Manual training: Its role in the development of the Seventh-Day Adventist educational system

Gerald Wayne Coy
University of Northern Iowa

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Manual training: Its role in the development of the Seventh-Day Adventist educational system

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University of Northern Iowa, 1987
MANUAL TRAINING:
ITS ROLE IN THE DEVELOPMENT OF THE
SEVENTH-DAY ADVENTIST EDUCATIONAL SYSTEM

A Dissertation
Submitted
In Partial Fulfillment
of the Requirements for the Degree of
Doctor of Industrial Technology

Approved:

Dr. Michael R. White (Advisor)

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University of Northern Iowa
December 1987
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Gerald Wayne Coy
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December 1987
ABSTRACT

The purpose of this study was to examine the history of manual training within the Seventh-day Adventist educational system and determine its relationship to the development of manual training in the public schools of America. Consideration was also given to the present status of manual training within the Adventist system.

The research design was historical in form, and data were gathered covering three special areas: (a) the development of manual training in American public schools; (b) the establishment of Seventh-day Adventist education; and (c) the present status of technology education (the great-grandchild to manual training) within Adventist secondary education.

Research for this study centered around primary documents from early Adventist education located in the James White Library on the campus of Andrews University. Primary documentation was also obtained from current bulletins and curriculum guides used in Seventh-day Adventist secondary schools throughout the United States. Materials pertaining to the development of manual training in the public schools of America were mostly secondary documentation from historians of the late 19th and early 20th centuries.
The findings of this study were that manual training was, and still is, a foundation stone of Seventh-day Adventist education. Had early developers of Seventh-day Adventist education followed the inspired counsel concerning the importance of manual training to a holistic education given in 1872 by Ellen G. White, the church matriarch, Adventist education would have been on the cutting edge of American educational reform. As curriculum requirements increase at all levels of education, public and private, the pressure in Adventist schools has resulted in reduced emphasis being placed on this foundational principle of the Adventist educational system.
Dedicated
to
My Loving Wife Charlotte
and
Daughters Roberta and Brenda
for without their support
and understanding
this study would not have been possible.
Acknowledgments

The successful completion of this dissertation has been accomplished with the help and support of many people. The writer wishes to express his gratitude to them. To Dr. Michael R. White, the writer's major advisor, heartfelt thanks for the support, advice, and encouragement given during five years of study.

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CHAPTER I

INTRODUCTION

Significance of the Study

The changing scene of American education during the 19th century has been classified in many ways. William Aspinwall (1912) and Edward Reisner (1927) have referred to this period of change as the development of "Modern Education"; Stan Dropkin, Harold Full, and Ernest Schwarcz (1965) talked about "Contemporary Education"; while Richard Schwarz (1979) has classified the changing times of 19th century education as an "Educational Reform" movement. Regardless of the names these historians use to describe the educational developments of the last century, they suggest that the 19th century in American education was an instrumental period for addressing social and educational changes of society. Schwarz (1979) saw the effects of this reform in:

- better teacher preparation and expanded basic curriculum, and a lengthened school term. Some of the reform-minded were also interested in integrating manual labor with theoretical instruction. (p. 118)

The traditional private schools of the 18th century were to give way to the rise and triumph of America's common schools, or public schools as they are now known,
of the 19th century (Meyer, 1975). This increased interest in the development of public schools did not, however, eliminate the establishment of new private schools.

During the last half of the 19th century, one such private educational system was established by the Seventh-day Adventist church (Vande Vere, 1972). Throughout the next century this education system, small in the beginning, was to grow into the largest private Protestant education system in the world. By the end of 1984, there were over 5,000 schools, 31,000 teachers, and 650,000 students involved in the worldwide Adventist education system, with programs ranging from kindergarten to doctoral studies (General Conference of Seventh-day Adventists, 1984).

In his book, *Myths In Adventism*, George Knight (1985) discussed four concepts of manual training, or labor, that are most often misunderstood by members of the Adventist church. First, he said "manual labor combined with study was one of the unique contributions of Adventism to education" (p. 235). James Mulhern (1959) noted that in 1755, nearly a century before the Adventist education system was established, Emanuel von Fellenberg, a follower of Johann Pestalozzi, used this method of training at Hofwyl, Germany. Second, he stated "work-study programs are the educational panacea . . . when every teacher works
with students every day" (p. 236). Pestalozzi worked along-side his students as part of their educational training at Neuhof earlier than even Fellenberg (Monroe, 1911). Thirdly, Knight (1985) said "work combined with study is the most important element in Ellen G. White's educational philosophy" (p. 237). White (1903) gave her understanding of the elements of true education as the following:

True education means more than the pursual of a certain course of study. It means more than a preparation for the life that now is. It has to do with the whole being, and with the whole period of existence possible to man. It is the harmonious development of the physical, the mental, and the spiritual powers. (p. 13)

Finally, Knight (1985) said "we can define practical training in the last quarter of the 20th century in the same terms as that of the 19th century" (p. 239). The change from an agrarian society of the early 19th century to a global-technological society of the late 20th century has brought about changes in the practical aspects of living. It is no longer necessary, for instance, to "harness and drive a horse" (White, 1903, p. 217) for daily transportation. The practical means of transportation for the 20th century has become the automobile.

Church members who are unaware of the fundamental principles of early Adventist education and of the public school systems of that era may easily misunderstand the position taken by early Adventist educators in their desire to combine academics with manual labor or training.
Influences such as "Faculty Psychology," the development of the mind by the development of its faculties, were prevalent in the late 19th century. Morris Bigge and Maurice Hunt (1958) gave this definition:

The central thesis of faculty psychology is that each person has a single unitary mind; this mind has several specific faculties, such as memory, will, and reason; and the strengths of these faculties depend upon the degree to which they are exercised. (p. 112)

As the 20th century emerged, there also emerged a growing controversy over the validity of "Faculty Psychology."

William Bruce (1939) wrote:

Modern educators sharply challenge the traditional emphasis upon habit formation [faculty psychology].... In recent years psychologists have repudiated the old habit doctrine that repetition is the chief factor in the learning process. Furthermore, a new regard for the child's emotional life has made parents and teachers sensitive to dangers which arise from forcing the mastery of specific items of knowledge and skill to the level of immediate, perfect habitual response. (p. 98)

Mrs. White (1903), the matriarch of the Seventh-day Adventist church, realizing the impact of the faculty psychology movement on education, also realized what might happen from misunderstanding her writings and warned parents and teachers about developing lopsided educational programs.

For ages education has had to do chiefly with the memory. This faculty has been taxed to the utmost, while the other mental powers have not been correspondingly developed. Students have spent their time in laboriously crowding the mind with knowledge, very little of which could be utilized. The mind thus burdened with that which it cannot digest and assimilate is weakened; it becomes incapable of
vigorous, self-reliant effort, and is content to depend on the judgment and perception of others.

Seeing the evils of this method, some have gone to another extreme. In their view, man needs only to develop that which is within him. Such education leads the student to self-sufficiency, thus cutting him off from the source of true knowledge and power.

The education that consists in the training of the memory, tending to discourage independent thought, has a moral bearing which is too little appreciated. (p. 230)

Adventists who feel that work-study programs are the panacea for today's educational demands are also misunderstanding the intended purpose of including it in the curriculum. Mrs. White (1903) recommended work-study as a method of instruction by example, but not as the only method of instruction.

Let teachers share the work with the students, and show what results can be achieved through skillful, intelligent effort. Thus may be awakened a genuine interest, and ambition to do the work in the best possible manner. (pp. 219-220)

Manual labor and study, however, were not the only concerns Mrs. White had for the educational institutions of the church. "Proper Education," the first testimonial written by Mrs. White on the subject of education, appeared in December of 1872, later included as a part of Testimonies, Vol. 3 edited by the White estate in 1948, called for quality academics for Adventist schools based on combining intellectual development with physical labor.

Physical labor will not prevent the cultivation of the intellect. Far from it. The advantages gained by physical labor will balance a person and prevent the mind from being overworked. The toil will come upon the muscles and relieve the wearied brain. . . .
All powers of the mind should be called into use and developed in order for men and women to have well-balanced minds. The world is full of one-sided men and women who have become such because one set of their faculties was cultivated while others were dwarfed from inaction. The education of most youth is a failure. They overstudy, while they neglect that which pertains to practical business life. . . . The constant application to study, as the schools are now conducted, is unfitting youth for practical life. The human mind will have action. If it is not active in the right direction, it will be active in the wrong. In order to preserve the balance of the mind, labor and study should be united in the schools. (pp. 152-153)

The expectations of manual training for the 19th century have changed over the years (DeVore, 1983; Lauda, 1983; Olson, 1957). Technology education of the 20th century is the great-grandchild of manual training of the 19th century. Knight (1985) noted, however, that the Adventist followers often feel that what was good in the 19th century is also applicable to the 20th. This is not in harmony with the counsel given by Mrs. White or other church leaders.

Of particular significance to any educational system are the attitudes and actions of its leaders relating to the changing of existing standards to improve the quality of programs. Speaking to a meeting of the Sanitarium Church School Board held at Elmshaven, California, Mrs. White (1904) stated that her writings were often limited to particular circumstances and offered this warning for future generations which may not fully understand the principles of which she had written: "God wants us all to
have common sense, and He wants us to reason from common sense. Circumstances alter conditions. Circumstances change the relation of things" (p. 45). Even the more recent leaders have encouraged the examination of past and present needs as the educational system prepares for the 21st century. Reuben Hilde (1980), a former director of the department of education for the Seventh-day Adventist Church, shared the concern for contemporary improvements when he encouraged quality improvement and accountability of the system through program evaluation by internal and external critics.

If we think there has been a collision or series of collisions along the way, and if our school system is in need of repair, then we all need to take a look at what caused the crash, what repairs are needed, and what direction we ought to pursue. I am convinced that sound evaluative persons are needed in the church; but these should also hear the critiques of their position. (p. 13)

This study, therefore, has been conducted to help improve the quality of education within the Adventist education system by examining the historical principles of manual training and relating and clarifying those principles for the Seventh-day Adventist system of the 1980s. As circumstances have changed and are likely to continue changing (DeVore, 1983), the review of those fundamental principles will be helpful in establishing alternatives for meeting the educational demands of the church in the 21st century.
Statement of the Problem

What role did manual training have in the development of educational curriculum by the founders of the Seventh-day Adventist educational system, and has this role remained the same or been modified since its inception?

Questions

This study also addresses the issues presented in the following questions.

1. What were the principles, or foundation stones, of the Seventh-day Adventist educational system at the time it was organized?

2. Who were the developers of these fundamental principles, and what philosophical ideas were they drawing upon to develop programs based on those principles?

3. Were these foundational principles unique to the Adventist education system during that period?

4. Was manual training included in the general educational curriculum of the church and for what purpose?

5. How and why have the church's foundational principles of education and the need of manual training changed since their inception?

6. What is the present place for manual training, or its modern day equivalent, in the church's educational system?
Assumptions

In conducting this study, and drawing conclusions based on its findings, the researcher makes the following assumptions:

1. The Seventh-day Adventist educational system is an established and recognized worldwide religious educational system.

2. Ellen G. White was a founding matriarch of the Seventh-day Adventist church and its educational system.

3. General education was, and still is, an important part of the Seventh-day Adventist church system.

4. The Department of Education of the General Conference of Seventh-day Adventists is now the official church educational policy authority for the worldwide educational system.

Limitations

The parameters of this study are the Seventh-day Adventist educational system and its development within North America. No attempt will be made to include institutions outside of North America unless they have a direct impact on what was taking place in the United States.
Delimitations

The application of a new curriculum is often the result of an evaluation of past curricula. Although the purpose of this study is to establish the principles of the past and see if those principles are followed today, there will be no attempt to predict what should be the course of action in the future. This study is limited to the following topics:

1. A review of some educational leaders of Europe and the United States during the 18th, 19th, and 20th centuries who affected the development of manual training.

2. An analysis of philosophies from early Seventh-day Adventist educators concerning manual training.

Definition of Terms

For the purposes of this study the following terms have been defined to establish a common interpretation. The results of the study may be altered critically if other definitions were to apply.

Career education:
A comprehensive education program focused on careers and an educational process where people gain knowledge, attitudes, awareness, and skills necessary for success in the world of work. (American Vocational Association, 1973, p. 17)

Foundation stone:
A basis (as a tenet, principle, or axiom) upon which something stands or is supported. (Webster, 1984, p. 487)
General education:
(1) learning which should be of common experience to all men and women; (2) education gained through dealing with the personal and social problems with which all are confronted. (Good, 1973, p. 258)

Industrial arts:
An educational field with subject matter centered in the materials, processes, products, and occupations of industry, and in which the student uses materials, tools, and machines in solutions to problems, for general education purposes. (Olson, 1957, p. 5)

Industrial education:
That part of the total educational program which includes instruction in industrial arts education and trade and industrial/technical education. (Robertson, 1967, p. 109)

Manual arts:
One of the earlier terms used to identify shopwork including design and hand construction in various mediums for the purpose of developing art appreciation and manual skills. (Good, 1973, p. 43)

(M) Manual labor:
Human activity that provides the goods or services in an economy. (Webster, 1984, p. 668)

Manual training:
Training to develop skill in using the hands and to teach practical arts. (Webster, 1984, p. 725)

North American Division:
One of eight divisions within the world structure of the Seventh-day Adventist church including the United States, Canada, Bermuda, Johnston Island, and St. Pierre and Miquelon. (Seventh-day Adventist Yearbook, 1985, p. 203)

Practical arts:
A general term used to denote a type of functional education of a manipulative nature on a nonvocational basis. (Good, 1973, p. 43)

Seventh-day Adventist:
The name "Seventh-day Adventist" was chosen in 1860; the denomination was not officially organized until May 21, 1863. (Seventh-day Adventist Yearbook, 1985, p. 4)
Technology:
Man's efforts to cope with his physical environment—both that provided by nature and that created by man's own technological deeds. . . . (Kransburg & Pursell, 1967, p. 4)

Technology education:
That phase of education that is involved with acquainting students in grades K-12 with the technological and industrial society in which we live. (Meeks, 1986, p. 15)

Vocational education:
That part of education which makes an individual more employable in one group of occupations than in another. It may be differentiated from general education which is of almost equal value regardless of the occupation which is to be followed. (Evans, 1971, p.1)

Review of Literature

The latter part of the 19th century was highlighted with innovative events helping to make the educational system of America one of the best educational systems in the world. Expanding with the industrial revolution and the new frontiers of the West, America, the land of the free, was accepting each year thousands of immigrants with a desire to try a new way of life and a chance for the future. This was the spirit in which modern American education was to grow.

Reform in the quality and quantity of elementary, secondary, and collegiate educational systems of America during the 19th century may be seen in a number of areas: (a) the establishment of schools for the education of the
masses, as compared with the limited number of select schools which had been previously established; (b) the enrichment of curriculum with emphasis given to the practical subjects including reading, writing, and math rather than the study of Latin or Greek; (c) the establishment of "Normal Schools" for the development and improvement of teachers and curriculum, and (d) improvement in the social status and financial rewards for teachers (Mulhern, 1959).

The reform of the educational systems of America was brought about by the work of a new breed of educators and philosophers like Horace Mann, Ralph Waldo Emerson, Herbert Spencer, William Harris, William James, and John Dewey. Horace Mann (1796-1859), considered to be the "Father of Education" (Maxwell, Bernstein, & Bernstein, 1963, p. 49) in America, helped lead the way with his concepts of a common school. As the first secretary of the Massachusetts Board of Education, his goal was to make the schools common to all with common elements in the curriculum and with common community control. He also sought to develop a common morality. Dissatisfied with the socially limited educational systems of Europe, Mann pushed for free education for all Americans. Being involved with politics during the early years of the United States, Mann realized the value of education for a free society.

Mann understood well the integral relationship between freedom, popular education, and republican government.
The theme resounds throughout his twelve reports. A nation cannot remain ignorant and free. No political structure, however artfully devised, can inherently guarantee the rights and liberties of citizens, for freedom can be secure only as knowledge is widely distributed among the populace. Hence, universal popular education is the only foundation on which republican government can securely rest. (Cremin, 1957, p. 7)

When asked to serve as secretary for the Board of Education, Mann wrote in his daily journal of May 27, 1837, about the importance of the task which lay before him.

It [the Board of Education] is the first great movement towards an organized system of common education, which shall at once be thorough and universal. . . . Every child should be educated: if not by its own father, the State should appoint a father to it. I would much sooner surrender a portion of the territory of the commonwealth to an ambitious and aggressive neighbor than I would surrender the minds of its children to the dominion of ignorance. (Mann, 1865, p. 72)

For Mann, freedom and education belonged together. This personal desire, however, was not the only driving force which helped him in the establishment of common schools. Mulhern (1959) noted that foreign educators and organized labor also had a strong influence.

Among the many influential forces operating to produce our public school system in this period were: (1) the organized labor movement and the growing consciousness among all workers of the social implications of democracy, (2) foreign influence, and (3) the activities of our own social and educational reformers. Organized labor, sensing its political power and adopting the Baconian philosophy that "knowledge is power," demanded that the children of workers be admitted to all the educational advantages traditionally enjoyed by the rich. To this end labor demanded state systems of public schools in which rich and poor should meet on a basis of equality. (p. 596)
The foreign influence was also important to the development of the American public education system of the 19th century. Pestalozzian educational theories of the 18th century, which advocated educating young children in nature, were heralded in America during the 19th century by Ralph Waldo Emerson (1803-1882). Emerson, noted as a New England essayist and poet rather than as an educator, was influential in spreading new seeds of thought for natural education in the writing of his prose. In his book *Nature*, published in 1836, Emerson explained: "philosophically considered, the universe is composed of Nature and the Soul... Nature, in the common sense, refers to essences unchanged by man; space, the air, the river, the leaf" (Jones, 1966, pp. 28-29). Natural education, therefore, involves leaving the controls and restrictions of man's society and, through observation and reasoning, examining the ways in which nature functions (Jones, 1966).

