriations.

The George-Elizay Act: Public Law No. 245, 72nd
Congress - 1934-1937, modified home economics regulations, provided funds for part-time classes in trade and industry, and funds for professional meetings.

The George-Deen Act: Public Law No. 673, 74th Congress - a continuous authorization from 1937, provided Federal funds on a graduated scale with states matching 50% over a 10 year period increasing to 100%, also added distributive education.

George-Barden Act: Public Law No. 586, 79th Congress - 1946, amended George-Deen, for greater flexibility in administration of state & local programs, funded counselors, data collection and occupational information, training & work experience for students out of school, purchases of equipment and supplies for apprentice training, and classes for school leavers over eighteen years of age.

George-Barden Act: Title II, Health Amendment Act of 1956 and 1961 Public Law No. 911, 84th Congress and Public Law No. 87-22, 87th Congress - provided funds for training practical nurses.

George-Barden Act: Amendment to Title I, Fishery Training Act, Public Law 1027, 84th Congress - 1957, established continuing authorization for the fisheries industry, allotments for training scientists and technicians for commercial fishing.
George Barden Act: National Defense Education Act, Title VIII, Public Law 85-864, 85th Congress and Public Law 87-344m 87th Congress - trained highly skilled technicians from 1958-1962. This Act was all for technical, not manual, occupations. Established rules for state plans:

1. demonstrate need in employment market;
2. curricula developed by specialized analyses;
3. make general education background available;
4. show that duration of class is sufficient for employment;
5. show that classrooms, equipment, lab supplies and instructional materials are available;
6. show that teachers and supervisors have adequate experience & preparation;
7. Students to be selected on aptitude and interests.

Area Redevelopment Act: Public Law 87-27, 87th Congress - to alleviate unemployment from 1961-1965, to train in redevelopment areas, HEW could contract with public or private schools if vocational education was not available through state or local agencies. (This is illustrative of the many Federal Acts which have provisions for vocational education, though only a small feature of the act).

Manpower Development and Training Act: Public Law
87-415, 87th Congress and Public Law 88-214, 88th Congress, and others - established to alleviate the hardships of unemployment, reduce costs of unemployment compensation & public assistance, maximize resources in the space age. Since 1962, it has offered short programs and entry level employment focus for skills needed in the immediate locale.

The Vocational Education Act of 1963 provided categorical funding for research, cooperative education, guidance, and disadvantaged and handicapped, together with set-asides for postsecondary vocational programs. The declaration of purpose statement in the act directed that vocational education would be available to all people of all ages in the communities of our nation. This expanded role and the new, specific directions for the conduct of vocational education affected virtually every program area under previous legislation.

The Vocational Education Act (VEA) of 1963 was a turning point, directing attention to the purpose that all persons have ready access to vocational training or retraining, and that preparation be realistic regarding actual or anticipated opportunities for gainful employment (Miller, 1990). Under this act previous categorical funding was eliminated. The purpose of this was to introduce new programs and courses as demands changed in the workforce.

The authorizations were for programs in a variety of
institutions, including high schools, secondary area vocational schools, junior colleges, technical institutes, colleges and universities. The Act also authorized funding for cooperative education, apprenticeships, the building of area vocational schools and residential vocational schools (Bailey, 1973).

The Act's declaration of purpose was:

...that persons of all ages in all communities of the state—those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps—will have ready access to vocational training or retraining which is of the highest quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and abilities to benefit from such training (Public Law 88-210, 1963).

In contrast to earlier acts the VEA permitted greater flexibility in local education agencies to serve occupational needs of a wider range of people. Smith-Hughes and its subsequent acts were restricted to programs of agriculture, trades and industries. The VEA funded business education,
health occupation programs and others at the state and local levels (Bailey, 1973). Between 1963 and 1984, unprecedented growth in enrollments brought a 400 percent increase in federally aided vocational education (Gray, 1990).

The Advisory Council on Vocational Education, 1968, required by VEA 1963, conducted an assessment of the Act. Their recommendations reaffirmed that vocational education should become an essential part of education for each individual. The report was submitted as a legislative proposal, and many of the recommendations were signed into law as the Vocational Education Amendments of 1968 (Bailey, 1973).

The VEA Amendments of 1968 repealed all previous vocation education acts, with the exception of Smith-Hughes, whose title was maintained for sentiment. This and the elimination of categorical funding for occupational areas gave the states greater flexibility in mandating programs for new and emerging occupations and clusters (Bailey, 1973).

The organization and advancement of vocational education at the federal, state and local levels since then has included the Education Amendments of 1976, Title II – Vocational Education, the Carl D. Perkins Vocational Educational Act of 1984, and the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1990.

The Carl D. Perkins Act of 1984 gave national priority
to various special needs populations. The amendment to this act, the Carl D. Perkins Vocational and Applied Technology Act of 1990 further expanded vocational education emphasized, once again, by Federal legislation.