Emerson, an idealist, believed that if man were educated in nature he would better be able to understand himself. In a lecture entitled "Education," included in his book published in 1883 (published one year after his death), he suggested that teachers and students should reach for the development of man's mind in a natural way since man is a part of nature.
The great object of Education should be commensurate with the object of life. It should be a moral one; to teach self-trust: to inspire the youthful man with an interest in himself; with a curiosity touching his own nature; to acquaint him with the resources of his mind, and to teach him that there is all his strength, and to inflame him with a piety towards the Grand Mind in which he lives. (p. 134)

Following the Pestalozzian methods, Emerson believed in an educational system wherein students are stimulated to learn by their environment.

Responding to the lead of Emerson, Herbert Spencer (1820-1903) promoted the concept of curriculum development in his 1880 book Education. He felt that the intellectual, moral and physical aims of curriculum within the school should prepare students to enter into society as fully functioning members. To accomplish this, traditional education needed to be replaced with basic sciences. "What now is the common characteristic of these several [educational] changes? Is it not an increasing conformity to the methods of nature?" (p. 96). Since basic science involves the understanding of nature, Spencer was instrumental in expanding the concepts of nature proposed by Jean Rousseau a century earlier in Europe.

Not all reformers of the 19th century, however, were philosophers. William Harris (1835-1909), "the most powerful leader in American public education after the Civil War" (Mason, 1960, p. 38), was to be a transitional figure in joining the concepts of Emerson and Spencer.
Although the ideas of kindergarten go back to Friedrich Froebel, Harris was instrumental in the establishment in 1773 of the first American public kindergarten under full control of the public schools in St. Louis, Missouri (Mayer, 1964).

As the reform from traditional private and higher educational schooling developed, so did the acceptance of additional educational philosophies for American education. The philosophies of William James (1842-1910), with his concern for the development of the mind through habit formation, began to be understood. James' principle of psychology for education, often referred to as "habit formation," involves the concept of learning by actual experience. Habit, one of the faculties of the mind, is developed by repeated responses until the response becomes automatic. James (1900) likens the habit response to the development of a second nature.

I believe that we are subject to the law of habit in consequence of the fact that we have bodies. The plasticity of the living matter of our nervous system, in short, is the reason why we do a thing with difficulty the first time, but soon do it more and more easily, and finally, with sufficient practice, do it semi-mechanically, or with hardly any consciousness at all. Our nervous systems have (in Dr. Carpenter's words) grown to the way in which they have been exercised, just as a sheet of paper or a coat, once creased or folded, tends to fall forever afterward into the same identical folds. (p. 65)

For James, and other educators supporting the philosophy of faculty psychology, the curriculum of the educational
institution should be designed to develop mental growth. It was the hope of developing faculties of precision, honesty, and self-reliance rather than developing a skill or trade that encouraged James (1900) to support the concepts of manual training as a function of general education.

The most colossal improvement which recent years have seen in secondary education lies in the introduction of the Manual Training schools; not because they will give us a people more handy and practical for domestic life and better skilled in trades, but because they will give us citizens with an entirely different intellectual fibre. Laboratory work and shop work engender a habit of observation, a knowledge of the difference between accuracy and vagueness and an insight into nature's complexity and into the inadequacy of all abstract verbal accounts of real phenomena, which once wrought into the mind, remain there as lifelong possessions. (p. 35)

Lawrence Cremin (1961), writing of the latter years of James' educational efforts, said:

They cast aside older notions of faculty psychology in favor of an essentially behaviorist outlook; and they asked the teacher to help educate heroic individuals who would project daring visions of the future and work courageously to realize them. In a society of such individuals James saw man's best hope for human dignity and progress. (p. 109)

James, influential in the development of educational psychology during the late 1800s, helped to influence both E. L. Thorndike and Dewey with the concepts written in his book *Principles*, published in 1890 (Cremin, 1961).

Dewey, one of the most progressive educational philosophers of the early 20th century, was concerned about the disciplines of a general education program and their
impact on society. To him the total function of education was to advance the community by educating all its members to respond to their surroundings. For Dewey, the process of faculty psychology was an acceptable method of reaching that goal. By 1917 Dewey, along with Thorndike, was aware of the fallacy in the reasoning behind the faculty psychology movement and joined those questioning its validity. Writing on the philosophies of education following the turn of the century, Dewey (1916) wrote:

Another influential but defective theory is that which conceives that mind has, at birth, certain mental faculties or powers, such as perceiving, remembering, willing, judging, generalizing, attending, etc., and that education is the training of these faculties through repeated exercise. This theory treats subject matter as comparatively external and indifferent, its value residing simply in the fact that it may occasion exercise of the general powers. Criticism was directed upon this separation of the alleged powers from one another and from the material upon which they act. The outcome of the theory in practice was shown to be an undue emphasis upon the training of narrow specialized modes of skill at the expense of initiative, inventiveness, and readaptability—qualities which depend upon the broad and consecutive interaction of specific activities with one another. (p. 80)

Even with the shifting of an educational philosophy by Dewey, manual training continued to be promoted and to grow in the schools. Melvin Barlow (1967) felt that from the reform of the last half of the 19th century a foundation was laid for the support of industrial education.

From 1870 to 1906, concerted attention and action was focused upon the general problem of industrial
education. Out of the crucible of discussion came the foundation for a new era in education....

From the standpoint of industrial education in public schools, the two principal products of the crucible were: (1) development of a strong and expanded manual training program, and (2) the emergence of trade education. (p. 49)

It was during the last three decades of the 19th century that the concept of general education was expanded to include manual training. With the establishment of the manual training programs in the United States by John Runkle in 1876 in Boston at the Massachusetts Institute of Technology (Barlow, 1967) and Calvin Woodward in 1880 in St. Louis (Bawden, 1950) at Washington University, American education was to open new frontiers. Leading American educators such as Fredrick Bonser and Lois Mossman (1923), Delmer Olson (1957), Don Maley (1969) and others have agreed with Dewey that the formal educational process of society should be responsible for the development of all aspects of society.

Although the original intents of Runkle and Woodward were for reaching different goals—Runkle was endeavoring to help engineering students learn skills needed for employment, whereas Woodward was teaching basic skills needed for general industrial employment—both were eventually to support the need for manual training as part of the general education requirements within general education. Woodward (1887) explained that even though the
original programs differed, Runkle also saw elements of value for general education.

For [his] vigorous action, and above all for his appreciative reports on the Russian methods, Prest. [sic] Runkle deserves the praise of American educators. Mr. Runkle looked deeper into the problem than had Della-Vos; he saw that shop-instruction, essential to a mechanical engineer, had elements of value in a general education. (pp. 4-5)

Although Dewey (1900) questioned the subject of manual training as a discipline for education, his response to Woodward's concept of manual training was positive. He commented:

We must conceive them (work in wood and metal, of weaving, sewing, and cooking) in their social significance, as types of the processes by which society keeps itself going, as agencies for bringing home to the child some of the primal necessities of community life, and as ways in which these needs have been met by the growing insight and ingenuity of man; in short, as instrumentalities through which the school itself shall be made a genuine form of active community life, instead of a place set apart in which to learn lessons. (p. 11)

In his book Education Today, written forty years later, Dewey (1940) was still of the same opinion.

Our culture must be consonant with realistic science and with machine industry, instead of a refuge from them. And while there is no guarantee that an education which uses science and employs the controlled processes of industry as a regular part of its equipment will succeed, there is every assurance that an education practice which sets science and industry in opposition to its ideal of culture will fail. Natural science has in its applications to economic production and exchange brought an industry and a society where quantity alone seems to count. It is for education to bring the light of science and the power of work to the aid of every soul that it may discover its quality. (p. 110)
During those early years and even today there is continual confusion as to the content of the subject area.

Throughout the twenties as shopwork in the schools became increasingly common, the distinctions between manual training, manual arts, and industrial arts became increasingly less sharp. The terms were generally used interchangeably and others such as practical arts, industrial education, and industrial training were added as synonyms. The original concepts of manual training, manual arts, and industrial arts were fairly clearly defined, but in usage they became crossed and mixed to such an extent that the original individual missions became obscured by the confusion apparent in an indiscriminate usage of terms. Thirty years later traces of this confusion still exist in the profession. (Olson, 1957, p. 70)

With all of the different names being used to identify industrial education programs, it was indeed helpful when Bonser and Mossman (1923) wrote a widely acceptable definition of industrial arts, the great-grandchild of manual training and grandchild of manual arts.

The industrial arts are those occupations by which changes are made in the forms of materials to increase their values for human usage. As a subject for educative purposes, industrial arts is a study of the changes made by man in the forms of materials to increase their values, and of the problems of life related to these changes. (p. 5)

It was during this same time period, the last three decades of the 19th century and the first two decades of the 20th century, that the Seventh-day Adventist church also developed an educational system, including manual training programs. Mrs. White (1903), in her book Education, wrote of the importance of manual training for all students, not just those unable to enter schools of higher education:
The benefit of manual training is needed also by professional men. A man may have a brilliant mind; he may be quick to catch ideas; his knowledge and skill may secure admission to his chosen calling; yet he may still be far from possessing a fitness for its duties. An education derived chiefly from books leads to superficial thinking. Practical work encourages close observation and independent thought. Rightly performed, it tends to develop that practical wisdom which we call common sense. (p. 220)

In the decade of the 1980s, however, many changes have occurred within the Seventh-day Adventist educational system with little reference to or concern about why manual training was first established. Any educational system, public or private, must constantly reevaluate philosophies and programs to assure the fulfilling of the objectives for which they were established or to establish new principles that build on the foundation of the old. If the objectives become obsolete, they must be revised or taken from the curriculum.

An extensive review of related literature under the topics of manual training, manual labor, manual arts, industrial arts, industrial education, technology education, career education, and applied arts reveals few significant articles or papers written in the past twenty years relating them to the Adventist church. The literature review includes (a) related publications, (b) related studies, and (c) background information on the history of American education and Seventh-day Adventist education. In the literature reviewed, only a few authors
addressed the problems of curriculum. The others tried to establish the status of programs in the educational system of the church.

Chester Blake (1980), in his dissertation at Washington State University, studied the status of post-secondary industrial arts programs within the church. In a personal interview, Blake expressed his concern about the continual lowering of importance, as expressed through the lessening of funds, that is given to the Industrial-Technical subject area by post-secondary administrators (Personal communication, March, 1984). This concern is supported by two of the conclusions drawn in his study: first, he found that there is a lack of placement and follow-up services for most Seventh-day Adventist Industrial-Technical departments thus missing a major source of input for improving the quality of the programs; second, there is an overloading of teachers in the Industrial-Technical departments with maintenance, supervision, and teaching.

Teacher satisfaction was evaluated by Laun Reinholtz (1979) in a dissertation completed at the University of Missouri. Based upon his findings of program decline and teacher dissatisfaction, he suggested implementing curriculum changes that will help the new teachers to have a broader understanding of why technology education is a vital educational component of the church program.
Craig Anderson (1982), at Colorado State University, best described the present trend within the church when he stated: "Even though it appears that the Seventh-day Adventists have maintained a philosophically realistic approach toward vocational and career education, a dichotomy exists between theory and practice" (p. 5). In theory Anderson noted that Adventist education has been built on the foundation of a balance of mental, physical, and spiritual development of the student. Students are to be taught not only the academics but the practical duties of life. The dichotomy exists in that Anderson found the church institutions no different than the public institutions with respect to the emphasis given the academic studies as compared to the industrial-vocational areas.

This internal decline in status of industrial arts programs must be evaluated. Those not associated with the church educational system have seen what the system has done for the church in the past. Charles Eavey (1964) wrote of the uniqueness of Adventist education by stating:

Seventh-day Adventists have always placed stress on the harmonious development of the physical, mental, and spiritual powers of the individual. In their boarding schools they combine daily physical work with intellectual study. The aim is to build into character the qualities of industry, integrity, orderliness, and dependability. (p. 325)

Even though Anderson's study (1982) was primarily concerned with the development of career education
programs, his recommendations reflect on the need to reestablish those principles which have made Adventist education unique. "It would be beneficial for Adventist educators to establish a philosophical base for career education, and to make practical applications of that philosophy" (p. 103).

The most recent study was completed by Bruce Rogers (1985) at North Carolina State University. Rogers' study was designed to see if Seventh-day Adventist secondary schools, in selected schools within the North American Division, are following the recommendations of Mrs. White regarding work and the educational program for work. Rogers concluded that, although the educational programs are in basic harmony with the concepts of Mrs. White, the church-supported institutions are less in harmony than are the self-supporting schools in that they do not place as much emphasis on the importance of work in the daily schedule or on the preparation for work in the class schedule. Considering the apparent decline of program quality as indicated by these studies, it is necessary to take a closer look at the principle of including manual training or its modern day equivalent, technology education, in the curriculum. This study is designed to meet that need.
Methodology

In writing historical works there are many styles that an author may choose to follow. Regardless of the style used, however, Homer Hockett (1955) suggested there are three essential elements for the production of any written historical work: (a) the location of source material; (b) the evaluation of source material; and (c) the author's interpretation of source material. These elements have served as the bases for the methodology of this study.

Location of Source Material

Location of historical source material was the first of Hockett's (1955) three recommendations to be considered in conducting this research. The discovery of primary material is often the most difficult portion of an investigation. Primary material, according to Armand Galfo (1983), is "firsthand materials related to events which have taken place" (p. 43).

The primary material dealing with the background for manual training was taken from books and articles written by the persons being investigated. In cases of translations to English, consideration was given to the possible loss of original flavor. When possible more than one translation was consulted before using the context.
In locating the primary material for the development of manual training within the Adventist church, it was necessary to review documents from the early years of the church. At present these are available at the church's headquarters in Washington D.C. or on the campuses of either Andrews University in Berrien Springs, Michigan, or Loma Linda University in Loma Linda, California. Archival notes, manuscripts, diaries, and letters were studied to establish: (a) the identity of the early leaders of the church involved in the establishment of an educational system, (b) their personal philosophies concerning manual training as part of the curriculum, and (c) how those philosophies were combined to form the foundational philosophy of education for the church. Special artifacts such as pictures, when available, were used as primary material in establishing an individual's presence at special meetings related to the context of this study.

John Best (1977) referred to secondary source material as "accounts of an event that were not actually witnessed by the reporter" (p. 348). Materials such as newspapers, journals, and book references were reviewed for guidance and understanding. Interpretations of other historians were also used as sources to establish the background for manual training development in Europe and the United States. These interpretative works, according to
Lester Stephens (1974), are tertiary sources in that they are an author's interpretation based on secondary sources.

In addition to the development of manual training in the public sector, attention was given to its development in the Seventh-day Adventist education system. For this study documents from the Seventh-day Adventist education system, leadership, and curriculum outlines were studied.

**Evaluation of Source Material**

The gathering of source material is not the only criteria for conducting historical research. The second step in historical research, according to Hockett (1955), is in the evaluation of the source material used. William Brickman (1982) suggested that the historian must evaluate the material to establish its "trustworthiness" (p. 94). This has been achieved in this study by external and internal criticism of the source material.

When answering the questions of lower or external criticism, the author is evaluating the authenticity or genuineness of the material (Shafer, 1980). The source material has been evaluated to answer the question: Is it what it is reported to be? The focus for this portion of the study was to validate the material as to when, where, and by whom it was written. Chronology and location are important in helping to evaluate the biases of the author. Extreme care is required in historical research to
avoid the use of forged or altered documents and some misinterpretation of fact or circumstances.

Internal criticism, sometimes referred to by historians as the "higher criticism," is dependent, according to Louis Gottschalk (1950), upon the accuracy or "credibility" (p. 139) of the source material. He explained that "By calling a particular credible is not that it is actually what happened, but that it is as close to what actually happened as we can learn from a critical examination of the best available sources" (p. 139). To accomplish internal criticism, Gottschalk (1950) recommended that the material be screened to answer four questions.

1. Was the ultimate source of the detail (the primary witness) able to tell the truth?
2. Was the primary witness willing to tell the truth?
3. Is the primary witness accurately reported with regard to the detail under examination?
4. Is there any independent corroboration of the detail under examination? (p. 150)

Interpretation of Source Material

The third and final element used in this study, as recommended by Hockett (1955), has been the interpretation of the material. David Cook (1975) reported that "The historical significance of any set of historical data stems from the context in which it is presented" (p. 32). Gottschalk (1950) called for "Historical-mindedness" in the interpretation of material. "Historical-mindedness
requires the investigator to shed one's own personality and to take on, as far as possible, that of the subject in an effort to understand the latter's language, ideals, interests, attitudes, habits, motives, drives, and traits" (p. 137).

When referring to the process of interpretation of material, Ernest Scott (1925) explained the difference between the true historian and the compiler of factual material.

One of the radical differences between a true historian and a mere compiler, is that the historian has absorbed the material about his chosen subject to an extent that enables him to write with that intimacy of acquaintance which can not be derived merely from rapid and cursory reading. (p. 27)

Another area of concern in the interpretation of historical material against which Robert Daniels (1981) cautioned writers of historical studies, is the tendency to evaluate the past from the conditions of the present. He said: "The influence of the present on the understanding of the past is always an obstacle, . . . They [historians] cannot help looking at the past with today's standards of value and assumptions of motivation" (p. 69).

The author of this study has attempted to evaluate the material with respect to the time in which it was written and under the conditions of that time. Primary emphasis has been given to the development of manual training within
the Seventh-day Adventist church and how that development compared to the program development in the public sector.

This historical investigation is designed to consist of five chapters. Chapter I is the introduction explaining the significance of the problem. It includes the problem statement, sub-questions, and the parameters under which the investigation was conducted. The introduction also includes a review of related literature, a methodology, and a summary.

Chapter II presents a historical perspective of the founding and early development of the American educational system and why manual training became a part of general education. Attention is also given to the change of manual training in the 19th century to technology education in the 20th century.

Chapter III follows the development of the Seventh-day Adventist education system in relation to manual training. Attention has been directed toward those individuals responsible for its development and their influence on the system.

Chapter IV contains documentation about programs presently recommended for implementation into the denominational education system from the General Conference, Union Conferences, and Local Conferences, of the North American Division of Seventh-day Adventists.
Chapter V contains the summary, findings, and conclusions for the development of manual training within the Adventist educational system and similar developments in the public sector.

Summary

Within the Seventh-day Adventist educational system concern has been expressed as to the future of technology education. Studies by Reinholtz (1979), Blake (1980), Anderson (1982), Rogers (1985) and others suggested a steady decline in administrative support for these programs. Responding to this concern this study develops the rationale upon which manual training, the forerunner of technology education, was established within the Adventist educational system as a benchmark upon which future change may be recommended.
CHAPTER II

BUILDING FOR TWENTIETH CENTURY EDUCATION

For centuries the philosophies and theories of noted educators of the past have been analyzed by researchers. This has resulted in the development of a history of education which is a long and well-documented story (Quick, 1890; Williams, 1892; Dexter, 1906; Graves, 1919; Cubberley, 1920; Messinger, 1931; Knight, 1941; Good, 1947; Mulhern, 1959; Cahn, 1970; Lipman & Sharp, 1978; Connell, 1980). Robert Quick (1890) divided the educators who contributed to this history into two classes: "thinkers and doers" (p. 239). The doers have been those educators and philosophers who have not only challenged established theories as the thinkers have done but have also implemented new educational practices. In evaluating the impact on society of each group or class, there is no reason to assume that one class of reformers should be considered greater than the other; and yet there are few individuals throughout the course of educational history that have been truly successful in both areas.

Arthur Ellis, John Cogan, and Kenneth Howey (1981) claimed that the primary underpinning of our present-day educational thought comes from the great Greek philosophers Socrates, Plato, and Aristotle. Socrates, according to
Severe Frost (1966), was responsible for the development of the Inquiry Method of teaching. Leading groups of young people through the streets of Athens to observe their environment, he used this method to implement his philosophy that if education is successful and produces good citizens, then society will be strong and good. Although the method may have changed over the past 2,400 years, the philosophy that citizenship is important in education still exists (Thayer, 1965).

The numerous philosophies, theories, and practices of education throughout history have often been measured by the standards of excellence established in the Classical Period by the writings of Plato (Cahn, 1970). Having studied under Socrates, Plato accepted the citizenship philosophy of his teacher; however, it was Plato's student, Aristotle, who had the greatest influence on the development of present-day educational thought (Ellis, Cogan, & Howey, 1981). Aristotle believed that education was a political responsibility of the state and felt that it should be well-rounded (Brubacker, 1947). The common core of this educational experience was to consist of reading, writing, music, and physical training (Wise, 1964).

With the expansion of the Roman Republic into the territory of the Greeks, the Greek educational methods were adopted (Reitman, 1977). One of the greatest contributions
of the Roman influence to education was the development of grammar schools and a curriculum for the liberal arts. Francesco Cordasco (1976) credited St. Benedict with giving the first recognition to manual labor in 529 AD. Ellis, Cogan, and Howey (1981) also noted that today's liberal arts curriculum of logic, literature, music, geometry, architecture, grammar, rhetoric, history, and astronomy are much the same as those taught by the Romans centuries ago.

Another of the great educators from the classical period of history was Quintilian (Reitman, 1977). Uncomfortable with the harshness of his contemporaries, he advocated two fundamental changes in the methods of instruction: the individualizing of instruction within small groups and avoiding the use of corporal punishment (Cole, 1962).

By the Middle Ages, however, the role of the state was changing and education was becoming more the responsibility of the church. With its growing political power, the Roman Catholic Church established itself as one of the stabilizing educational forces in the Medieval period (Seeley, 1899). Church-controlled education often used students to copy religious material rather than help them develop skills in oration and reading. The church's goal for the students' educational experience was to develop moral and religious understanding of the heavenly kingdom.
rather than an understanding of this world (Monroe, 1935). According to Sanford Reitman (1977) the craft guilds of the middle ages became highly organized and thus contributed to education by furnishing apprenticeships to the working class.

With the Renaissance and the Reformation periods came the decline in the absolute authority of the Roman Catholic Church. From 1517, the year in which Martin Luther nailed his 93 theses to the church door, education once again slowly became available to the individual (Reisner, 1927). Luther believed that an education should help one to read the Bible and choose for himself how he should believe (Painter, 1915). To develop the literacy required for this, Luther encouraged the establishment of state-controlled schools over church-dominated schools. For a period of time the Roman Catholic Church tried to offset the impact of the reformation through church-supported education. The Society of Jesus, established in 1534 and commonly known as the Jesuits, was the primary instrument in this endeavor (Lawrence, 1970).

During the Renaissance and Reformation periods, contributions to the field of education were made by a number of individuals. Francis Bacon (1561-1626), an English philosopher, established the scientific method of inquiry (Binder, 1974); John Comenius (1592-1670) encouraged the universal education of boys and girls.
through the establishment of infant schools (Keatinge, 1896); John Locke (1632-1704), another English philosopher, established the basis for modern behavioral psychology with his theory that the mind is like a blank tablet upon which the environment makes the imprint and development comes only by the formation of habit through discipline (Monroe, 1935); Jean Jacques Rousseau (1712-1778), a Frenchman, promoted developmental psychology through his written work called Emile (Cahn, 1970); Johann Pestalozzi (1746-1827), of Switzerland, expanded Rousseau's ideas of child development with the development of object lessons as a principal teaching method for elementary education (Monroe, 1935); Friedrich Froebel (1771-1841) developed the first kindergarten in 1837 (Van Til, 1971); and Johann Herbart (1776-1841), of Germany, proposed five steps of instruction including preparation, presentation, association, generalization, and application (Doughton, 1935). These are some of the reformers who helped to shape the style of education available in America for the 20th century.

Reformers

During the Renaissance period, other educators such as John Sturm, John Calvin, and John Colet were actively involved trying to establish a standardization for educational theory and practice (Aspinwall, 1912). The
establishment of the "Gymnasium" at Strassburg in 1537 by Sturm is an example of such an effort. Ellwood Cubberley (1920) gave this explanation of the organization within the school which first allowed students to spend one year per course of study.

He [Sturm] organized his school into ten classes, one for each year the pupil was to spend in the school, and placed a teacher in charge of each. . . . Of the ten years the pupil was to spend in the gymnasium, seven were to be spent in acquiring a thorough mastery of pure idiomatic Latin, and the three remaining years to the acquisition of an elegant style. (p. 273)

The influence on education created in the educational reform period of the 18th century by Rousseau, however, was hard to exceed (Painter, 1915). Unwilling to accept existing philosophies of education for the upper classes and regimented practices of education for children, Rousseau challenged the existing conditions and methods of education and called for a natural curriculum for educational studies and for improved methods of instruction. For this, Quick (1890) called him one of the greatest of educational reformers.

Jean Jacques Rousseau
(1712-1778)

Born on June 28, 1712, in Geneva, Switzerland, Rousseau led a life most unbecoming of the educational leader he is noted to have been. His father, a Swiss watchmaker, was an irresponsible and violent person who abandoned him at the
age of ten (Davidson, 1898). Since his mother had died as the result of childbirth, his maternal uncle and aunt tried for six years to fulfill the parental role without apparent success (Graves, 1912). At the age of 12, after a period of time when he used his leisure time unwisely and developed a dependency on cheap novels (a habit acquired from his father), young Rousseau was apprenticed first to a lawyer and then to an engraver to help him learn skills that were more productive of his time (Sahakian & Sahakian, 1974). After four years of apprenticeships, when Rousseau could no longer take the restrictions placed upon him by his work or home, he left home and spent several years as a vagabond (Parker, 1912).

Not willing to accept the responsibilities imposed by time or place, Rousseau continued his vagabond life-style even after his marriage to a commoner, Therese Levasseur (Good, 1947). During their life together they had five children, all of whom were placed in a foundling hospital without identification as he did not want to be responsible for them or have them upset his life-style (Seeley, 1899). He later regretted this act (Compayre, 1899). In his Confessions Rousseau wrote about hiding and observing children as a fugitive and unseen person. From this experience he realized the great injustice he had bestowed upon his own children as a result of his selfish actions.
In 1749 Rousseau, at the age of 37, responded to a notice in the newspaper of a contest being held by the academy of Dijon. The academy was looking for the best essay on the topic "Has the restoration of the sciences contributed to purify or corrupt manners?" (Seeley, 1899, p. 242). Stephen Duggan (1916) suggested that the response Rousseau made to the question and later writings were stimulated by his impressions and feelings for the common people he met in his travels throughout Europe. The most marked characteristic of Rousseau's thought, however, was the extreme revolt against all civilization and social control (Graves, 1912).

Writers even today continue to criticize the writings of Rousseau as questionable in that they are inconsistent and lack proof for the recommendations he suggested (Meyer, 1975). Even though Rousseau was rejected by philosophers of his day, he established himself as a reformer by his call for major change in the educational process and clientele. As a reformer and leader for the concepts of modern education, he was accepted by the illiterate masses.

In 1762 Rousseau published two new literary works, Social Contract and Emile. The latter marks the beginning of the study into child development and has brought him to the forefront as an educational reformer (Mulhern, 1959). The social philosophy which he expressed in his Social Contract is based on what he felt were the rights of man.
The impact of this work upon the common people has been so strong that historians (Seeley, 1899; Aspinwall, 1912; Duggan, 1916; Weber, 1960) believed that this writing influenced much of the subsequent writings on rebellious actions which led to the French Revolution. Christian Weber (1960), however, cautioned that the reactions of Rousseau to the social conditions in force at the time were more emotionally based than logical.

Dissatisfied with the formalism of education, Rousseau (1911) "challenged the old practices with such bitter zeal and force that the world listened to his as to no other voice" (Mulhern, 1959, p. 460). William Shoup (1891) also gave much credit to the work of Rousseau as an educational reformer when he stated "strange as some of Rousseau's theories were, we yet owe to him many of the best ideas, many of the most beneficent actual improvements of modern education" (p. 226). One such important improvement is the significant impact of Rousseau on the role of the child in the educational process (Boyd, 1911).

The great geminal truth which made the Emile quick and living was the simple idea that the child is the one positive fact in education. It was the effective proclamation of this that made Rousseau the pioneer of the New Education and the Emile the most important work on education produced by the modern world. (p. 347)

Adolphe Meyer (1975) noted that, following Rousseau's death in 1778, critics such as playwright Henrik Ibsen (1828-1906) and the German philosopher Fredrick Nietzsche...
(1844-1900) tried to discredit Rousseau by pointing to the inconsistencies of his writings and emphasizing the fact that he was mentally unstable at his death (Meyer, 1975). Quick (1890), however, recognizing the inconsistencies and erratic actions of Rousseau, still holds the writings of Rousseau on education above other great philosophers in light of the impact they had on society.

The writings of Rousseau and the results produced by them are among the strangest things in history; and especially in matters of education it is more than doubtful if the wise man of the world Montaigne, the Christian philanthropist Comenius, or that "slave of truth and reason" the philosopher Locke, had half as much influence as this depraved serving man [Rousseau]. (p. 240)

With the decline of traditionalism and formalism through social reform movements, the foundation was being laid in the 18th century by Rousseau that would affect education for centuries to come (Graves, 1919).

Through him [Rousseau] education has been more closely related to human welfare. The industrial work of Pestalozzi and Fellenberg, the moral aim of education held by Herbart, and social participation in the practice of Froebel, and the present-day emphasis upon vocational education, moral instruction, and training of defectives and of other extreme variation, alike find some of their roots in Emile. (p. 20)

These movements in the reform of educational organization, methods, and content spread throughout the continents of Europe and America during the 17th, 18th, and 19th centuries (Aspinwall, 1912).
Johann Bernard Basedow  
(1723-1790)

Inspired by concepts of natural education proposed by Rousseau, Johann Bernard Basedow, the most notable of the German school reformers of the 18th century (Eby, 1952), raised funds from selling his writings to establish the "Philanthropinum," where he could put these new ideas into practice. The Philanthropinum, according to John Brubacker (1947), was perhaps the first school opened with the intent of setting aside the traditional educational procedures and forging forward in the natural institutional methods espoused by Rousseau. Quick (1890) referred to the social impact of Basedow's work as "one of the most famous movements ever made in educational reform" (p. 273).

Although trained for the ministry, Basedow was not ordained because of his unorthodox behavior (Painter, 1915). Basedow resembled greatly Rousseau in his temperamental personality, his irresponsibility and his instability. The erratic but talented Basedow, inspired by Rousseau's *Emile*, set out, therefore, to reform the unnatural education of his day (Eby, 1952).

In 1768 Basedow published *An Address to Philanthropists and Men of Property on Schools and Studies and Their Influences on the Public Welfare*. The appeal was centered on the two primary concerns Basedow had about education: (a) that schools should be "nonsectarian," and (b) that
schools should be under the control of a "National Council of Education" (Graves, 1919, p. 26). Through this publication he raised sufficient funds to publish, in 1774, his Das Elementarwerk—The Elementary Work, and Das Methodenbuch—The Book of Method, which contained principles for educational reform to be borrowed from nature as proposed by Comenius (1657/1907) and Rousseau (Duggan, 1916).

Realizing the social impact of Basedow's methods of education, Prince Leopold of Dessau helped him to establish the "Philanthropinum" in 1774 at Dessau. Its name implies a place of "Love for Humankind" (Reisner, 1930, p. 171). Following the concepts of Comenius and Rousseau, Basedow's aim for the Philanthropinum was "education according to nature" (Monroe, 1911, p. 581). At Dessau, Basedow implemented a universal form of education, that is, one that is available to all persons regardless of their social class; yet economically he retained the recognition of social class differences through the allotted time spent in study and work (Duggan, 1916). Thus all students at the Philanthropinum became acquainted with both skilled and unskilled manual labor. Those that could pay for their schooling were still required to work part of the time, although not as much as those that were unable to pay the full tuition (Quick, 1890). Fredrick Gruber (1961), in
fact, credited Basedow with introducing vocational education into the secondary school program. He [Basedow] recognized the need for industrial training and motor activity, but taught trades not only for practical ends, but also for health and the complete development of the individual. His works were widely read in both Germany and England, and he is sometimes credited with having introduced vocational education as a regular part of the secondary school program. (p. 119)

Another element of Basedow's school was that children were treated as children and not as little adults. This made it necessary to change the methods of instruction (Thompson, 1951). Classical education for adults involved long periods of sitting while memorizing materials, a type of instruction unfit for the growing and active young person. Reformers included the following: languages were taught in the student's mother tongue through conversation rather than through the use of Greek and Latin; games and drawing were used to develop the interest of the student for communication and geometry; mental methods were used to develop skills in arithmetic; and geography was taught by beginning with the home (Thompson, 1951). Above all "the most striking characteristic of the school, however, was its recognition of child interests and the consequent improved methods" (Graves, 1919, p. 30).

New methodologies of teaching and common education for all classes of society provided a stimulus for younger children to desire education (Painter, 1915).
Immanuel Kant (1804) gave this balanced view of the Philanthropinum.

It is often imagined that educational experiments are unnecessary, and that a judgment as to whether a thing will be good or not can be reached on rational grounds alone. This is a great error, and experience teaches that with our experiments there very often appear effects entirely different from those which were expected. Since it all depends upon experiments, it is clear that no one generation can present a complete educational plan. The one experimental school which, in a measure, began to break the way was the Institute of Dessau. In spite of the many defects with which one can reproach the Institute (defects which are found in all conclusions drawn from experiments), we must give it the honor of having made experiments continually. It was, in a certain way, the only school in which teachers had the freedom to work out their own methods and plans, and where they were united among themselves as well as with all the scholars in Germany. (p. 126)

Basedow proved to be an unfit administrator because of his inability to work with others and was replaced by Joachim Heinrich Campe, "the most influential propagandist for the philanthropinist movement" (Mulhern, 1959, p. 462). This change in administration, however, came too late to solve the administrative dilemma of the school, and the Philanthropinum was closed in 1793 (Graves, 1919).

Levi Seeley (1899) gave four reasons for the failure:

1. The institution was purely secular in character, and the world was not yet ready for this. . . .
2. Altogether too many subjects were included in the course. . . .
3. Basedow's indiscriminate condemnation of everything that had been done before, and all who failed to agree with him. . . .
4. Most fatal still, perhaps, was the unfitness of Basedow for the directorship of the institution. He was capricious, lacking in self-command and proper balance, visionary, and often suspicious of the teachers under his direction. (pp. 252-254)
Even with the failure of the Philanthropinum, the ideas of Bøsdow were apparently not forgotten as similar institutions sprang up throughout Germany. One of these new schools was that of Christian Gotthilf Salzmann at Schnepfenthal. Duggan (1916) comments on the role Salzmann and his school had in the history of education.

Salzmann's school undoubtedly anticipated successfully many of the reforms afterwards introduced into elementary education by Pestalozzi, and the philanthropinic movement as a whole blazed the way for the changes with which the name of Pestalozzi is usually associated. (p. 218)

Even though the philanthropinic movement eventually became a fad and fell into the hands of moneymakers who lent financial support to new schools, it introduced many new ideas concerning instructional methods and industrial training (Parker, 1912). By the time of Bøsdow's death in 1790, the door of the reform movement had been opened wider for other reform leaders such as Pestalozzi, Herbart, Froebel, Fellenberg, and others.

Johann Heinrich Pestalozzi
(1746 - 1827)

Switzerland again became the birthplace of another educational reformer 18 years after the death of Rousseau, on January 12, 1746, Johann Heinrich Pestalozzi was born, the son of a Zurich family (Eby, 1952).
When Pestalozzi was six years of age, his father was taken ill and, realizing that his illness was terminal, he made arrangements for their maid "Babeli" to stay with the family and help raise young Johann, his brother and his sister (Von Raumer, 1855). Thus the advantages of a stable home, which had been denied Rousseau, helped Pestalozzi to experience the development of the heart before the head (Quick, 1890).