These acts and amendments generally established educational agencies to do what the common school could not or would not do. They also established federal roles and policy, concentrating resources on special populations. These federal roles in vocational education have been, and continue to be, characterized by a variety of institutions with roots in legislation, departments of government and professional associations. This federal assistance, has been the catalyst for state education agencies (SEAs) and local education agencies (LEAs) to align priorities, programs, and expenditures more closely to community and individual needs (Barlow, 1990).

Career Education in Theory

Career Development became a theoretical and applied research field in the 1950s (Super, 1983). After passage of the VEA 1968, a National Conference on Exemplary Programs and Projects was convened. This was to maximize use of funds under part "D" of the act: Exemplary Programs and Projects. Of the eight consultants presenting conference papers, two were very significant: Herr (1969) and Gysbers (1969).

Edwin Herr submitted that the developmental tasks and
current knowledge of career development should be used as the organizing structure of a systems approach to education (Herr, 1969). In other words, he gave broad suggestions for centering career development in the curricula. Above all he argues for appropriate experiences at each level of education. For example: "Because of the importance of early childhood experiences in the family, the school and the community, intervention in career development needs to begin during the first decade of life" (Herr, 1969, p. 8). He also emphasized the significance of the characteristics of people, for example:

In sum... the emphases attendant to guidance and the aspects of education which have vocational implications have shifted from a Parsonian model of matching men and job to a model more committed to the clarification of those aspects of self - e.g., interests, capacities, values - which need development for a lifelong process of planning and decision making (Herr, 1969, p. 8).

His main theme succinctly shows the possibility of combining career development, the behavioral objective approach to educational programming (which was just then coming into vogue and to the structure and terminology of vocational education at the specialization levels), and the reorientation of vocational education. His theme is stated:

One of the operational goals critical to implementing
the Exemplary Programs and Project Section of the Vocational Educational Act relates to the need to design behavioral descriptions which would encompass the characteristics of career development, placing these at appropriate developmental levels, and wedding them to educational strategies which will facilitate them (Herr, 1969, p. 18).

Like Herr, Gysbers (1969) advocated turning education around. Gysbers stated:

The emphasis of career exploration programs at the elementary and junior high levels should be on the individual development of all individuals rather than on the early selection of some to fill certain occupations. The objectives of career exploration activities should be based on and directed toward filling the needs of the individuals rather than on meeting the demands of the labor market (p. 6).

Though this appears to be a rather bold statement, Gysbers paper also abstracts some of the ongoing projects which support the idea that educational efforts in keeping with career development theory can satisfy the goals of vocational education, the purposes of general education, manpower demands, the needs of the disadvantaged and other peoples, and economic and societal needs.

Both Herr and Gysbers' papers were not widely read
beyond that conference, though the United States Office of Education, Exemplary Programs and Projects Branch in its summary recommendations relied heavily on the theories of both men. A combination of factors resulted in the great increase of vocational education and career development programs in the 1960s and 1970s. Some of these factors were increases in high school enrollments and federal and state funding in vocational education, construction of new vocational education facilities, and mandates to increase the number of women and minorities in vocational education programs.

As Commissioner of Education, Sydney P. Marland (1971) gave great impetus to career education. Speaking to the National Association of Secondary School Principals he spoke directly to the point of career education. He began with a condemnation of administrators who had relegated vocational-technical education to second class status. Then he attacked general education, suggesting to get rid of it, that useful knowledge is superior to general knowledge. Then he proposed "that a universal goal of American education, starting now, be this: that every young person completing our school program at grade twelve be ready to enter higher education or to enter useful and rewarding employment." Marland also spoke of lifelong learning, humaneness, occupational exploration, new leadership to the States, true
and complete reform of the high school, emphasis on new vocational fields, cooperation with business and labor, leadership development, and state plan innovation (Bailey, 1973).

There were many materials developed to assist in transferring theory into practice, particularly in the public school arena. Bailey and Nystrom, (1972), divide the school curriculum into three stages. The first is the awareness stage, grades 1-3, in which the child becomes aware of "self", and the "world of work". The second stage is the accommodation stage, for grades 4-6, that not only relates the growing knowledge of self and the world of work, but adds the process of career development. The exploration stage, for grades 7-8, provides students with concrete work-related activities and decision-making exercises which will facilitate career planning (Bailey & Nystrom, 1972).

During the exploratory stage, developmental tasks revolve around career planning, career exploration, and the acquisition of specific cognitive based skills and information (Blustein, 1987). Students also examine the concept of work, the meaning of career development, and the different broad occupational categories and specific job possibilities related to their interests and abilities (Rosenthal, 1989).