Commentators on Pestalozzi's life have conflicting opinions concerning Pestalozzi's mental and physical development without a father. William Aspinwell (1912) viewed his early training given by his mother as the source for his later emphasis on instruction built around love and sympathy. Samuel Williams (1892), on the other hand, emphasized the problems Pestalozzi encountered as a growing child and felt they were brought on by not having the masculine influence in the home that was needed by such a young man. The German historian Karl Von Raumer (1855) cited a comment by Pestalozzi on his own life and development:

I was brought up by the hand of the best of mothers like a spoilt darling, such that you will not easily find a greater. From one year to another I never left the domestic hearth; in short, all the essential means and inducements to the development of manly vigor, manly experience, manly ways of thinking, and manly exercises, were just as much wanting to me, as, from the peculiarity and weakness of my temperament, I especially needed them. (p. 1)
Charles Bennett (1926) paid special attention to the influence that Andrew Pestalozzi had on his grandson Johann. During the summer Andrew Pestalozzi, a Swiss village pastor, would bring Johann to spend time with him in the hills outside the city of Zurich. It was here, Bennett explained, that Johann learned to love nature and develop his ideas for a new form of education. Emulating his grandfather, Pestalozzi entered the ministry and endeavored to help the poor and illiterate by regenerating the moral, social, and economical structure of the agrarian society (Gutek, 1968). But "in his twenty-second year, he abandoned literary ideas altogether, bought an unpromising tract of land, built a house which he called Neuhof, and betook himself to the cultivation of mudder [crops]" (Williams, 1892, p. 301).

Inspired by Rousseau's The Social Contract and Emile, Pestalozzi determined to help change the social and psychological tendencies which Rousseau had addressed (Pinloche, 1901). J. Green (1912) expressed the concerns of Pestalozzi for the degradation of man.

But for him [Pestalozzi] education was not concerned with instruction simply, or even primarily. He was concerned to raise men from their present degradation to the level of humanity. It was not the poverty which he saw around him which stirred his soul to its depths; it was the degraded lives the poor people led. Their shiftlessness, their want of purpose and initiative, their utter lack of human dignity, hurt him. All these things could be cured by a properly-devised system of education. The problem was at bottom an individual and a moral one: "Help the people to help themselves";
"Teach them the worth and dignity of honest labor."
He would make the people happy and contented, not by showering charitable doles upon them, but by making them feel and prize their independence. (p. 7)

Pestalozzi (1915) expressed his concern for the social plight of Europe and his desire to help solve the situation.

But ever since I have been able to see I have seen it so; and it is from this view that the impulse arises within me, not merely to plaster over the evils in schools, which are enervating the people of Europe, but to cure them at their root.

But this can never be done without subordinating all forms of instruction to those eternal laws, by which the human mind is raised from physical impressions on the senses to clear ideas. (p. 200)

Duggan (1916) divided Pestalozzi's attempt to reach this lifelong objective into three distinct periods:

1. The period of experiment in industrial education for juvenile delinquents (1774-1780);
2. The period of literary activity for social and educational reform (1780-1798);
3. The period of reform in the teaching of elementary school subjects (1798-1827). (p. 226)

Pestalozzi never forgot the loving spirit of his childhood home; and, following the failure of his farming venture at Neuhof, he attempted to implement the principles of Rousseau that were written in Emile by eventually taking up to 50 vagrant children, boys and girls, into his home (Meyer, 1975). Pestalozzi did not take these children into his home to make profit from their labors as other farmers had; but he hoped to show that the children of the poor could help support themselves and still receive an education if given the opportunity (Green, 1969).
Isaac Doughton (1935) concluded that the experiment was unsuccessful, not because of the unsoundness of Pestalozzi's philosophy or methods but because of his inability to manage the institution. Duggan (1916), on the other hand, urged that it should be considered a success:

Tho [sic] there was no direct relation between the industrial work and the formal instruction, the experiment was a great success in showing the inspiring influence of properly organized manual work as a supplement to formal instruction. (pp. 226-227)

Pestalozzi blamed no one but himself for the failure of Neuhof.

Although, as before, he [Pestalozzi] was ready to admit mistakes and to take the blame for the failure upon himself he was yet convinced that his idea for the education of the poor was practicable and right. He again distinguished between 'accidental details' and 'the essence of the matter'; among the first he quoted his unfortunate tendency 'always to reach for the top of the ladder before having secured a firm footing on the bottom'. He had attempted too much in combining a retail business with the workshop; he should, as he realized too late, have kept things as simple as possible in his education of the poor. (Silber, 1960, p. 24)

Withdrawing from the administration of educational centers, Pestalozzi spent several years of his life writing on the cause for social and educational reform (Good, 1947). Early in this period, 1781, he wrote his views of reform in a novel entitled Leonard and Gertrude. Gertrude, a peasant woman, was influential in reforming her drunken husband Leonard, educating her children, and inspiring her neighbors with her devotion and skill (De Guimps, 1890).
Boyd (1911) found four ideals that Pestalozzi strived to embody in his writing:

1. The best education for the children of the poor is the education got by taking part in the ordinary work of the peasant home.
2. The best educator for such children is the good mother (herself, it may be, quite uneducated), who encourages her children to think about what they are doing, and to put their thoughts into words.
3. This education follows the order of nature most closely when the children's experience advances gradually from the simpler facts to the most complex.
4. The school established to supplement the mother's education must be modeled on the methods of the home (pp. 351-352).

Pestalozzi realized, from his experience at Neuhof, that the way to social reform was not through training the poor to do repetitious work without understanding its meaning, but rather through education, the process of developing an ability and understanding for work. To broaden his experience, Pestalozzi actively sought a position of schoolmaster from the government (Silber, 1960). At fifty-two he was granted permission by the German government to take charge of a school for orphan children in the Ursuline convent at Stanz after the massacre in the area carried out by the French armies (Doughton, 1935). Once again there arose within him the desire to reestablish the school he had begun at Neuhof. On January 14, 1799, the first children were admitted to Pestalozzi's new school (De Guimps, 1890). He soon realized, however, that the physical conditions of the facilities and the lack of equipment would not allow for
the type of instruction given at Neuhof; and a
methodological shift was made to the use of objects and
conversation as the medium of instruction. Rather than
using books, which were too expensive, Pestalozzi taught
through experience and observation. Meyer (1975) explained
the observational process as:

Led by the master's questions, the pupil, examining an
object, was drawn out to note its salient
characteristics and then, when his inspecting had
exhausted whatever was observable, to frame the details
his senses had detected into a coordinated
generalization. (p. 226)

Six months after the opening of the orphan school at
Stanz, the French armies decided that the building was
needed for a hospital and forced the school to close (De
Guimps, 1890). Having exhausted himself in starting the
school, Pestalozzi spent a short period of time
regenerating his enthusiasm before accepting an
administrative position at Burgdorf, Germany (Heafford,
1967). De Guimps (1890) recorded in full a letter written
by Pestalozzi to a friend in 1807 concerning the work at
Stanz. In the letter Pestalozzi explains his feelings
about manual labor and why the transition from his interest
in industrial education to the task of improving the
methods of instruction was necessary.

I tried to connect study with manual labor, the school
with the workshop, and make one thing of them. But I
was the less able to do this as staff, material, and
tools were wanting. A short time only before the close
of the establishment, a few children had begun to spin;
and I saw clearly that, before any fusion could be
effected, the two parts must be firmly established separately—study, that is, on the one hand, and labor on the other. (p. 167)

His support of the faculty psychology movement, the development of the mind through exercising its various faculties (James, 1900), however, still remained. In the same letter to his friend on the work at Stanz, Pestalozzi commented:

I am more than ever convinced that as soon as we have educational establishments combined with workshops, and conducted on a truly psychological basis, a generation will necessarily be formed which will show us by experience that our present studies do not require one-tenth part of the time or trouble we now give to them. (De Guimps, 1890, p. 169)

Although he found it necessary to suspend his experiment of combining industrial training with intellectual development, he continued the development of his observational method. Gerald Gutek (1968) described the development of Pestalozzi's Art of Sense-impression.

To form clear concepts the child should first be exposed to objects possessing the most essential characteristics of the class to which the objects belong. Such objects were best fitted to impress their essential nature rather than their variable qualities upon the child. Thus the impression of the essential nature of an object overpowered the impression of its qualities. The child learned to subordinate the accidental properties of an object to its essential nature. In conceptualization the following process occurred: (1) the learner recognized the number of objects; (2) he recognized their appearance, form, structure, or outline; (3) the learner named the object by speech. From this description of the art of sense impression arose the famous Pestalozzian object lesson based upon teaching of number, form, and language. (pp. 92-93)
It was at Burgdorf, therefore, that most of the theory for Pestalozzi's "A B Cs of observation" were developed and a dream to reorganize the methods of education was begun.

Despite his poor management skills, Pestalozzi was immensely successful in drawing attention of others to the work he was doing. With the growing interest in what this unusual educator was claiming as the proper methods for education, Pestalozzi (1915) chose to explain his method in detail by writing *How Gertrude Teaches Her Children*. Here he explained to his friend Gessner the key for the success of his students. Pestalozzi (1915) considered sense-perception as the foundation for knowledge, and the observational process as the basic method of instruction.

All instruction of man is then only the Art . . . of helping Nature to develop in her own way; and this Art rests essentially on the relation and harmony between the impressions received by the child and the exact degree of his developed powers. It is also necessary . . . that there should be a sequence, so that beginning and progress should keep pace with the beginning and progress of the powers to be developed in the child. (p. 26)

To reach the ultimate goal for the development of the human race, Pestalozzi (1915) continued to explain that there was only one method of instruction that was viable.

The course of Nature in the development of our race is unchangeable. There are and can be no two good methods of instruction in this respect. There is but one--and this is the one that rests entirely upon the eternal laws of Nature (p. 156).

The first source is Nature herself, by whose power our mind rises from misty sense-impressions to clear ideas. From this source flow the following principles,
which must be recognised [sic] as foundations of the laws, whose nature I am seeking.
1. All things which affect my senses, are means of helping me to form correct opinions.... They are, on the other hand, sources of error and deception so far as their phenomena present to my senses their accidental qualities, rather than their essential characteristics.
2. To every sense-impression . . . a whole train of sense-impressions . . . may be added easily, as it were involuntarily.
3. Now if the essential nature . . . is impressed with a force disproportionately strong upon your mind, the organism of your nature leads you . . . daily from truth to truth.
4. By putting together objects whose essential nature is the same, your insight into their inner truth becomes essentially and universally wider, sharper, and surer.
5. The most complex sense-impressions rest upon simple elements. When you are perfectly clear about these, the most complex will become simple.
6. The more senses you have questioned about the nature of appearance of a thing, the more accurate will be your knowledge of it. (pp. 80-81)

After much study Pestalozzi (1915) found that to make the observational process provide usable knowledge, a special means of instruction should be followed.

At last . . . came the thought--the means of making clear all knowledge gained by sense-impression comes from number, form and language. . . .
I aimed wholly and simply at finding out how a cultivated man behaves . . . when he wishes to distinguish any object which appears misty and confused to his eyes, and gradually to make it clear to himself. In this case he will observe three things:
1. How many, and what kinds of objects are before him.
2. Their appearance, form or outline.
3. Their names; how he may represent each of them by a sound or word.
I also thought number, form and language are, together, the elementary means of instruction . . . the whole sum of the external properties of any object is comprised in its outline and its number, and is brought home to my consciousness through language. (p. 87)
Although the personality of Pestalozzi lacked in originality, practicality, and consistency, and his educational philosophies were often repetitious, inaccurate, and lacking in comprehensiveness (Silber, 1960), his philosophy contained the seeds of modern pedagogy and educational reform (Graves, 1919; Downs, 1975). Fredrick Eby (1952) described these seeds as a concern for the sense of impressions as the beginning of intellectual life. He added that the concrete must always precede the abstract, and that human development is a gradual building process. Pestalozzi, although unscientific in his approach, did more than any one else to develop the spirit for educational reform (Green, 1969).

In 1804, political intervention again upset the growing popularity and recognition that Pestalozzi was receiving when the government took back the castle at Burgdorf (Graves, 1919). After a short and uncooperative partnership with Fellenberg at Munchenbuchsee, Pestalozzi and his followers began work at Yverdon on October 28, 1804 (Gutek, 1968). Here, at Yverdon, he exerted great effort to establish a training school for teachers. Educators came from all parts of Europe to see what the Pestalozzian methods were really about (Doughton, 1935). Thus Yverdon has been referred to as the "Mecca of Pestalozzianism" (Seeley, 1899, p. 267).
In his final major publication, *The Swansong*, also translated *The Song of the Dying Swan* (Aspinwall, 1912), Pestalozzi summarized his ideas concerning education and its role in the total development of man. John Green's (1912) translation of Pestalozzi's *Educational Writings*, including *The Swansong*, noted:

The problem of the Elementary Method, upon which, more or less conscious of its full magnitude, I have spent the greater part of my later life in endeavoring to solve, is nothing other than the problem of how to conform to the order of Nature in the cultivation of man's capacities and powers. (p. 267)

It follows that the problem of the Elementary Method is the problem of following the order of Nature in the unfolding and developing of these specifically human powers of head, heart, and hand. (p. 268)

Specialized development of one side of human nature is unnatural and false. It is as sounding brass and tinkling cymbal, a hollow unreality. Education worth the name necessarily strives after the perfection of man's powers in their completeness. (p. 269)

Elaborating on the harmonious development ideas of Pestalozzi, Gutek (1968) said:

The naturally educated man was characterized by the harmonious development of all his human powers and capacities. Education served to elaborate those qualities that defined and elevated man from the animal level. Since education for harmonious development integrated and balanced man's essential moral, intellectual, and physical powers, the preferred model of the educated man was of good heart, of discerning mind, and fitted to work in his particular station in life. (p. 130)

The methods of Pestalozzi were spread rapidly throughout Europe by other educators involved in the reform movement.
The doctrines of no other great educational reformer have received such wide dissemination and such general acceptance as those of Pestalozzi; and it is of interest to the student of education to know the agencies operating in this dispersion and adoption. Not only Switzerland, but Germany, France, Spain, Russia, Denmark, England and the United States made immediate application of the chief reforms advocated by Pestalozzi. (Monroe, 1907, p. 10)

In the United States, Pestalozzianism was introduced by Joseph Neef, a former assistant to Pestalozzi, in 1809 (Knight, 1941) through the philanthropic endeavors of William McClure, a Scottish immigrant who had moved to Philadelphia (Hoyt, 1910). Similar attempts were made to establish Pestalozzian education in New Harmony, Pennsylvania, by Robert Owen and McClure (Binder, 1974). A greater influence, however, was brought about by Horace Mann and Edward Sheldon (Melvin, 1946). Mann's Seventh and Ninth Annual Reports are based primarily on his evaluation of the influence of Pestalozzianism throughout Europe (Duggan, 1916). However, Sheldon's "Oswego Movement" attempted to bring to the teachers of New York schools some ideas of Pestalozzi on child development, object lesson instruction, freedom of self-expression and techniques of instruction that were designed to improve the teaching-learning process (Binder, 1974).

William Carr (1980), Secretary of the Educational Policies Commission, 1936-52, and Executive Secretary for the National Education Association, 1952-67, believed that no other foreign educator has influenced education in
America as much as the work and writings of Pestalozzi:

Most educators who attain fame do so by writing books rather than by their demonstrated prowess in actual teaching. Pestalozzi was a towering exception to the rule. He was one of those regrettably rare individuals who could not only write clear and energetic prose about the teaching-learning process but also dedicate his days to the active and successful practice of teaching.

His example, his perceptions about the nature of learning, are as worthy of recognition in today's America as they were two centuries ago when Pestalozzi and his devoted wife, Anna, began in Neuhof to teach the most neglected and deprived children of poor Swiss peasants.

Pestalozzi's solicitude for the underprivileged, his conviction that education is concerned with moral principles as well as with knowledge, his adamant refusal to separate the school from the rest of the child's life, his faith in the possibilities of goodness in human nature—all of these ideas retain a central position in educational debate today.

It is doubtful whether any other foreign educator has exerted on American education today an influence so benign, so profound and so enduring. (p. 27)

Although Pestalozzi expressed in How Gertrude Teaches Her Children that his educational theories were incomplete, American educators through the years have continued to expand upon them since his death in 1827 (Mann, 1865; Dewey, 1915; Bonser, 1932). Fellenberg, Froebel, and Herbart were also instrumental in adding new meaning to the educational structure that Pestalozzi began (Painter, 1915).
Emanuel von Fellenberg
(1771-1844)

Faced with the limited facilities and material at Stanz (explained earlier in this chapter), Pestalozzi found it necessary to abandon his ideas of social reform through combining industrial training with intellectual education. The concept, however, was not lost. An associate of Pestalozzi's from Munchenbuchsee, Emanuel von Fellenberg, having seen the work of Pestalozzi at Neuhof and later spending four months at Munchenbuchsee with him (Pinoche, 1901), chose to pursue Pestalozzi's concept of social regeneration of the peasantry of Switzerland through the development of new educational programs. Fellenberg thus gave rise to the manual-labor movement in Europe and America (Mulhern, 1959).

In 1799 Fellenberg purchased a large estate near the town of Hofwyl, Germany (Graves, 1912), and opened an agricultural institute. This school, referred to simply as "Hofwyl" (Monroe, 1907, p. 12), was patterned after Pestalozzi's school at Neuhof. The major exception in Fellenberg's approach, according to Krusi (1875), was that he, a better organizer, made sure the facility was ready before accepting students, unlike Pestalozzi who was so eager to start that he accepted students before the school was ready.
Duggan (1916) listed three goals Fellenberg was striving to achieve at Hofwyl.

1. To carry out the Pestalozzian idea of giving to the children of the poor an industrial education and at the same time the elements of an intellectual education.
2. To realize the philanthropinic idea of educating the children of the rich and of the poor together, in order to develop a mutual sympathy and understanding.
3. To train teachers for the common schools, especially in the rural districts. (p. 236)

At Hofwyl, with the aid of an aggressive assistant, Jacob Wehrli, Fellenberg was able to reach one of his major goals: the implementation of Pestalozzi's theory of providing manual labor combined with intellectual training in order to diminish the contempt held toward juveniles and children of the poorer classes (Graves, 1919). Will Monroe (1907) reported that "During the first half of the last century it (Hofwyl) was the most successful and— to except Yverdon--the most famous educational institution in Europe" (p. 11).