The role of the middle school in career development has
four major functions:

1. To provide opportunities for the development and implementation of an accurate self-concept.
2. To teach decision-making skills.
3. To provide vocational information and exploratory experiences.
4. To help students choose and locate appropriate curricula or jobs (Matheny, 1969, p. 18).

In operationalizing the concept of career development, Super and his colleagues developed the construct of vocational maturity (Super, et al., 1981). There are two domains of vocational maturity. The cognitive components include decision making skills and world of work information. The second component regards vocationally mature attitudes such as a person's self-report of career planning and career exploration activities (Blustein, 1987). Herr (1972) determined that family, values, school climate, and community reward systems — sets of situational circumstances — interact with self-concept and developmental experiences to produce a continuing and fluid process of growth and learning known as vocational behavior (Herr, 1972). It has been found that career attitudes become more mature as people come to believe that they can control their environment and their own future (Rodriguez and Blocher, 1988).

The shift over the years has been to emphasize the
transferability of skills and knowledge from one vocation to another related one, and to provide opportunities for geographic and occupational mobility. The United States has learned that the fundamental purpose of vocational education is, and has always been, job-specific training, retraining and skills upgrading (Evans, 1982; Lotto, 1988). Though legislation has recently focused greater attention on individual interests and has resulted in current attempts to balance individual and employment needs, the purpose of vocational programs has altered very little.

Herr (1969) advocated the concept of combining developmental tasks and current knowledge of career development into a reorientation of vocational education into the regular curriculum. He argued for appropriate experiences at each level of education, beginning at the elementary levels. Marland (1971) encouraged high level commitment to career and vocational education centered with all of education on the career development theme.

Many vocational psychologists have suggested that self knowledge is necessary for adaptive career development (Super, 1984, and others). "Autonomous, rational, self-esteeming, and future-oriented youth were found to see career and occupational information as being useful in shaping their careers" (Super, 1983, p, 559). These traits that develop in childhood as part of the basic personality
are strengthened or weakened in adolescence. To many students who do not have adequate knowledge or accurate information on the world of work or themselves, occupational futures appear too remote or too uncontrollable for planning to seem worthwhile (Super, 1983). "Indecision or indecisiveness may be a result of lack of understanding of self in relation to environmental requirements or incompatibility of self and environment. This may be expressed through the client's poor adjustment or low vocational maturity" (Guthrie and Herman, 1982, p. 202).

Research indicates that the career development process facilitates career maturity (Ciardiello and Bingham, 1982). That is, career development fosters growth of attitudes, knowledge, behavior and job skills essential to cope adequately with the tasks of a given life stage. This simply means that students need to understand how they see work and other life-career roles, and how society, families and peers see them. This gives them some understanding of their possible options and a fairly good general idea of the world of work.

A study by Nevill and Super (1984) determined that career development attitudes, but not knowledge, were related to work importance. This study examined the relationship between career maturity and commitment to work, sex, socioeconomic status, and college level. The Career
Development Inventory was used to measure the specific dimensions of career development, and The Salience Inventory, which yields scores for five major life career roles: student, worker, homemaker, citizen and leisurite, was used to measure the relative importance of these life roles. Commitment to work was related to both the attitudinal and the cognitive factors of career maturity. Sex and socioeconomic status were not related to career maturity (Super & Nevill, 1982). Two years later vocational maturity was significantly correlated with social interest and moral development in a study undertaken by Krebs (1986).

Adolescent vocational development progresses as the individual's career maturity increases (Brizzi, 1990). It was first suggested by Super (1983) that the term "career maturity" should be replaced with the term "career adaptability" in the study of adult vocational development. Brizzi's study (1990) determined that "Vocational development does not end with career choice, but depends in adulthood on the individual's ability to meet vocational tasks adaptively, whereas adolescent vocational development progresses as the individual's career maturity increases".

A recent study supports previous studies that show there is a relation between locus of control and the development of more mature career attitudes (Rodriguez and Blocher, 1988). Locus of control, or autonomy, as defined by
Blustein (1987), refers to self-appraisals regarding the individual's preference for using external (social oriented) or internal (self-oriented) cues in determining appropriate social behavior. Rodriguez and Blocher (1988) states, "As people come to believe that they can control their environments and their own future, career attitudes may also become more mature. It may be that locus of control is an important mediating variable in facilitating career development..." (p. 279).

No significant relationships were found between career maturity and parental education level or program orientation (Smith, 1987). Smith's study of college freshmen majoring in business determined that career maturity is not related to intelligence and school achievement. This study suggested that school achievement and career maturity are separate constructs. He concludes, "There appears to be sufficient evidence to support the view that career development factors significantly influence retention rates among college students" (Smith, 1987, p. 8).

Blustein (1987) determined that individuals who are not able to define a coherent and consistent set of interests, values and abilities may have difficulty in learning how their attributes can be expressed in an occupation. Two studies have provided empirical support of the role of a clarified, consistent, and harmonious
self-concept system in the career development of young adults (Blustein, 1987).

Commitment to work has been found to be related to career maturity in a study by Neville and Super (1988). They claim that career maturity is a well-established concept which has become central to many career education programs in schools and colleges. This study examined the relationship between career maturity and commitment to work, sex, and socioeconomic status. Socioeconomic status was found not to have a significant relationship with career maturity. Sex was found to have only a limited relationship to career maturity data.

Summary

In each section of the review of literature, a common theme occurred. It was found that career development is beneficial, in personal, social, and vocational roles for all individuals. The review of career development theories points out the need to intervene early. These long-term interventions have been found to be the most successful in achieving some degree of improvement in terms of attributes such as career maturity (Rodriguez and Blocher, 1988).
CHAPTER III

DESIGN OF THE STUDY

Introduction

This study will examine the current levels of emphasis that middle school teachers place on career education in the Rim of the World School District. The particular focus in this investigation is to determine the degree of emphasis which teachers place upon the awareness and exploratory phases of career education in the middle school. This study will also determine if a significant statistical difference can be demonstrated between these two phases and in levels of emphasis.

Research Design

The research is designed to measure the extent of career awareness teacher's place at the middle school level, and the extent of career exploration teacher's place at the middle school level. The survey will be given at a meeting at which all teachers are present. They will be asked to fill out an information sheet, which asks their gender, age, race, and specific job at the school. This information will be used to determine the overall characteristics of the population.

Answers to the following specific research questions
will be sought:

1. To what extent do teachers emphasize career awareness in the middle school curriculum as demonstrated by responses to a career education emphasis survey?

2. To what extent do teachers emphasize career exploration in the middle school curriculum as demonstrated by responses to a career education emphasis survey?

3. Can significant differences be demonstrated using scores derived from a career education emphasis survey administered to middle school teachers when career awareness items and career exploration items are compared?

4. Can significant differences be demonstrated using scores from a career education emphasis survey administered to middle school teachers when levels of responses are compared?

Description of the Subjects

The participants in this study consist of the entire population at one middle school, Mary Putnam Henck, in the Rim of the World School District. The curricular areas represented at this sight are Spanish, Math, Language Arts, Social Science, Science, Industrial Arts, Physical Education, and Special Education in the 6th, 7th and 8th grades.
**Instrument**

A survey, the Career Education Emphasis Questionnaire, will be used to collect the data for the study. This survey is designed to be a data gathering instrument for use by persons involved in planning, implementing, and evaluating career education programs.

The survey consists of 46 items that are rated according to the degree of emphasis placed by the respondent on each item. Roughly half of the items concern career awareness, and the other half relate to career exploration (see Table 2). The responses are GREAT, MUCH, SOME, LITTLE, and NONE (see Appendix B for complete questionnaire). The data can be compiled according to number of individual responses in these categories, giving a column variable. In addition, total responses can be calculated by frequency of selection in the awareness phase and frequency of selection in the exploratory stage. This will give two row variables, one for the awareness items and one for the exploration items (see Table 1). An analysis of variance can determine if there is a significant statistical difference between the two sets of independent variables.

**Reliability and Validity**

The Career Education Emphasis Questionnaire is included in a compilation of data gathering instrumentation developed by Delaware's Occupational-Vocational Education Model in
1973, under Part "D" of Public Law 90-576. Though originally designed to determine the extent of career education integrated in home economics programs in Delaware (English, 1974), this questionnaire was chosen because it represents the constructs of this study as well.

The generalizability of the findings in this study are limited to the characteristics of the population surveyed. The conditions of the research (including the surroundings, time of day, time of year, and the Hawthorne effect) may also have affected the generalizability of the results. Without a larger population sample it cannot be determined whether some scores are affected by the teacher's curricular area and/or content of subject matter.

Methods and Procedures

Before administering the survey, permission was gained from the principal of Mary Putnam Henck School, Dave Cathalinat. The survey was given on March 16, 1992, during a teacher inservice day in which 90% of teachers were present. The questionnaire was explained and handed out at that time. The teachers responded to 46 items by placing checks rated in columns valued great, much, some, little, and none emphasis according to the degree of emphasis placed on the item in their program. The teachers returned the completed questionnaires within a designated time period.
Statistical Procedures

The data were analyzed to ascertain the extent to which emphasis was placed on each of the two phases of career education appropriate for middle school programs. The frequency of responses were calculated for each line item, and for each column. The line items were separated into two categories, the awareness items and the exploratory items (see Appendix). Data were obtained from the awareness items and data were obtained from the exploration items. This approach yielded two sets of independent variables; (1) row values for the awareness and exploration items (Row 1 and Row 2 respectively) and (2) a column value for the levels of responses labeled GREAT, MUCH, SOME, LITTLE, and NONE (Columns 1, 2, 3, 4, & 5 respectively).