As a result of his work carried on for the poor, Fellenberg soon realized that something should also be done for the rich. He conceived that they should be trained for areas of supervision in hopes of developing in them a sympathy and understanding of the poor. Realizing that they would not stay at the "agricultural institute" because of the extensive manual labor requirements, Fellenberg established for the rich a "literary institute" which included object lessons and physical activities as well as
the usual academic studies. Through this experience, the poor students became acquainted with the wealthy, while the wealthy were learning the dignity of labor (Graves, 1919).

At all the institutes or schools that were established by Fellenberg, the common fundamental element was the combination of observational instruction with a means of applying newfound knowledge. This did much to help the industrial and economical needs of the masses. However, following the death of Fellenberg in 1844, the schools that he had established at Hofwyl slowly lost this mission and were closed. The industrial education principles, however, continued to spread throughout Europe. Eventually the concept reached the United States, and according to Duggan (1916) "Manual Training Institutions" were opened to enable young people to earn and learn at the same time.

As the result of many reports upon Fellenberg's establishment there were founded between 1825 and 1850 "manual labor institutes" all over the United States. They were organized to provide a higher education along literary lines, the industrial feature being introduced to provide an opportunity for self-support for poor students and at the same time to secure physical exercise as the necessary bases for intellectual work. (p. 237)

Like the reformers Rousseau, Pestalozzi, and Basedow before him, Fellenberg did not envision the impact that his work would have upon modern education. Graves (1919) described the significance of these reformers at the beginning of the 20th century.
The destructive attitude of the eighteenth century prepared the way for the social, psychological, and scientific tendencies of modern times. ... and although many of the modern movements were beyond the vision of the reformers, ... modern education may be interpreted as beginning with the individualistic recommendations of Rousseau. ... The present tendencies in education make the relation of the individual to the social whole the test of the value of his activities, and attempt to harmonize the individual interests with those of society. (pp. 397-401)

Cubberley (1920) gave credit to Fellenberg for the spread of Pestalozzi's concepts throughout Europe and to the United States.

Fellenberg's work was a continuation of the social-regeneration conception of education held by Pestalozzi, and contained the germ-idea of all our agricultural and industrial education. His plan was widely copied in Switzerland, Germany, England, and the United States. (p. 547)

Two other disciples of Pestalozzi, who gained much of their influence from working with him at Yverdon, were Herbart and Froebel (Melvin, 1946). Froebel, the inventor of the "Kindergarten" (Compayré, 1899, p. 457), emphasized education in light of the natural development from within the child and his activities:

By making needlecraft, paper folding, weaving, and the use of sand, clay, paint, and glue, respectable school activities, Froebel unwittingly gave a potent boost to manual training. Unlike Rousseau, however, he made no plea for training the hand for economic and social ends. And unlike Pestalozzi he cherished no illusions that the adept use of the hands would somehow help a child to enlarge his supply of knowledge. Froebel saw the use of the hands simply as an aid to self-expression. (Meyer, 1975, p. 255)

Herbart, on the other hand, expressed the view that education is the result of impressions from without and
emphasized the development of better teaching methods and teacher preparation.

Herbart makes character the end of education; it is to be secured by the development of a many-sided interest. Man's interests come from his experience with things and his intercourse with people; hence the need of scientific subjects and of historical subjects, the latter of which are the more important. The mind of the pupil is largely the result of the teacher's instruction, which—to be educative—should be based upon apperception, should follow certain formal steps of the recitation, and conform to the principle of correlation of subject. (Duggan, 1916, p. 223)

To accomplish this type of education, Herbart (1908) included a place for technology in the educational system.

Technology should not be regarded merely from the standpoint of so-called "material" interests. It forms a powerful intermediate link between the conceptions of nature's working and of human aims. Every older boy and youth should be able to handle the familiar tools of the joiner, just as much as rule and compass. Mechanical skill would in many cases be more profitable than gymnastics, the former aiding the mind, the latter the body. Middle-class schools should have classes for manual training attached to them, though these latter need not be quite the same thing as technical schools. Every human being in fact, should learn to use his hands; for the hand has its own place of honor beside the tongue in raising man above the brutes. (p. 247)

From these 16th and 17th century educators came the educational concepts, including manual training, that were to help shape the educational philosophies of America in the 19th and 20th centuries (Cubberley, 1920).
American Common Schools

With its roots in philosophies of philanthropic education, universal education, with public support and control, reached a higher state of development in the United States than elsewhere (Graves, 1919). Edgar Knight (1941) depicted the task of evaluating the development of formal education in America as extremely difficult because of each colony's uniqueness of population centers, religious beliefs, and geographical locations. This, Knight said, is why the early years of formal educational development in this new country were so varied.

Colonial Period

American colonists, having left Europe during the early 16th century, influenced the development of education in America through their concern for religious freedom and political power (Good, 1947; Cohen, 1974a). F. V. Painter (1915) compared the development of education in the American colonies with what was taking place in Europe to explain the surprising success of education in America.

As was the case in Europe during the corresponding period, the theological influence in education was very strong; but, at the same time, the peculiar circumstances of establishing a home in an unsubdued wilderness, and of laying the foundation of a great republic, early gave the schools vigorous life and practical bearing. (p. 379)
Writing on the development of education in America, H. G. Good (1947), Roy Brammell (1952), and Gutek (1986) emphasized the importance of the cultural background of the settlers in the educational development process. Brammell (1952), in particular, contended that the religious cultural backgrounds of the early settlers indeed had an effect upon the types of educational opportunities provided.

The three outstanding Protestant groups in Europe from which our early settlers came were the Lutherans, the Calvinists, and the Anglicans or English Episcopalians. . . . Each group encouraged education. They were different, however, in their beliefs as to where the responsibility for education rested . . . The Calvinists held essentially the same point of view as the Lutherans. . . . These groups, interested in education for religious purposes, were not fearful of civil authority . . . Matters were different among the Anglicans. This group placed the responsibility for education on the home. (pp. 14-15)

With respect to the development of "common schools," Colonial America may be divided into three different major geographical locations: the Southern, Middle, and Northern colonies (Drake, 1955). According to Graves (1919),

There are three chief types of school organization in the colonies . . . (1) the "laissez faire" method, current in Virginia and the South, (2) the parochial organization of New Netherlands and Pennsylvania, and (3) the governmental activity in Massachusetts and Connecticut. (p. 82)

Educational Practices in the Southern Colonies

Combining the aristocratic spirit with the scattered population of the Southern colonies, William Drake (1955)
and Mulhern (1959) contended the "laissez faire" organization of education in the South was typified by the early educational opportunities offered the Virginia colonists. Seeking to reproduce the educational style inherited from England, education became selective and the responsibility of the home.

Typical of the aristocratic spirit of the South was the Governor of Virginia, Sir William Berkeley, in response to the authorities in England. John Pulliam (1982) quoted him as saying in 1671:

I thank God, that there are no free schools nor printing, and I hope we shall not have them these hundred years, for learning has brought disobedience, and heresy, and sects into the world, and printing has divulged them, and libels against the best government. (p. 22)

Leaving the responsibility of early education to the home, the Southern colonies, with their strong Anglican heritage, concerned themselves with the development of private secondary schools and colleges. Educational legislation for elementary schools did not occur until near the time of the American Revolution (Cubberley, 1920).

The feelings of hostility toward education do not appear to be the same, however, for the post-secondary levels of learning in the South. This was demonstrated by the establishment of William and Mary College in 1693 at Williamsburg (Knight, 1941). Edwin Dexter (1906) noted that, had the orders of the King of England been followed
when money was sent to the colony for the establishment of a college in 1616, Virginia would have had the first college in the new colonies. Led by the strong aristocratic spirit and a desire to make money off the wealthy, the South kept education strongly segregated between the rich and poor for centuries.

Thomas Jefferson, an early advocate of education as a governmental responsibility of the state, introduced a proposal in 1779 for the general diffusion of education. Even though he died before he could see the full results of his proposals, Jefferson may be credited with opening the way for public schools in the South (Noble, 1954).

Making no provision for public education until 1723, when it passed its first governmental act calling for the encouragement of learning, Maryland followed the laissez faire organization of Virginia (Painter, 1915). Although there was a gradual movement toward universal education through free schools, it was not until the awakening of the Revolution that much of an attempt was made to implement the free schools established by law in 1696 (Graves, 1919). Mulhern (1959) gave this general overview of the availability of education throughout the South during the colonial period:

Apart from provision for apprenticeship education, where public action was taken it expressed itself in providing Latin schools, or "free schools" as they were usually called, for the rich, but in which a few poor boys were "taught gratis" as a charity. (p. 273)
Resulting from the laissez faire attitudes taken by the colonists settling in Maryland, the Roman Catholic Church was able to establish some of its first parish schools in America. James Lee (1967), a professor from Notre Dame University, explained that although Franciscan missionaries had established elementary schools in the Spanish colonies of Florida during the early 16th century and the French settlers of the Mississippi Valley in the 17th century, the situation in the English colonies, with the exception of Maryland, was not the same. Due largely to the sentiments that the English colonists brought with them from Europe, it was not until after the Revolutionary War and the signing of the Declaration of Independence that Catholics were free to establish educational institutions in the colonial states (Carper & Hunt, 1984).

South Carolina's attempts at education were also influenced by the aristocratic nature of the South. The ruling elite, according to Drake (1955) and Gutek (1986), sent their children abroad or to the North for study, and they had little interest in educating the poor. This condition remained until 1710 when the "Charleston Free School" was given public aid for accepting a few "charity boys." To be eligible for the aid, the school was required to employ only a member of the Church of England as the schoolmaster (Dexter, 1906). Limited efforts were undertaken also by the Society for the Propagation of the
Gospel (S.P.G.) to fund parish schools in 1712 and, later, county schools (Mulhern, 1959). Neither attempt proved much of a success, and even after the Declaration of Independence any effort to found "free schools" met with insufficient appropriations.

The Southern colonies continued to be dominated by the desires of the rich to be rulers of the land and their religious beliefs that the home is responsible for the education of the children. If the parents could afford the education, fine; if not, then the children would go without (Gutek, 1986).

North Carolina, through the accession of an influential middle class, showed a marginal growth of sentiment for universal education similar to that in other Southern states before the great educational awakening (Cohen, 1974a).

Educational Practices in the Middle Colonies

Parochial schools prevailed in the Middle colonies (Pulliam, 1982). In colonial New York the Dutch settlers organized their schools according to the organization they had been using in Holland (Shoup, 1891). Each church congregation was responsible for the education of its children. These schools taught the catechism and the prayers of the Dutch Reformed Church. Unlike Southern Anglican schools, the schools of the Middle and Northern
colonies were chiefly elementary so that everyone would be capable of reading the Bible (Noble, 1954). When the English took governmental authority of the New Netherlands in 1664, however, the Dutch Reformed leaders were replaced with those favoring the Anglican views and the ideal of universal education was replaced by a laissez faire philosophy of schooling (Meyer, 1957). For over a century the Anglican views of education were followed.

The "Public School Society of the City of New York" was founded in 1805 to provide education for boys not eligible to attend the private schools because of their non-religious beliefs or their inability to pay for training in the private and church schools of New York. Through its educational institutions, training continued until a City Board of Education was established by the legislature in 1842 (Dexter, 1906).

In Pennsylvania the provision for universal education in William Penn's first "Frame of Government" opened the way for the small church sect to establish a series of parochial institutions (Cubberley, 1920). The School Law of 1683 contained three key points to the developing educational programs of the colony.

1. All who have charge of children must see that they can read and write by the time they are twelve years old.
2. All children shall be taught a useful trade.
3. All those who neglect these provisions shall be fined five pounds for every child neglected. (Dexter, 1906, p. 60)
The Friends (or Quaker) Church, responding to the growing desire for educational and religious training, started a secondary school in Philadelphia in 1689 (Cressman & Benda, 1961). The success of this first school in helping young people to read, write, and understand Biblical principles as taught by the church eventually led to the establishment of branch elementary schools in various parts of the city. Throughout Pennsylvania and the other Middle colonies, similar parochial organizations were established, especially by the Lutheran, Mennonite, and Moravian followers. In Western Pennsylvania's Wyoming Valley, following the example of Philadelphia, attempts were made to establish a broader common school system, but again the parochial systems prevailed.

To Raymond Callahan (1956) the most significant development in colonial secondary education was the establishment, in 1750, of Benjamin Franklin's Academy in Philadelphia, which later grew into the University of Pennsylvania. Despite the broad vision of Franklin and his opposition to the aristocracy-oriented form of education (Venn, 1964), a state-sponsored system arose only gradually through the development of "poor schools."

In 1834 under the direction of the Secretary of State, a system which permitted districts to levy local taxes to share in a state fund was established. Appropriations for its maintenance were greatly increased by the following
year (Dexter, 1906). It was not until the educational awakening of the latter part of the 19th century, however, that most of the districts took advantage of this law.

The organization of colonial schools in New Jersey and Delaware followed closely the pattern established in New York. Under the Dutch and Swiss influence, small schools were established with each church. New Jersey, in fact, had the first permanent school funds in America (Shoup, 1891).

Educational Practices of the Northern Colonies

According to Cubberley (1925), of all the ideals brought to this new country concerning the role of education in society, those of the pilgrims settling in New England were most beneficial to education in the 20th century. Franklin Messinger (1931) concluded that the influence of Massachusetts on American education was not based on its commercial or financial developments but rather on the commitment of the statesmen and writers to speak out for education. Recognizing the principle of education for all children, Massachusetts established the first two compulsory education school laws in the new colonies (Grieder & Romine, 1955). In 1642, responding to a growing concern for the neglect of children by parents and masters, the colony passed a law to provide an
industrial education (apprenticeship), combined with some literary elements (Cohen, 1974b).

This court, taking into consideration the great neglect of many parents and masters in training up their children in learning, and labor, and other implyments which may be proffitable to the common wealth, do hereupon order and decree, that in euery towne the chosen men appointed for managing the prudential affajers of the same shall henceforth stand charged with the care of the redresse of this evill . . . shall have power to take account from time to time of all parents and masters, and of their children, concerning their calling and implyment of their children, especially of their ability to read and understand the principles of religion and the capitall laws of this country . . . and they shall have power, with consent of any Court or the magistrate, to put forth apprentices and children of such as they shall not to be able and fitt to employ and bring up. (Cohen, 1974b, p. 393).

By 1647 the law was expanded and required each town of fifty families to maintain an elementary school, and each of a hundred families a grammar school. This law, is referred to as the "Old Deluder Law" (Drake, 1955; Cohen, 1974b). The law was intended to make the idle time of young people profitable through education. Idle time, it was felt, was controlled by the devil or the "Old Deluder" as he was referred to.

Connecticut's educational laws were similar to those of Massachusetts (Cohen, 1974b). The educational development in Massachusetts, according to Graves (1912), was likewise typical of the other New England states, except Rhode Island (Cubberley, 1920).
In the ensuing years, as the nation's population continued to increase, the westward movement of the settlers began. The general horizontal migration westward (those moving from New England often migrated to Ohio, Michigan, Wisconsin, Illinois, and Iowa) can be seen in the types of early educational systems developed in the new territories. Noble (1954) noted the significance of this phenomenon.

This factor is of more than passing significance, for the settlers in the new territories brought with them their respective types of religion and the social institutions to which they had been accustomed. (p. 139)

With the outbreak of the War for Independence, Cubberley (1925) explained that the development of educational opportunities were severely restricted.

For something like half a century little was done, and much was lost. The effect of the War on all types of schools was disastrous. Most of the rural and parochial schools closed, and many of the private and charity schools in the towns and cities also were forced to discontinue. . . . The War engrossed the energies and the resources of the people, and schools, never very securely placed in the affections of the people, outside of New England, were allowed to fall into decay or entirely disappear.

The close of the War found the country both impoverished and exhausted. . . . It was indeed a critical period in our history, and that little or no attention was anywhere given to education was but natural. (pp. 5-6)

Although the years following the War for Independence were lacking in the establishment of new educational policies, it was during this period, with its growing concern for personal freedom and its desire for self-improvement, that
the soil for the development of America's common schools was being cultivated (Carper & Hunt, 1984).

The Awakening

Throughout the 17th and 18th centuries, the predominant responsibility for education rested with the family and with religious organizations, not with the governments. Following the "Age of Enlightenment" (Noble, 1954, p. 43) in Colonial America, the 19th century was marked with some of the greatest advances in American education. This period has thus become known as the "common school revival" (Graves, 1919, p. 165), or the "Awakening" (Melvin, 1946, p. 299). While Mann was the most conspicuous figure of the educational movement (Knight, 1941), the movement began a score of years before his time.

A marked shift to the social values of education began late in the nineteenth century, partly as the effect of the work of Herbart, a German philosopher and educator, Pestalozzi, the great Swiss educational reformer, and another German, Froebel, the father of the kindergarten. They emphasized the values of education for the improvement of society as contrasted with but not conflicting with mere personal advancement. (Grieder & Romine, 1955, p. 94)

Those promoting the reform of the common school believed that this new form of education would provide the necessary elements for meeting the needs of an exploding society. Carper and Hunt (1984) mentioned five
expectations of the common school for the early 19th century.

1. Training in common citizenship skills.
2. A common creed. (transmission of widely held values)
3. Common experiences. (mixing people of diverse backgrounds so that unity could be promoted)
4. Common opportunities for unequal persons. (especially members of different social and economic classes)
5. Commonly agreed-to reforms to improve society through the solution of social problems. (p. 170)

However, by 1984 they also noticed that only two of the five expectations, common experiences and common opportunities, are relevant to the present society.

Throughout the 19th century, a continued concern for educational opportunities resulted in the establishment of institutions for training teachers (Doughton, 1935), increased activity on the part of educational journals, and the publication of a number of reports from firsthand investigation of education in Europe, including the writings of Mann (1865). Pulliam (1982) commented that the greatest contribution before Mann was made by James G. Carter, who constantly advocated normal schools for Massachusetts and obtained legislation for school committees elected by the town for the support of high schools and a State Board of Education.

Stemming from his work in Massachusetts, Mann became known as the "Father of the American Public School" (Morgan, 1936, p. 3). Good (1947) credited Mann's success in educational advancement to the development of
educational sentiment through his political campaigns around the state in his bid for a legislative seat, his Annual Reports and Common School Journal, his encouragement of school libraries, and his establishment of state normal schools. Mann was indeed instrumental in establishing the first state normal school in the United States, opening on July 3, 1839 (Cubberley, 1925).