Table 1

Career Education Emphasis Questionnaire

Matrix of Independent Variables

<table>
<thead>
<tr>
<th>Great</th>
<th>Much</th>
<th>Some</th>
<th>Little</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exploration Items</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Comparing means within these 2 independent variables gives an interval level of measurement. For this reason a two-way analysis of variance was used to analyze the data (see Table 1).
CHAPTER IV

ANALYSIS OF DATA

The Problem

Do teachers emphasize career education in the middle school curriculum? According to a review of the literature, it is generally agreed that career education is a lifelong process. Career awareness and career exploration are the first two levels of this process. Do teachers in the middle school emphasize the first two levels of career education and to what extent? This study has examined this area and obtained results to answer the following specific research questions:

1. To what extent do teachers emphasize career awareness in the middle school curriculum as demonstrated by responses to a career education emphasis survey?

2. To what extent do teachers emphasize career exploration in the middle school curriculum as demonstrated by responses to a career education emphasis survey?

3. Can significant differences be demonstrated using scores derived from a career education emphasis survey administered to middle school teachers when
career awareness items and career exploration items are compared?

4. Can significant differences be demonstrated using scores from a career education emphasis survey administered to middle school teachers when levels of responses are compared?

Demographic Data

Mary Putnam Henck Intermediate School, in the Rim of the World School District, is located in the San Bernardino Mountains approximately 70 miles east of Los Angeles, California. This rural community district consists of three elementary schools, one middle school, and one high school. The middle school, Mary Putnam Henck, contains grades 6, 7, and 8.

Population Characteristics

The data were collected from thirty-five (90%) middle school teachers during March, 1992, at Mary Putnam Henck School. The men outnumbered the women by almost two to one (22 males and 13 females). The females were white and ranged in age from 55 to 30. The males, with the exception of one Hispanic, were white and ranged in age from 59 to 29. The average age for the females was 40.7 years and the average age for the men was 44.2 years. The average age for the entire group was 42.4 years. The salary schedule for the Rim of the World
District indicates that the population is generally middle class, earning between $24,000 and $51,000 per year. Data were also collected about the type and size of university attended. Fifty-seven percent (20 people) attended universities, thirty-one percent (11 people) attended state colleges, and twelve percent (4 people) attended private colleges. Thirty-seven percent (13 people) attended institutions with a population of 10,000 or less. Twenty-six percent (9 people) attended institutions with populations of between 11,000 and 20,000. Twenty percent (7 people) attended institutions with populations between 21,000 and 30,000 students, and seventeen percent (6 people) attended institutions where the population was higher than 30,000 students.

Procedures

The data on the forty-six items were separated into the awareness items and the exploratory items. Table 2 lists the items as separated by English (1974).

<table>
<thead>
<tr>
<th>Career Education Emphasis Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness Items</td>
</tr>
<tr>
<td>1. Recognizing how values become important to an individual.</td>
</tr>
<tr>
<td>2. Recognizing which values become important to an</td>
</tr>
</tbody>
</table>
Table 2 (continued)

individual.

3. Recognizing work values. (Example: Work neatly, work safely, work together, avoid waste, follow directions, etc.)

5. Identifying short term goals.

6. Identifying long term goals.

7. Recognizing the effect of values and goals in decision-making.

10. Recognizing the consequences of given decisions.

11. Recognizing that some decisions may be irreversible.

15. Recognize that job requirements vary among jobs.

17. Recognizing educational level requirements for job entry.

19. Recognize job skills vary within occupations.

21. Recognize working conditions vary within occupations.

23. Recognizing the availability of educational opportunities in the area.

25. Recognizing that jobs deal with people, data, things or ideas, and various combinations.

26. Recognizing the impact of technology on the subject matter field.

28. Recognizing the interrelatedness of subject matter
Table 2 (continued)

areas to jobs.
30. Recognizing work roles related to subject matter areas.
35. Recognizing personal traits desirable for employment.
37. Recognizing that the mental picture one holds of oneself may differ from how others see him.
38. Recognizing the reasons for individuals losing jobs.
39. Recognizing all jobs have advantages and disadvantages.
41. Recognizing the trend for women to combine homemaking and wage-earning.
44. Recognizing the influence of occupations upon life styles.
46. Recognizing the technological impact on society in relation to expanded employment opportunities for women.

Exploration Items
4. Exploring work values.
8. Exploring the effect short term and long term goals have upon decision making.
Table 2 (continued)

10. Exploring decisions that may be irreversible.
13. Exploring the availability of employment opportunities through various resources.
14. Exploring the restrictions of a certain occupation may limit job choice. (Example: age, experience, union shop, certificate.)
16. Exploring job requirements for an occupation of personal interest.
18. Exploring educational requirements for job entry.
20. Exploring job skills required for an occupation of personal interest.
22. Exploring working conditions of an occupation of personal interest.
24. Exploring an educational route for a career of personal interest.
27. Exploring the impact of technology upon the subject matter field.
29. Exploring the inter-relatedness of subject matter areas to jobs.
31. Exploration of work roles.
32. Exploring the career cluster concept.
33. Exploring a career cluster concept of a personal choice.
Table 2 (continued)

34. Exploring the resources available for students to learn more about themselves.
40. Exploring the advantages and disadvantages of a personal interest.
43. Exploring the changing role of women in today's world.
45. Exploring lifestyle in reference to occupations.

Means were calculated for each column and each row. A two-way analysis of variance yielded total sums of squares, degrees of freedom, mean squares and F-values.

Data Analysis

The first measurement of central tendency is the arithmetical average of all the scores within the matrix established for this study. The means are listed in Table 3. The data indicate a slightly negative leptokurtic skew, more so for the awareness items than for the exploration items. Based on this descriptive data, research questions 1 and 2 can be answered.
Research Question 1

To what extent do teachers emphasize career awareness in the middle school curriculum as demonstrated by responses to a career education emphasis survey?

The majority of mean responses (20.24) occurred in Columns 3 and 4 for the awareness items, meaning that the majority of mean responses indicated an emphasis by teachers either some or much of the time on career awareness in the middle school curriculum. About one-fourth as many mean responses (5.56) placed great emphasis, and one-fourth as many mean responses (5.6) placed little emphasis in this same area. Only 2.76 mean responses indicated no teacher emphasis in career awareness in the middle school.

Table 3

Career Education Emphasis Questionnaire Matrix

Means of Variables

<table>
<thead>
<tr>
<th>Great</th>
<th>Much</th>
<th>Some</th>
<th>Little</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Items</td>
<td>X=5.56</td>
<td>X=9.64</td>
<td>X=10.6</td>
<td>X=5.6</td>
</tr>
<tr>
<td>Exploration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Items</td>
<td>X=3.095</td>
<td>X=7.142</td>
<td>X=11.47</td>
<td>X=8.19</td>
</tr>
</tbody>
</table>
Line graphs (Table 4) are used to illustrate the relationship of the row of awareness items to the row of exploration items.

Table 4

Career Education Emphasis Questionnaire

Row Analysis by Means

<table>
<thead>
<tr>
<th>CELL MEANS</th>
<th>GREAT</th>
<th>MUCH</th>
<th>SOME</th>
<th>LITTLE</th>
<th>NONE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEANS</td>
<td>7</td>
<td>6.55</td>
<td>5.56</td>
<td>4.14</td>
<td>2.76</td>
</tr>
<tr>
<td>MEANS</td>
<td>8</td>
<td>9.64</td>
<td>11.47</td>
<td>8.19</td>
<td>4.14</td>
</tr>
<tr>
<td>MEANS</td>
<td>9</td>
<td>10.6</td>
<td>11.47</td>
<td>8.19</td>
<td>4.14</td>
</tr>
<tr>
<td>MEANS</td>
<td>10</td>
<td>7.142</td>
<td>9.64</td>
<td>6.19</td>
<td>2.76</td>
</tr>
<tr>
<td>MEANS</td>
<td>11</td>
<td>5.56</td>
<td>7.142</td>
<td>5.6</td>
<td>2.76</td>
</tr>
<tr>
<td>MEANS</td>
<td>12</td>
<td>3.095</td>
<td>5.56</td>
<td>4.14</td>
<td>2.76</td>
</tr>
<tr>
<td>MEANS</td>
<td>13</td>
<td>1.55</td>
<td>3.095</td>
<td>2.76</td>
<td>2.76</td>
</tr>
<tr>
<td>MEANS</td>
<td>14</td>
<td>1.55</td>
<td>1.55</td>
<td>1.55</td>
<td>1.55</td>
</tr>
</tbody>
</table>

Row 1 (R1) = Awareness
Row 2 (R2) = Exploration
Research Question 2

To what extent do teachers emphasize career exploration in the middle school curriculum as demonstrated by responses to a career education emphasis survey?

The majority of mean responses (19.66) occurred in columns 2 and 3 for the exploration items, meaning that the majority of teachers placed little or some emphasis on career exploration in the middle school curriculum. About one-half as many mean responses (10.24) indicate teachers who placed great or much emphasis in this same area. Approximately one-fifth as many mean responses (4.14) indicate teachers who placed no emphasis on career exploration in their middle school curriculum.