As an educational administrator, Mann was bitterly opposed by local politicians, Boston school principals, and the ultra-orthodox public for his liberal views that the dissemination of learning should be for all and not just the aristocracy (Graves, 1912). Mann's Seventh Annual Report, which referred to his European visits, and his championing of teaching methods became the center of the debate. Graves (1912) felt these difficulties were the makings of his reputation as an educational leader above that of a legislator.

As an experienced legislator, Mann was not an educational philosopher, but an educational visionary. Cubberley (1920), in addressing the battle for free schools in America, called Mann one of the great founders of the American educational system.

No one did more than he [Mann] to establish in the minds of the American people the conception that education should be universal, non-sectarian, and free, and that its aim should be social efficiency, civic virtue, and character, rather than mere learning or the advancement of sectarian ends. Under his practical leadership an unorganized and heterogeneous series of
community school systems was reduced to organization and welded together into a state school system, and the people of Massachusetts were effectively recalled to their ancient belief in and duty toward the education of the people. (p. 690)

During his service as Secretary of the Board of Education, Mann was instrumental in doubling the appropriation of funds for public education, increasing the number of teachers throughout the state, providing increased salary of the teachers, lengthening the school year, and bringing about skilled supervision and professional training (Binder, 1974).

Another contribution to the awakening of American educational reform was a systematic exploration of European education and organization of school administration. With the increasing pressures of an expanding nation, the district school systems, usually operated by the churches, were inadequate. These were the primary concerns to which the scholarly work of Henry Barnard was directed. As a well-traveled historian of European education and school administration, Barnard has been referred to as the "father of American school administration" (Pulliam, 1982, p. 80).

As the first secretary of the Connecticut State Board of Education, he undertook reforms similar to those of Mann in Massachusetts. But though he did not attack the district school systems, or "school societies" as they were called, the conservatives were so concerned about the new taxes Barnard was advocating for the support of public
education that they legislated him out of office four years later by abolishing the position (Noble, 1954).

After collecting material for writing a history of education in the United States for a year and a half, Barnard again entered the arena of educational administration when he became the first Commissioner of Common Schools for Rhode Island. Here, according to Knight (1941), Barnard was successful in establishing taxation for schools and improving the general conditions for education in Rhode Island. In 1851 he was rehired in Connecticut and encouraged to carry out and extend his reforms.

Barnard held the distinction of being the first United States Commissioner of Education in 1867. But, of all his accomplishments, according to Drake (1955), Barnard's writings, which give the best history of education in America before 1860, stand in first place.

During the latter part of the 19th century and the beginning of the 20th, great changes took place in American education (Grieder & Romine, 1955).

The conviction that elementary schooling was the birthright of every American child. Between 1852 and 1918 every state enacted compulsory attendance laws, with the effect that now more than 95 per cent of the children in the age group six to fourteen are in school. The idea of universal schooling has now been applied to secondary education, with the United States leading all other countries in the proportion of adolescents enrolled in school. (p. 82)

Change favoring practical education was stimulated by the signing of the Morrill Act in 1862 by President Lincoln
(Venn, 1964). In explaining the importance of this Act to the development of technical education, Grant Venn (1964) noted five implications for higher education.

1. A liberal and practical education was prescribed.
2. As the financial and philosophical basis of the state university systems, they opened the doors of higher education to a far wider public, removing forever the idea of a single education for a select few.
3. The act gave important status to the mechanic arts and agriculture.
4. This acceptance of vocationalism in the colleges was to have much significance in the later movement to extend vocationalism into the public schools.
5. This new form of education came to be accepted as vital to the national welfare, as a spur to economic growth. (p. 45)

Another notable 19th century change in American education which affected the lower levels of education and what should be taught in the local schools was the legal battle of Stuart vs. School District No. 1 of Village of Kalamazoo in 1874. According to Edmund Reutter, Jr. and Robert Hamilton (1970) this was a "landmark case" (p. 111) in establishing the right of local school boards to levy taxes for the support of local high schools and to offer courses beyond those required by the state. Binder (1974) concluded that the awakening period was indeed a time beneficial to all classes of Americans. Yet, according to Bennett (1926), one of the major developments in education coming from the 19th century into the 20th was the growing acceptance of industrial education as a part of the overall educational program.
Industrial Education

Melvin Barlow (1967), in agreement with Bennett (1937), gave an overview of how the educational awakening has directly affected industrial education.

Three basic threads . . . have had direct bearing upon the development of industrial education in the public schools: the growing importance of education in general, the change in the basic economy of the nation, and the activities of labor. (Barlow, 1967, p. 482)

Barlow (1967) explained that it is best to divide the concepts of industrial education into two basic parts in order to understand them.

Part one consists of Manual Training, Manual Arts, and Industrial Arts. Part two consists of Trade and Industrial Education, and Technical Education. In effect the two parts become a continuum providing industrial education experiences from the elementary school through two years of post-high school educational experience. (p. 482)

In the present study, special attention is given to those areas of industrial education referred to by Barlow as part one, that is, the subjects of manual training, manual arts, and industrial arts.

Manual Training

Following the ideas of Froebel about the place of kindergartens in the educational development process, Felix Adler established the Workingman's School and Free Kindergarten of New York in 1880 (Bennett, 1937). This was a unique school in that it combined the comprehensiveness
of an academic institution with the philanthropy of a "charity school." Charles Ham (1886) cited Bamberger, principal of the school, who gave the following as the purpose for establishing the school.

We [Adler and Bamberger], therefore, have undertaken to institute a reform in education in the following two ways: we begin industrial instruction at the very earliest age possible. Already in our kindergarten we lay the foundation for the system of work instruction that is to follow. In the school proper, then, we seek to bridge over the interval lying between the preparatory kindergarten training and the specialized instruction of the technical school, utilizing the school age itself for the development of industrial ability. This however, is only one characteristic feature of our institution. The other, and the capital one, is, that we seek to combine industrial instruction organically with the ordinary branches of instruction, thus using it not only for the material purpose of creating skill, but also ideally as a factor of mind-education. (pp. 337-338)

The early 18th century movement, according to Graves (1919), helped to clear the deck for the educational action in modern times.

While the mission of the eighteenth century may be interpreted as tending largely toward free movement and getting the individual under way, the mission of the nineteenth and twentieth has been gradually to regulate this movement,—to know the law and help the individual to adjust himself to it. (p. 3)

The impact of the developing industrial revolution in Europe and America, with the resulting social changes, soon made it evident that educational opportunities must be expanded to meet the needs of all persons (Cole, 1914). More and more of the responsibility for education was
transferred from the fields and apprenticeships to the schools.

Concurrently with these developments, American educators moved forward in the development of the public schools to provide a basic educated labor force. Seeley (1899) saw this as a new educational system emerging in America during the 19th century. Included in the new system were free secondary public schools, curriculums including manual training and basic skills in academics. Barlow (1967) noted that "By 1870 there were approximately 500 free public high schools in the nation. This number increased to over 6,000 by the end of the century" (p. 485). From this mixing process came the introduction of manual training into the American system.

Into the crucible went traditional educational ideas, social and economic needs, patterns of educational reform, and newer ideas from Russia and Scandinavian countries to form the beginnings of manual and trade education. (Barlow, 1967, p. 28)

The struggle to establish manual training in America can be seen in the works of educators such as John Runkle, Calvin Woodward, Henry Belfield, and James MacAlister during the last quarter of the 19th century. Although not an American, Victor Della Vos of Russia was also influential in establishing the concept of systematically teaching the elementary mechanical arts.

It was reserved for Russia to solve the problem of tool instruction by the laboratory process, and make it the
Runkle, President of the Massachusetts Institute of Technology and Professor of Mathematics (Ham, 1886), had a growing concern over the lack of ability which the graduates in the engineering department were showing in the manual arts (Barlow, 1967). Not until he visited the Centennial Exposition of 1876 in Philadelphia and saw the work of Della Vos at the Russian display, however, did the solution of skill development enter his mind. During a personal interview on May 22, 1884 with Ham (1886), Runkle recalled:

At Philadelphia, in 1876, almost the first thing I saw was a small case containing three series of models—one of chipping and filing, one of forging, and one of machine-tool work. I saw at once that they were not parts of machines, but simply graded models for teaching the manipulations in those arts. In an instant the problem I had been seeking to solve was clear to my mind; a plain distinction between a Mechanic Art and its application in some special trade became apparent. (p. 332)

Upon returning to Massachusetts, Runkle recommended to the Corporation of the Massachusetts Institute of Technology that they complete their course in mechanical engineering by adding a series of instruction shops (Runkle, 1877). Within months the School of Mechanical Arts was started and a new era for education in the United States was begun (Bennett, 1937).

By 1884 Runkle was even more convinced that the skill development of manual training was needed as part of the
educational process. Ham (1886) recalled asking Runkle the purpose of teaching manual arts, to which Runkle replied:

All teaching has in an important sense a double purpose: first, the cultivation of the powers of the individual, and second, the pursuit of similar subjects, by substantially the same means, as a professional end. Now we use our shops [laboratories] both for educational and professional ends. . . . In brief, we teach the mechanic arts by laboratory methods, and the student applies the special skill and knowledge acquired, or not, as circumstances or his inclinations dictate. (p. 332)

The work of Runkle may have been instrumental in introducing the general principles of Della Vos's "Alphabet of Tools," learning proficiency and skill in the manipulation of tools, into the American educational system; but it was the work of Woodward from Washington University in St. Louis that made an educational philosophy of it (Cremin, 1961). The first manual training school for students of high school age in the United States was established in 1880 by Woodward (Snedden & Warner, 1927). Because of his commitment to the development of manual training, Woodward has been given the title, "Father of Manual Training" (Olson, 1957, p. 54; Bennett, 1937; Bawden, 1950). It was not the intention of Woodward to establish specialized vocational training programs but to add a dimension to the educational process that would enable the students to comprehend the complexity and value of labor and materials. Woodward (1887), referring to a prospectus he wrote in 1879, commented:
One great object of the school is to foster a higher appreciation of the value and dignity of intelligent labor, and the worth and respectability of laboring men. A boy who sees nothing in manual labor but mere brute force, despises both the labor and the laborer. With the acquisition of skill in himself, comes the ability and willingness to recognize skill in his fellows. When once he appreciates skill in handicraft, he regards the skillful workman with sympathy and respect. (p. 6)

The following year, 1880, he expanded on his reasons why manual training should be in the school as part of the general education curriculum by explaining the type of curriculum that would be used at the Manual Training School in St. Louis.

The Manual Training School is not a mere workshop; the head is to be trained even more than the hand. Specific trades will not be taught; the tool-education will be liberal, extending impartially through all the shops.

It is not expected that every boy who attends the school will become a mechanic, but we have reason to believe that a boy's experience in the school will clearly indicate whether he is fit to become a mechanic or not. (p. 6)

Another concern of Woodward's (1887) in the operation of the school was that if the curriculum was teaching students to use tools, the school would naturally be tempted to put the students' skills into action and produce projects which could be sold and thus reduce the cost of education. To him, this concept was indeed unacceptable. The educational goal should not be to produce specific articles but to acquire skill in the use of tools and materials.

I fancy there is no more pernicious fallacy than this of making a school self-supporting by manufacturing for the market. Suppose you attempt to maintain one of
those popular humbugs, a commercial college, on that theory; or to run a full medical school, without endowment, on the self-supporting plan (the student would probably write prescriptions cheap, and cut off legs for half-price); or to manage a public school of oratory and English composition on the strength of an income derived from contributions to newspapers and magazines, and from orations made and delivered to order! Nothing could be more absurd, and yet the cases are closely parallel. No, do not be beguiled by the seductive promise of an income from the shop. Admit from the first the well-established fact, that a good school for thorough education on whatever subject costs money, both for its foundation and its support. (pp. 195-196)

The psychological values of education were of great importance in the educational process supported by Woodward (1890). For him the theory for shopwork was threefold. First, both manual training and intellectual development should be broad based and not directed at a specific point or need. Second, a systematic approach is essential for intellectual development or the using of apparatus and materials in the laboratories. Thirdly, the finished project is not the primary objective of education but rather the intellectual and physical growth which comes from the exercise (Bennett, 1937). On the door of Woodward's school this motto was carved (Snedden & Warner, 1927):

Hail to the skillful, cunning hand!
Hail to the cultured mind!
Contending for the world's command,
Here let them be combined. (p. 2)
For Woodward (1887) the ultimate objective of manual training in the school was to be part of a general education program.

The object of the introduction of manual training is not to make mechanics. . . . Every object of attention put into the schoolroom should be put there for two reasons,--one educational, the other economic. Training, culture, skill, come first; knowledge about persons, things, places, customs, tools, methods, comes second. It is only by securing both objects that the pupil gains the great prize, which is power to deal successfully with the men, things, and activities which surround him. (p. 229)

Ham (1886) explained that mental development, as compared to manual training, is an inward flow of information. When allowed to remain within, education becomes a selfish adventure. To free the mind, one must turn either to the voice or the hand for the sharing of concepts and theories. "It is through the hand alone that the mind finally impresses itself upon matter. In other words, thought and speech must be incarnate in things or they are dead" (p. 141).

The objective style of education, however, is given through manual training. The outward flow of information allows one to share and be active in helping the society in which he lives. "The skilled hand confers benefits upon man, and each benefit so conferred exerts the natural reflex and moral influence of a good act upon the mind of the benefactor" (Ham, 1886, p. 141).
The philosophy of Woodward changed dramatically from his days as Dean of the Engineering Department at Washington University and the opening of the Manual Training School in 1880. When Woodward asked Noah Dean, a carpenter at the University, to show engineering students how to use machines to make models of wood to illustrate certain mechanical principles, he did not realize the ultimate impact his actions would have on secondary education (Barlow, 1967). From his initial desire to train young engineers, Woodward grew to realize the tremendous impact manual training could have on all students and that they should not need to wait until they reach college for this understanding.

Speaking to the St. Louis Social Science Association in 1878, Woodward expressed concern that methods used by Runkle and Della Vos for manual training were not presently being properly developed. For years Froebel and his followers had shown the value of using manual dexterity activities in the kindergarten while more recently Runkle, Della Vos, and Woodward himself were using manual training on the college level. Ham (1886) recorded this statement from Woodward's speech: "The manual education which begins in the kindergarten, before the children are able to read a word, should never cease" (p. 333). Woodward went on to say:
One great object of the school is to foster a higher appreciation of the value and dignity of intelligent labor, and the worth and respectability of laboring men. A boy who sees nothing in manual labor but mere brute force despises both labor and the laborer. With the acquisition of skill in himself comes the ability and willingness to recognize skill in his fellows. When once he appreciates skill in handicraft, he regards the workman with sympathy and respect. (p. 335)

During this same period of time, the latter part of the 19th century, programs for manual training were established at the Massachusetts Institute of Technology--School of Mechanic Arts, Purdue University, Illinois Industrial University, the University of Wisconsin, and the Spring Garden Institute of Philadelphia. In 1884 two special schools were opened that should not be overlooked because of their importance in this developing educational process. The Baltimore Manual Training School, which opened in March of 1884, was the first manual training school to be supported with public funds. The Toledo Manual Training School was unique because there were programs available for both boys and girls (Stombaugh, 1936).

The interest in manual training did not end in the 1880s but continued to be supported by private individuals and a growing number of governmental agencies throughout the remainder of the 19th century (Dexter, 1906). The Chicago Manual Training School, the first independent manual training institution, resulted from the realization
of a number of leading Chicago businessmen that the economic value of such a school would benefit their city.

Also during this period of educational development, one of today's leading technical institutions, the University of Wisconsin-Stout, was established. This institution resulted from an offer given the Menomonie, Wisconsin, Board of Education by James H. Stout in October, 1890. Lawrence Cremin (1961), gave this account of that offer.

I will place upon the school-grounds, in a place to be designated by the Board of Education, a building of proper kind and size, furnished with all the equipments necessary for the instruction of classes of boys and girls in the subjects included in the first year of a course in manual training. I will also pay the salaries of the necessary teachers, the cost of all necessary materials and supplies, and all the contingent expenses for three terms or for a time equivalent to three school terms, except such a part thereof as shall be paid by five hundred dollars which is to be provided by the board of education. (p. 143)

Stombaugh (1936) also noted that Stout's philanthropic interest in the school was so strong that when the school burned down four years later, he again donated the necessary funds to rebuild and keep the school in operation.

The late 1870s and the early 1880s continued to be turbulent times for the manual training movement (Cremin, 1961). As new manual training high schools were established, based on the concepts of Woodward, the controversy over manual training in the school systems grew strong within the educational associations. Even
William Harris, a former teacher with Woodward at Washington University, became outspoken against the value of manual training as a part of general education. In a speech given to a National Education Association meeting of superintendents in 1889, Harris warned that teaching students to do carpentry or other manual labor is only giving them a limited knowledge, whereas, teaching them to read opens the doors to all human knowledge. Cremin (1961) cited Harris as saying:

> It is the difference between a piece of baked bread, which nourishes for the day, and the seed-corn, which is the possibility of countless harvests. Education that educates the child in the art of self-education is that which the aggregate experience of mankind has chosen for the school. (p. 31)

Woodward's faith in the future of education was based on his desire for a broader base for general education and not a narrower style as Harris was implying.

> The education which the manual training school represents is a broader, and not, as the opponents of the new education assert, a narrower education. We put the whole boy to school, not a part of him, and we train him by the most invigorating and logical methods. We believe that mental activity and growth are closely allied to physical activity and growth, and that each is secured more readily and more fully in connection with the other than by itself. (Woodward, 1887, p. 217)

In spite of the challenges to manual training, it continued to expand in the schools as a result of the defense established by Woodward (Cremin, 1961).

Another of the supporters of manual training was MacAlister. In 1883 he left his job as an administrator in
the Milwaukee schools to become the superintendent of public schools in Philadelphia. Convinced that manual training should be a part of the educational process, he determined to integrate it into the Philadelphia educational system. At the annual meeting of the American Institute of Instruction the following year, he explained his concept of the manual training program.