A two-way analysis of variance indicated whether or not there was a significant statistical difference between the AWARENESS and the EXPLORATION responses (labeled ROWS in Table 5). This analysis also determined whether or not there was a significant statistical difference in the level of responses as indicated in the columns headed GREAT, MUCH, SOME, LITTLE, and NONE (labeled COLUMNS in Table 5). An F-value of 7.01 or above is needed to demonstrate significance at the .05 level. The data presented in Table 5 was used to answer research questions 3 and 4.
Table 5

Career Education Emphasis Questionnaire

Analysis of Variance

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>ms</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROWS</td>
<td>49561.2</td>
<td>1</td>
<td>49561.2</td>
<td>2.396</td>
</tr>
<tr>
<td>COLUMNS</td>
<td>718161.6</td>
<td>4</td>
<td>179540.4</td>
<td>8.6799</td>
</tr>
<tr>
<td>ERROR</td>
<td>82739.86</td>
<td>4</td>
<td>20684.97</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL</td>
<td>85046.1</td>
<td>9</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Research Question 3

Can significant differences be demonstrated using scores derived from a career education emphasis survey administered to middle school teachers when career awareness items and career exploration items are compared?

There is no significant statistical difference between the teacher's emphasis on career awareness and career
exploration. This means that while the differences shown in Tables 2 and 3 are slight, they are caused by chance.

Research Question 4

Can significant differences be demonstrated using scores derived from a career education emphasis survey administered to middle school teachers when levels of responses are compared?

An F-value of 8.6799 indicates that at the .05 level there is a significant statistical difference between teacher's level of responses. There is no statistical difference at the .01 level of significance.

Findings

Findings related to the research questions revealed that there is some emphasis given to career education in the awareness and exploratory phases in middle school. The F-ratio of 2.396 based on the extent of awareness and exploration emphases was not significant at the .05 level. The differences in the emphases between career awareness and career exploration are not statistically significant. The F-ratio of 8.6799 from the two-way analysis of variance based on levels of emphasis was significant at the .05 level, but not at the .01 level.

Discussion of Findings

Overall, as illustrated by the slightly leptokurtic skew shown in Table 4, more than half of the participants give a
little more emphasis than not to career education in the middle school. The lack of statistical significance between emphasis on career awareness and career exploration might indicate that teachers who do emphasize career education probably tend to emphasize both phases of awareness and exploration to an even extent. The fact that a significant statistical difference exists in levels of teacher emphasis indicates that extent of emphasis is probably determined by personal factors. These factors might include, but are not limited to which institution they attended and its size, gender, and personal belief systems. A study by English (1974) determined that the length of time the teacher had spent in wage earning and volunteer experience other than teaching was not statistically significant. Neither was age, teaching experience, nor educational preparation significant in degree of emphasis placed (English, 1974).

Conclusions

Teachers at the middle school level generally emphasized career awareness and career exploration to some extent in their curriculum. However, there was a significant statistical difference in their levels of responses. Because of the small population size, this data cannot be generalized to a larger population of teachers in middle schools without further expanded study.
Chapter V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The major purposes of the study were: (1) to determine the extent of emphasis that teachers place in the middle school curriculum on career awareness; (2) to determine the extent of emphasis teachers place in the middle school curriculum on career exploration; (3) to determine if significant differences can be demonstrated between emphasis in career awareness and career exploration; and; (4) to determine if significant differences can be demonstrated between levels of emphasis.

The Problem

A review of literature has determined the necessity of early intervention to meet the career development needs of the middle school student. The study evaluated current levels of emphasis placed by teachers on career education in one school.

The Population

The study was limited to the staff at one middle school in a rural area of Southern California. Ninety percent of the teachers participated in the study.

Procedures

The teachers were administered a survey that included a
career education emphasis questionnaire and a personal data sheet for demographic data. The instrument contained short, concise statements designed to represent either the awareness or exploratory phases of career education.

Findings

Findings related to the research questions revealed that there is some emphasis given to career education in the awareness and exploratory phases in middle school. The differences in the emphases are not statistically significant. Findings did reveal a significant difference in levels of emphasis by teachers, though.

Conclusions

This research study substantiates the review of literature on career education. For teachers to adequately integrate career education into existing programs will require a coordinated effort. Findings can not be generalized to a larger population from a sample of this size but inservice teacher education in Rim of the World School District can be significant in developing greater insight for teachers into career education. Integration into current programs can be encouraged.

Super (1957) and others suggest that people arrive at and prepare for occupations in stages. Programs aimed at these stages, such as career awareness and exploration are basic to the concept of career education that preparation for
a career role must begin in early childhood if the individual is to develop the concepts, attitudes, and skills which insure freedom of choice and expand career options (Bailey, 1973). The fundamental concept of career education is that all educational experiences, curriculum and counseling should be geared to preparation for economic independence and an appreciation for the dignity of work.

As stated previously, it is rare that middle school students get any consistent exposure to career development. It is also evident that the level of teacher emphasis in career education is dependent on personal factors, not on any central advocacy, either in institutions, the school system, or agencies. Developing a unified concept or belief of the school system would help teachers become aware of the importance of this emphasis. Colleges, universities and private and trade/technical schools can also provide preservice programs in career education for prospective teachers. Finally, federal, state and local agencies, including business and professional groups, can promote such learning. In fact, there is little information on what is actually being done today in the middle schools regarding career education. This is compounded by the lack of continuity between the groups mentioned above. Their combined influence could become a vehicle for necessary and beneficial change.
The changes need to be facilitated purposefully and sequentially, and not by chance and happenstance. Teachers must accept responsibility for effectiveness of learning. This will cause fragmentation, specialization, and sameness to be replaced with wholeness, diversity and a deep involvement. The educator who has a high stake, will generate interest and involvement for students. Instructional goals for teachers must include all curricular areas with attention to both the educational and occupational implications of their subject matter. Career development must be reinforced through curricular emphases and the attitudes of teachers and administrators who promote this process.

Recommendations for Further Study

As a result of findings in this study there are further possibilities for research. Other middle schools should be investigated to determine if the differences in the levels of emphasis are significant in similar or dissimilar settings. A study might determine if differences in teacher's subject matter is statistically significant in relation to levels of emphasis. Since personal factors are suspect in this difference, a teacher attitude survey might provide further insight or significance. A study that correlates types and sizes of colleges with career education emphasis could also give evidence of significance for levels of emphasis.
BIBLIOGRAPHY


APPENDICES
Appendix A

Letter sent to Middle School Principal
Dear Mr. Cathalinat,

I am currently undertaking a research project to determine the extent of emphasis of career education in middle-school teachers. I am hopeful that you will assist me in this project by allowing me to survey your teachers at the beginning of your in-service meeting on Monday, March 16, 1992.

In view of the changing nature of the work force, this study will make a case for the importance of the career development process. The surveys will be the basis for evaluating the level of emphasis and attitudes in middle-school teachers.

I appreciate your support and enthusiasm for my career education project, and I formally request permission to survey your teachers. I am enclosing a copy of the questionnaire I would like to give to your staff. To acknowledge your agreement, please sign a copy of this letter and return it to me at Mary Tone Elementary before Thursday, March 12. Thank you.

Sincerely,

[Signature]

Marita Watkins

[Signature]

Dave Cathalinat
Appendix B

Data Gathering Questionnaire
March 16, 1992

Dear teachers,

My final requirement for my Master of Arts degree is a research project to determine the extent of emphasis of career education within all curricular areas. I am hopeful that you will assist me in this project by filling out this survey and returning it to Dave Cathalinat no later than Friday, March 27, 1992.

The surveys will be the basis for evaluating the level of emphasis and attitudes in teachers regarding the career education process. The information below will be used for statistical purposes only, therefore, your response is optional. I appreciate and thank you for your support of my project.

Sincerely,

[Signature]

Marita Watkins

Your age: ______________________

Your race: ____________________

Your job (curricular area): ________________________

Type of institution from which you graduated (University, State College, etc):

Approximate size of Institution above (population):
DIRECTIONS: Place a check (✓) in the column which indicates the appropriate degree of emphasis you include in your subject area. Statements may apply to any or all disciplines or programs.

(Example: Recognizing the interrelatedness of all occupations.)

IN YOUR PROGRAM EMPHASIS IS PLACED ON STUDENTS:

Recognizing how values become important to an individual.

Recognizing which values become important to an individual.
Recognizing work values. (Example: work neatly, work safely, work together, avoid waste, follow directions, etc.)

Exploring work values.

Identifying short term goals.

Identifying long term goals.

Recognizing the effect of values and goals in decision making.

Exploring the effects of short term and long term goals upon decision making.

Exploring alternative behavior in given decision making situations.

Recognizing the consequences of given decisions.

Recognizing that some decisions may be irreversible.

Exploring decisions that may be irreversible.

Exploring the availability of employment opportunities through various resources.

Exploring the restrictions of certain occupation may limit job choice. (Example: age, experience, union shop, certificate)

Recognize that job requirements vary among jobs.

Exploring job requirements for an occupation of personal interest.
Recognizing the reasons for individuals losing jobs.

Recognizing all jobs have advantages and disadvantages. Exploring the advantages and disadvantages of a personal interest.

Recognizing the trend for women to combine homemaking and wage earning.

Recognizing changing roles of people in today's world.

Exploring changing roles of people in today's world.

Recognizing the influence of occupations upon lifestyles.

Exploring lifestyles in reference to occupations.

Recognizing the technological impact on society in relation to expanded employment opportunities.

Thank you. Please check ( ) if you are interested in the results of this study.