A word or two must be added concerning the proper sphere of the manual-training school. It does not mean the fitting of pupils for special industrial occupations. Boston, Philadelphia, New York, may find it to their advantage to establish schools for the training of artisans, just as they have schools for the training of engineers and lawyers and doctors; but the moment the manual-training school undertakes to do this, it will forfeit its place as a part of the general educational system. The establishment of trade schools is a different question altogether; manual training, as I understand it, aims at general results. Its purpose is to develop human beings on the executive side of their nature as well as on the receptive. Its aim is to equip a boy so that, when he gets in the world, he will be able to do as well as to think. The training is to be so generalized in character that it will prove an accomplishment which will stand its possessor in good stead wherever manual skill can be made available. (Bennett, 1937, p. 365)

Two years after his arrival in Philadelphia, and only one year after the opening of the Baltimore Manual Training School, MacAlister put his words into action and established the second manual training high school of its type to be supported at public expense. In September of 1885 the Philadelphia Manual Training School opened as part of the public school system of Philadelphia (Bennett, 1937). With a growing debate between manual training and
vocational training, the action of the school authorities of Philadelphia was the strongest public endorsement of its time for manual training as part of general education and revolutionized the schools of Philadelphia (Ham, 1886).

Another individual from Philadelphia involved in manual training was a black woman named Fanny Jackson Coppin. She was born as a slave in 1837 in the District of Columbia and freed as a young girl. She pursued an education at Oberlin College in Ohio, and following graduation in 1865, she accepted the principal position at the Institute for Colored Youth in Philadelphia. Encouraged by the Philadelphia Centennial Exposition of 1876, Coppin set out to establish a training center in industrial skills for colored men and women in 1889 (James, 1971). Established in 1837 the Institute was moved to Cheyney, Pennsylvania in 1904, renamed Cheyney State College in 1959 and Cheyney University of Pennsylvania in 1983.

By the end of the 19th century, manual training had spread across the nation. Realizing they were not keeping up with the trends in education in the East, the Board of Education for San Francisco (1894) appointed a special committee to report on the need of manual training within the system. The report is summarized in these statements:

Manual Training in the United States has taken a broader ground . . . it does not attempt to manufacture mechanics, but to give practical ideas to all pupils, to train the mind and to interest and obtain a proper respect from all for manual labor.
Manual Training for girls needs but little argument for its support. They are entitled to the best mental training possible, and the importance to them of the knowledge of sewing, of cutting and fitting of clothing, artistic hand work, and of cooking, are such that manual training for them would be naturally found in these directions.

If we could do our duty by this department by a waft of the magician's wand . . . we should bring into existence with the morning's dawn not less than two well equipped Manual Training High Schools. . . . Every grammar school would have its class or classes in some form of Manual Training for both boys and girls.

The manual training movement was indeed expanding across the United States from East to West and North to South.

Manual Arts

As the century drew to a close, additional movements affected the style and quality of manual training (Anderson, 1926). With the growing labor demands of the industrial revolution in America, the educational system was called upon to produce not only students capable of reading and writing but also those who would be productive workers for an industrial society. Two of the educational movements reflecting this change were known as the "Sloyd Movement" (p. 108) (also spelled Slojd) and the "Arts and Crafts Movement" (p. 70).

Sloyd Movement

The Sloyd Movement was not unique to America but an altered program of one also operated in Sweden about 1875.
Otto Salomon (1888), director of the Sloyd Normal School at Naas, Sweden, and instrumental in its development, explained the aims of the sloyd system as:

This formal education which Slojd has in view aims principally at instilling a taste for and love of work in general; inspiring respect for rough, honest bodily labor; training in habits of order, exactness, cleanliness and neatness; accustoming to attention, industry and perseverance; promoting the development of the physical powers; training the eye and sense of form. (p. 202)

Eugene Martin and Joseph Luetkemeyer (1979) explained that the original concept of sloyd was not that of Salomon but rather the ideas implemented by Uno Cygnaeus.

The methods used by Gustaf Larsson in introducing the sloyd system in the Sloyd Training School of Boston were somewhat different, however, from those used by Salomon in Sweden. Larsson found it necessary to make changes to the models being used for instruction in order to allow for drawings, additional flexibility and creativity in meeting the needs of students in American schools (Stombaugh, 1936). In a paper presented at the 11th annual convention of the Eastern Manual Training Association held in Philadelphia on July 6, 1904, Larsson explained that basically the instruction was to go from the easy to the difficult or simple to complex. It was assumed that, if students were given a good foundation, they would then be able to comprehend the process of going from the concrete levels of doing to the abstract. To accomplish this,
Larsson felt that it was more important that the teacher be trained in the pedagogy of teaching than to be trained as a craftsman and that students be allowed to develop projects of their own interest (Bennett, 1905).

Following the example of the Sloyd Training School of Boston, experiments were carried on in other cities as well to determine the value of the sloyd system as compared to the Russian manual training program which was influencing the American educational scene. As a result of these experiments, the sloyd system, according to Anderson (1926), found a better acceptance in the grammar schools than in the secondary or college institutions because it was better suited to the age of the pupils and had a greater appeal to their interests.

The popularity of the sloyd system, with its ability to draw on the student's interests and self-direction, grew rapidly within the United States as it had in Europe. Stombaugh (1936) stated that "Five years after the Sloyd Training School had been established, one quarter of the secondary schools offering manual training work reported courses in sloyd" (p. 101).

**Arts and Crafts Movement**

Another of the influential movements of this time (1880-1900) was the "Arts and Crafts," which originated in England under the leadership of men like John Ruskin and
William Morris. Their efforts were an attempt to offset the decline in individualized craftsmanship during the industrial revolution (Anderson, 1926).

Abby Marlatt (1904) of the Manual Training School in Providence, Rhode Island, defined the arts and crafts movement as "those manual arts in which one individual, having created his own design, beginning with the raw material carries it through to complete form" (p. 584).

An American, Charles Leland, made the acquaintance of Morris in England and was impressed with how this style of manual training could be used not only for a student's manual dexterity development but also his cultural development (Stombaugh, 1936). In 1880, about the same time that Woodward was beginning the Manual Training School in St. Louis, Leland was granted permission by the Philadelphia School Board Committee on Industrial Education to implement a new program in an unused portion of the Hollingsworth School (Bennett, 1937).

The methods used by Leland and later by J. Liberty Todd, a fellow worker in Philadelphia, were substantially different than those used in the manual training schools of their time. Instead of placing the emphasis on using models and required activities, they placed it on meeting the interests of the student. Another striking difference in the arts and crafts movement is that a strong emphasis
was given to handwork rather than machine work in
developing the spirit of craftsmanship (Stombaugh, 1936).

Bennett (1919), a Professor of Manual Arts at Bradley
Polytechnic Institute and editor of the Manual Training
Magazine, expressed the concern that manual training was
becoming too stereotyped and that, as times changed, so
should the context of education.

The public school has a noble record and should not be
diverted from its traditional purpose, which manifestly
is to round out preparation for living, not in the
remote or the near past, but to-day, in modern
surroundings. . . . It is the schoolman's duty to
analyze present conditions, determining what
constitutes a preparation for adequate living, and then
shape the work of his school accordingly. (pp. 20-21)

As the "Father of Manual Arts" (Olson, 1957, p. 62),
Bennett (1919) viewed the role of manual training much
differently than that of manual arts. He expressed a
concern for the impact of industry upon social development
and called for the development of programs to educate
consumers in the processes and materials of industry.

A very important result of this development in the
industries is the need of men with a wider knowledge of
the materials and processes of industry and the
principles upon which the processes and the use of the
materials rest. This knowledge is not being handed
down from father to son . . . but this need for a wider
knowledge of the principles and processes of industry
is not confined to the workers in these producing
industries. Every man who would intelligently use the
modern conveniences of his own home, or the
labor-saving devices and conveniences of business life,
must know something of the materials and principles of
industry; and if he is to have any adequate
appreciation of the product—if he is to judge the
quality of the thing he purchases or uses, he must know
something of the process that produced it. (pp. 14-15)
Realizing the rapid change in the industrial needs, Bennett (1919) advocated that the manual arts be classified in five or six subject areas rather than the traditional woods, metals, and drawing of the manual training period. He suggests the retention of drawing as a part of the "graphic arts" and woods and metals within the "mechanic arts." Added to these should be programs in "plastic arts," "textile arts," "book-making arts" and possibly the "culinary arts" (p. 16).

John Feirer and John Lindbeck (1964), looking back at the turn of the 20th century, have this to say about the importance of the concepts for manual arts.

It signaled emphasis upon creative design as an integral part of manual training, a wedding of technical skills and sensitivity to form and function. The concept manifested itself in the very desirable student involvement in the designing as well as the manufacture of projects. In this activity, the project was the goal and the tool skills and knowledges were only means of achieving this end result. Manual arts instruction did not regard industry as the prime source of tool processes to be used as a basis for instruction; instead, it studied media and process in a strictly craft relationship. This movement, like its predecessors, was to add substance to the emerging theory of Industrial Arts as the final development stage of manual education. (pp. 13-14)

The increasing interest of manual arts teachers in design is evident in the number of papers and discussions on the topic in the reports of the National Education Association and of organizations for teachers of art and manual training.
Industrial Arts

Once again the societal influences were altering the role for industrial education. Barlow (1967) depicted the changes in society at the beginning of the 20th century as typical in displaying the need for industrial education.

The forces of society bear heavily upon the program of industrial education, and it is in the nature of industrial education to reflect these forces accurately. Industrial education has been conditioned to change, particularly change of a social and economic nature. The actual program of modern industrial arts bears little resemblance to the manual training of the early years. The content and procedures have been adjusted continuously. Fundamental principles remain the same, but a change in social and economic environment demands that these principles be interpreted, and as far as possible implemented, according to this environment. (p. 494)

The cultural trend in manual training was severely criticized early in the 20th century by persons both within and outside the educational field. Although men such as Runkle and Woodward were pioneers in opening the way for manual training, they were now being criticized for being too narrow in their concept of training (Stombaugh, 1936). The psychological and holistic concepts of manual training had lost their importance with the sloyd and arts and crafts movements which made it easier for those interested in vocational training to lead the way.

In attempting to solve the growing philosophical split between the manual and vocational training movements, Charles Richards (1904), Director of the Manual Training Department at Columbia University, challenged manual arts
teachers to reconsider the content of their courses and consider the name "Industrial Arts" rather than "Manual Arts" for describing their field. Writing in 1904, he became one of the first to suggest the new name.

Behind every other subject in the curriculum is a body of ideas of fundamental meaning and importance. The industrial arts, which stand for one of the most vital and important phases of modern civilization, throw away their claim to recognition by masquerading under a term at once inappropriate and misleading. Such a term is both an obstacle to the full and free development of our work and its recognition and appreciation on the part of the public.

Shall we continue to carry this incubus of an unsuitable name, or shall we do what we can to substitute a better?

In the hope of enlisting consideration and discussion, the writer proposes the term suggested above: Industrial Arts. Such a term indicates a definite field of subject matter. The word Art is inclusive of both the technical and aesthetic elements, and the qualifying word points specifically and comprehensively to the special field of our material (pp. 32-33).

Two additional educational leaders that were influential in the establishment of the validity of industrial arts were James Russell and Fredric Bonser. Russell (1909), writing in the Educational Review, criticized the practices of manual training in saying:

Subtract from our present manual training course that which is essentially applied design and those exercises which are intended to afford motor expression in the learning of other subjects in the curriculum, and what is left is an incoherent, unorganized series of projects without purposes or educational values (p. 439).

His criticism, however, was mainly against the practices and not the merit of the program in the
curriculum. He proposed that the model of manual training be eliminated and that the students use the arts of industry as the content base for instruction. He was even so bold as to suggest that such a program be called "Industrial Arts" and study be given to production, manufacture, distribution, and consumption of natural and synthetic products.

To Bonser, another of the educational leaders, credit should be given for helping to clarify the role of industrial arts. He, like Russell, was concerned that the scope of manual arts was too narrow and would be more viable if the curriculum content base was developed around the concepts of industrial methods rather than around the skills. The definition of Industrial Arts given by Bonser and Mossman (1923) expressed this new emphasis.

As a subject for educative purposes, industrial arts is a study of the changes made by man in the forms of materials to increase their values, and of the problems of life related to these changes. (p. 5)

Encouraged by the support given by John Dewey, men like Richards, Russell, and Bonser continued to press for the continued acceptance of industrial arts as part of general education to avoid being overtaken by the vocational movement. As explained in Chapter I, Dewey (1900), Professor of Education at Columbia University, supported the social significance of manual arts processes but was opposed to the vocational concept. He goes on to explain:
In educational terms, this means that these occupations in the school shall not be mere practical devices or modes of routine employment, the gaining of better technical skill as cooks, seamstresses, or carpenters, but active centers of scientific insight into natural materials and processes, points of departure whence children shall be led out into a realization of the historical development of man. (p. 17)

The depression and international conflicts took their toll on education as well as on the economy and social structures of America (Barlow, 1967). Although the controversy of program need had declined, educational leaders such as William E. Warner of The Ohio State University continued to strive to improve the quality of Industrial Arts. The "Laboratory of Industries" concept was designed to look at industry as a whole and not at skill development as practiced in manual training and vocational education.

In 1947, however, a new and refreshing concept was proposed by Warner. Instead of basing programs on traditional industrial operations, Warner suggested that the curriculum reflect the concept of technology (Lux, 1981). Supporting the change from industrial arts to the study of technology, Delmer Olson (1963) wrote:

The first half-century of industrial arts has been an interesting one. Conceived in a spark of idealism and illumined with the light of philosophy, industrial arts contained the potential for development into a system of fundamental education for all boys, girls, and adults. But strangely, it chose to restrict itself in curriculum and to serve but a small part of the school population. It may be argued that this was not of the industrial arts' making; yet the fact remains that the
field of arts has had full responsibility for its own growth and development—and still has. (p. 27)

Once again American education was faced with a new challenge. Will Technology Education be the solution to the original concepts of Manual Training in the educational system?
CHAPTER III

EARLY ADVENTIST EDUCATION

The last half of the 19th century was a crucial time period in the development of a church organization known as the Seventh-day Adventists. In his book, *Light Bearers to the Remnant*, Richard Schwarz (1979) capsulized the roots of the church prior to the 19th century.

Seventh-day Adventists believe that their roots in history go back a long way. Back, not only to the Millerite movement of the 1830s and 40s, but farther: to Wesley and the eighteenth century Evangelical revivalists, to the great Protestant Reformers and to such earlier dissenting groups as the Lollards and Waldenses. Back to the primitive Celtic Church of Ireland and Scotland, the persecuted church of the first three centuries after Christ, back to Christ and the apostles themselves. Yet it is obvious that modern adventism developed in the setting of the great advent awakening which took place in the early years of the nineteenth century. (p. 13)

Following the great disappointment of October 22, 1844, the date on which the Millerites believed that Christ was to return, there was a crucial need among the followers for reevaluation and reassurance of their beliefs (Vande Vere, 1972). This reassurance was to come from the leadership of three early believers: Capt. Joseph Bates, James White, and Ellen Gould Harmon later to become Mrs. E. G. White.

The original development of the Millerite movement had taken place in New England and New York during the second quarter of the 19th century (Ahlstrom, 1972). Finding it
difficult to rekindle the spiritual awareness among the earlier Millerite believers for the new Sabbatarian Adventist message, Bates, the Whites, and others traveled long distances to spread this new message in what they hoped would be more fertile ground (Spalding, 1961, vol. 1). In The Wisdom Seekers, Emmett Vande Vere (1972) gave an explanation for the rejection, by former Millerites and those individuals sympathetic to their message, of the new messages from Bates and the Whites.

Yankees and New Yorkers were reluctant to accept new ideas—and toward Adventism they had developed an antagonism. In their opinion Millerism had been sheer folly, and the persistent Adventists ought to end their cries of approaching doom. (p. 12)

The new West of Michigan, Illinois, Indiana, Wisconsin, and Ohio were becoming a growing area for new believers. By the middle of the 18th century the Sabbatarian Adventist leaders, such as the Whites, discovered that the acceptance of the message was greater among the pioneers moving West to the Great Lakes and beyond than in the East (Olsen, 1925).

Realizing the vastness of the geographical area to be covered and the possibility of using printed material to the advancement of the Advent message, James White began publishing The Present Truth in 1849 at Middletown, Connecticut (Andross, 1926). By 1851 the Whites had moved to Saratoga Springs, New York, and James White continued to publish religious papers but changed the name of The
Present Truth to The Advent Review and Sabbath Herald in 1852 (Olsen, 1925). This move, however, was also short-lived. Following an 1853 tour of Battle Creek, Michigan, and seeing the enthusiasm of the new members there, the Whites chose to accept an offer of expanded space and equipment from John Preston Kellogg, Henry Lyon, Dan R. Palmer, and Cyrenius Smith to relocate the printing offices for The Advent Review and Sabbath Herald, referred to as the Review and Herald, to Battle Creek. This move, as explained by Arthur Spalding (1961, vol. 1), combined with the rapidly growing number of believers in the area, gave Battle Creek the distinction of becoming the original headquarters for the General Conference of Seventh-day Adventists in 1863.

There were other advantages for the publishing work besides spreading the theological beliefs of the Sabbatarian Adventists. The Review and Herald was to be instrumental in spreading the word for health reform to the new believers. By 1866 the concern among the Seventh-day Adventist members for health reform had grown enough to encourage the establishment of the Western Health Reform Institute at Battle Creek. Olsen (1925) considered this as another major event for the newly formed Seventh-day Adventist church.

The opening of the Health Institute marked an era in the history of the development of our work. It not only gave tangible outward expression to the health
principles as a definite phase of denominational belief, but it supplied an effective instrumentality for the propagation of those principles. (p. 269)

"Adventists," as they were often referred to (Knight, 1985, p. 20; Schwarz, 1979, p. 98), had not chosen to make the development of an educational program one of their initial goals. It was, in fact, the last of the church's major institutional developments:

It [education] was preceded by the establishment of a strong publishing work that focussed on developing and disseminating gospel literature (1849), a centralized ecclesiastical organization (1863), and a vigorous health-care program (1866). (Knight, 1984, p. 85)

In addition to the theological and health messages that were being promoted through the Review and Herald, the same presses were being used to provide guidance for the youth of the Sabbatarian Adventists (Howell, 1935). In an effort to address the developing dilemma of not having a school to which the Adventist believers could send their children, James White began printing The Youth's Instructor in 1852 for the purpose of supplementing the public educational system by supplying special material enabling parents to train their children in biblical principles at home. With the expansion of the publishing work came a growing concern for the role of education within the newly organized church.

To examine the role of education for the early church, and its foundational principles of educational development, it is helpful to examine the philosophical ideas of those
early educational leaders on the topic. Edward Cadwallader (1958) recommended two sources for the enlightenment of the history of Seventh-day Adventist education, each of which reinforces the other.

One source is that abundance of reproof, counsel, and principles of education found in the writings of Mrs. E. G. White . . . The other source is the chronicle of events in the rise and growth of Seventh-day Adventist system of schools, an acquaintance with which will enable the student of education to better understand the former source. (p. 4)

It is to the latter of these sources recommended by Cadwallader that this study is focused.

Writing on the history of Seventh-day Adventist education, George Knight (1983) indicated three separate groups of individuals that were leaders in establishing the church's educational system. From these, special attention for this study was given to those influencing the development of manual training. The initiators of the educational programs include James and Ellen White, Goodloe Bell, and Sidney Brownsberger. The second wave of educators, the reformers, included William Prescott, John Harvey Kellogg, Edward Sutherland, and Percy Magen. Following the turn of the century, one other individual was critical to the stabilizing of the curriculum and equalizing the educational emphasis, Fredrick Griggs. It was the work of these individuals and support from others that helped make the Seventh-day Adventist educational
system into what Rogers (1985) noted as the largest Protestant parochial school system in the world.

The Initiators

The increasing concern over the declining quality of public education was not unique to the growing number of Adventist believers. In a pastoral letter written in 1792, Catholic Bishop John Carrol warned his congregational parents of the growing dangers of public education and encouraged them to see the importance of a lifelong Christian education. This controversy grew for the larger portion of the 19th century and in 1884 the Catholic bishops of America, with the support of the Vatican, formally stated their position at the Third Plenary Council of Baltimore. They called for a parish school near every church and that "all Catholic parents are bound to send their children to the parish school" (Carper & Hunt, 1984, p. 6).

Responding to many of the same feelings and concerns for the inadequate spiritual training within the public schools as other Christians were having, Cadwallader (1958) noted that a group of Adventist believers in New York decided to establish an independent Christian school at Buck's Bridge in 1853. This one-room school lasted for three years with the unique distinction of having a new
teacher each year. It was also unique in that it was the first attempt at Christian education by Adventist followers.

With the failure of the Buck's Bridge educational endeavor in 1856, no additional attempts at operating a school for the Adventists were made until 1857. This time the school was located in Battle Creek, Michigan (Knight, 1983). Meeting with the same demise as the Buck's Bridge school, three separate attempts at establishing new schools at Battle Creek were held between 1857 and 1867.

Even though the educational endeavors of the early Adventist church were slow in developing, the pattern of development proved not to be far from that of the educational systems developing throughout the rest of the country. Knight (1983) added this advice for understanding the setting in which Adventist education was developed.

It is important to recognize that the early Adventist educators lived and operated in the complex social, educational, and religious milieu of the late nineteenth and early twentieth centuries. They were struggling against the same evils as their contemporaries, and they arrived at many of the same solutions. They were not unique or ahead of the reformers of their time, but, on the other hand, they were well in advance of the accepted educational mentality of their day. (p. 8)

Indeed the initiators felt the pressures of educational reform taking place in the common schools across America. The development of the Seventh-day Adventist education
system, therefore, is seen through the individual efforts of the early Adventist educational leaders.

James White
(1821-1881)

James White, "the leader who probably did more than any other man to promote education within the early church" (Cadwallader, 1958, p. 2), was born the fifth of nine children. Because of a physical condition with his eyes, he was denied the privilege of an education until he was 19 years of age (Graham, 1983). Appreciating the value of an education, he sought to help others and taught school for two years between 1841 and 1842. Referring to his love for teaching, White (1868) wrote: "I loved this world more than I loved Christ and the next, and was worshiping education instead of the God of Heaven" (p. 15). It was this love for education and God's work that, according to Roy Graham (1983), would make White the primary initiator of education within the Seventh-day Adventist Church.

In dealing with the importance of education, as compared to the other needs of the Sabbatarian Adventists, White was perplexed as to what should be recommended to the new believers. If on one hand, Vande Vere (1972) pointed out, a school were established, one might raise the question as to how sincere the believers were about the
imminent return of Christ. Cadwallader (1958) summarized the issue as:

At first many of the parents were prone to believe that the Lord's coming had been delayed for a short time only, and that their children's education was not very important as they would not likely attain adulthood on this earth. After the passing of a few years however, parents began to sense the need of education for their children and sent them back to public school or provided for their learning at home. (p. 5)

If, however, schools were not established, Vande Vere (1972) went on to explain, the existing dilemma would grow and improper actions might be taken by individual believers trying to solve the situation in their own limited way.

In 1862 a church member, W. H. Ball, concerned with sending his children to public schools because of the growing problems with poor discipline and the teaching of values not supported by Adventist beliefs, wrote to White, editor of the Review and Herald, asking if it was:

... right and consistent for us who believe with all our hearts in the immediate coming of the Lord, to seek to give our children an education? If so, should we send them to a district or town school, where they learn twice as much evil as good? (White, 1862, p. 29)

The reply given by White became a catalyst in laying a foundation for the need and development of a system for education within the church. He wrote: "A well-disciplined and informed mind can best receive and cherish the sublime truths of the Second Advent" (p. 29).

This belief in the disciplined and informed mind, however, was not a new philosophical concept for White.
Writing in the *Review and Herald* five years earlier on the educational issues facing the Sabbatarian Adventists, he gave three characteristics of a Christian education:

First, education of the child is an essential part of human development. A poor education is indeed better than no education.

> It would be far better to send children to our common schools, as demoralizing as they are, where their minds may be occupied with their studies during school hours, and where they may receive some good mixed with the bad, than to turn them out into the streets, where they can get no good, but learn the habits and vices of street sinners. (White, 1857, p. 125)

Second, the best education for Christians is one which is in harmony with their theological beliefs.

> Our children may be separated from the poisonous influences of both school and street associations. In many locations Sabbath-keepers can employ pious and devoted teachers, who, with the united efforts of parents at home, can do much in leading their children in the path of virtue and holiness. (White, 1857, p. 125)

Finally, the education of the children begins well before the formal years of schooling; indeed it begins in the home with instruction given by the parents.

> Mothers may be the best teachers of their little ones. Fathers can spend those hours, too often spent from home in worse than useless chit-chat, in teaching their sons and daughters. (White, 1857, p. 125)

Following the failure of the schools at Buck's Bridge and Battle Creek, White had remained sceptical concerning the possibility of successful educational institutions.
within the church. Writing to William Russell, White (1861) said:

We have had a thorough trial of a school at Battle Creek, under most favorable circumstances, and have given it up, as it failed to meet the expectations of those interested. (p. 134)

Within ten years, however, White was to reconsider his position on education for the children of Adventist believers and envisioned the need of not only an education, but an education within a denominational school. Despite the failures of education at Buck's Bridge and Battle Creek, James and Ellen White were supportive of the development of a denominational school. White (1872a) writing in the Review and Herald, summarized the questions being raised by church members, in regard to the growing need of an educational center in Battle Creek.

These are questions which have been agitating the minds of the brethren in this place more especially for a few weeks past. Shall we take hold, as a people, of the subject of education, and form an Educational Society? Shall we have a denominational school, the object of which shall be, in the shortest, most thorough and practicable way, to qualify young men and women, to act some part, more or less public, in the cause of God. Shall there be some place provided where our young people can go to learn such branches of the sciences as they can put into immediate and practical use, and at the same time be instructed on the great themes of prophetic and other Bible truth? (p. 144)

In responding to the positive support of church members for developing an educational center, White (1872b) announced in the Review and Herald that a school was to be established at Battle Creek, for two specific purposes.
The circumstances which it [the school] is intended to meet are these: There are persons all through our ranks, who have come to years of maturity, who have convictions that they ought to do something to directly forward the glorious and important cause in which we are engaged. To this end, they want immediately to acquaint themselves thoroughly with the teachings of the Bible in reference to those great truths which pertain to this time. But at the same time, they feel that they lack in education, so that they could not use the knowledge of the truth after it was obtained, for the benefit of others, either in the way of writing or speaking.

Now there are plenty of places in the land where any of this class could go to obtain an education in other languages, grammar, rhetoric, logic, history, philosophy, and the sciences in general; but they would lack the other advantage which they would need, that is, the society and influence of those of like faith, and lectures and instruction on the different points of Bible truth as they hold them.

This is the point which this school is especially designed to meet; and it is proposed to make provision for instruction in all branches of education, so that, while persons are equipping themselves from the armory of Bible truth, their educational deficiencies may at the same time be supplied, and they go forth, after a due course of training, prepared to wield those weapons for the advancement of the cause. (p. 168)

On June 3, 1872, the Seventh-day Adventist school at Battle Creek was opened, under the direction of Goodloe Harper Bell as principal, with the full support of James White. With the opening of the Battle Creek school came the beginning of a denominationally supported educational center for Seventh-day Adventists (Knight, 1984).

Encouraged with the establishment of a school at Battle Creek, White set out anew to finish what he felt was truly needed in the church at that time. The school which Bell had started was primarily an elementary school for the children of those living near Battle Creek. What White was
looking for was a place of advanced learning where students could come and be trained as workers for the cause of God. Speaking before the General Conference, White (1873) commented on the type of education that should be offered.

Probably there is no branch of this work that suffers so much at the present time as the proper education of men and women to proclaim the third angel's message. . . Now I say we want a school. We want a denominational school, if you please; not, as I have said, to give men and women a long course of thorough education. I don't not know as we have time for this. But we want a school in which the languages, especially the spoken and written languages of the present day can be taught, and learned by young men and women to prepare them to become printers, editors, and teachers; and if we can do no more, where our young men that are about entering the ministry, and women, too, who are to be laborers in this great work, can be instructed thoroughly in the common branches, where their minds can be disciplined to study, where if it is not for more than three months, our young men may have the best instruction, and may, during that time, at least learn how to study. (p. 181)

The appeal by White for additional educational organization was taken into consideration by the General Conference, and by March of 1874 the Adventist Educational Society was established. White continued to support this new educational endeavor until his death in 1881.

Goodloe Harper Bell (1832-1899)

With increased interest for education among the Adventist believers at Battle Creek, stemming from White's 1862 Review and Herald article on the need for educating children in Christian schools, another attempt was made to
establish a school at Battle Creek in 1867. This school, referred to as Bell's "Select School" (Graham, 1983, p. 52), under the tutelage of Goodloe Harper Bell, remained in existence rather spasmodically until 1871. The year 1872, however, marks the official establishment of a school supported by the General Conference of Seventh-day Adventists (Vande Vere, 1972). Responding to the growing demand for acceptable Christian education within the church, the General Conference, located in Battle Creek, voted to sponsor Bell and his "select school" as the denomination's first official educational center (Schwarz, 1979). From this one-teacher, twelve-student school was to develop the denominational educational system that would grow in proportion to a mustard seed (Cadwallader, 1958).

To understand the impact of Bell on denominational education, it will be helpful to look at the educational background and philosophy of education which were his driving forces. Cadwallader (1958) saw Bell as one of the influential educational developers in the early years of the Seventh-day Adventist Church.

Born April 7, 1832, near Watertown, in Northern New York, Goodloe Harper Bell was the youngest of twelve children of David and Lucy Ann Bell. David Bell moved his family West into Michigan between 1850 and 1851 (Lindsay, 1983).
Supported by the writings of other Adventist historians (Olsen, 1925; Cadwallader, 1958; Schwarz, 1979) Lindsay (1983) explained that Goodloe Harper Bell attended Oberlin College for a short while. Bell, leaving Northern New York went to Oberlin, Ohio and after a short stay of a few months moved to Michigan. Although the enrollment records at Oberlin College do not show a Goodloe Harper Bell attending that institution, it is possible that he may have taken classes during the winter school of 1850. Records were not kept at that time of students or classes for the winter school. J. C. Bartholf (1899), writing on the life of his close friend and teacher Bell, also referred to the short period of time Bell spent at Oberlin.

[Bell] moved still farther west, settling near Oberlin, Ohio, where the now famous and successful Oberlin College had recently been opened. This change was a most gratifying one to the aspiring and studious young man, as it gave promise of affording him the much-coveted opportunity of acquiring a college education. He entered the school, and remained there a short time; but he was doomed to bitter disappointment in realizing the bright dreams of securing a thorough college training. Soon after entering the institution his family deemed it wise to make another move still farther west, this time settling near Hillsdale, Mich., and still later, in the vicinity of Grand Rapids. (p. 102)

This short educational experience at Oberlin may have had a significant impact on the educational philosophy of Bell in years to come (Lindsay, 1983).

If Bell did participate in the winter school, it would have been long enough for some of the reform ideals of his teachers to make an impact upon his life. The Christian principles for which Oberlin stood, its high
standards of personal morality, the Bible-centered curriculum, the combination of manual work and study, and the emphasis placed upon agriculture were all principles Bell would later strongly uphold, especially after 1872. (p. 13)

The historical accounts (Bartholf, 1899; Olsen, 1925; Spalding, 1961, vol. 1; Lindsay, 1983) of Bell's early educational work in Michigan indicate that he spent the years between 1854 and 1866 as a teacher in central and western Michigan. Even though the local and state records do not show Bell as a teacher during this time, as most records did not list individual teachers, Allan Lindsay (1983) documented from state records the existence of Bell as a school inspector and concluded:

Bell was engaged in teaching and farming in the Lisbon district between 1854 and 1863. For at least three of those years he served as visiting inspector of schools in Chester Township. (p. 22)

Bell was proud of the time which he had spent teaching young people in the schools of Michigan. When he was editor of The Youth's Instructor, Bell (1870) reflected on his teaching experience and his concern for the training of young people.

Having spent many years in the training of young, we feel an interest in them that it would hardly be possible for us to feel under other circumstances. (p. 189)

Historians do not fully agree on the reasons for Bell's first visit to the Adventist health center at Battle Creek in 1866. Bartholf (1899) stated that Bell first visited the institute to bring a friend that was in need of the
services which the health center provided. Being impressed with what he saw, Bell returned the following year and entered the institution for his own benefit. Schwarz (1979) also used the 1867 date as the beginning of Bell's acquaintance with the work at Battle Creek. O. F. Conklin (1866), writing in the Health Reformer on the activities of the institute in celebrating Thanksgiving day, 1866, indicated that Bell was one of two men appointed to plan the activities for the day. Lindsay (1983) concluded that Bell was there as a patient in 1866 and, as others (Schwarz, 1979; Knight, 1983) indicated, 1867 as well.

The critical issue is not the date on which Bell was a patient at the health reform institute but rather the impact the religious beliefs of the Seventh-day Adventist church would have on him and, in turn, the impact he would have on the development of an educational system within the church. Even though Bell was going through a time of interpersonal evaluation with respect to his spiritual beliefs during the latter part of the 1860s, his interest in young people and their educational development was unaltered.

Recalling some of the early events concerning education at Battle Creek in the 1860s, W. C. White (1936), the youngest surviving son of James and Ellen White, noted the encounter of his older brother, J. E. White, with Bell outside the Review and Herald publishing office.
still a patient at the health institute, was exercising by cutting wood for the Review and Herald office when J. E. White, working in the typesetting room, stopped and visited with him. Realizing that Bell was a teacher by profession, White asked if he would be interested in helping him and some of the other young people working at the Review and Herald with some of their grammar work for school.

The acceptance of Bell's teaching methods by students and parents soon generated enough interest for a school (Lindsay, 1983). He moved his family to Battle Creek in 1867, and by 1868 the church at Battle Creek employed him as a full-time teacher. Bell was delighted at the opportunity to help, but after one year of operation, the financial support of the school fell short of what was needed. Bell continued to operate his school and was the editor of The Youth's Instructor until finances and continued health problems necessitated that he return to his former home in western Michigan in 1871 (Cadwallader, 1958).

Even though Bell's special school was not totally successful, it was indeed instrumental in developing a renewed interest in church-supported education. As explained earlier, James White began to reconsider his previous stand on church-operated schools and encouraged the development of a school operated by the denomination to train workers for spreading the gospel.
When asked to return to Battle Creek and open a new denominational school in 1872, Bell (1872) replied to Mrs. White in a way that not only expressed his concern for problems with discipline he had previously encountered, but was an excellent example of his commitment to his newfound faith.

I greatly fear that I shall not be able to succeed as well as formerly, for I do not see how I can ever again have the respect and confidence of the young in Battle Creek: and without this, it would be impossible to have a good school. It seems to me that, under the circumstances, they must naturally look upon me with distrust; yet, if it is the will of the Lord, I am willing to try, trusting in him to give just that degree of success that seemeth good to hir. (p. 2)

For two years Bell was principal of the school at Battle Creek, and then, as before, his failing health would not allow him to continue. A new principal, Sidney Brownsberger, was appointed, and after spending the summer and fall terms recuperating, Bell once again returned to the school, this time as a teacher rather than as administrator (Vande Vere, 1972).

A major issue to emerge during the early years of the school, that would divide the efforts of Bell and Brownsberger at Battle Creek, was the emphasis given by the Whites for the practical training and work experience of students as opposed to the traditional classical education that was prevalent in the public schools. Bell, having received a portion of his education at Oberlin College, understood the concept of manual labor and training as part
of a well-rounded education. Brownsberger, on the other hand, was trained at the University of Michigan and was unfamiliar with the new concept that the Whites promoted (Cadwallader, 1958).

In August of 1874 Mrs. White presented the issue of educational reform to the school board at Battle Creek, and referring to her earlier testimony on "Proper Education" given in 1872, as published after her death, she stated:

We are reformers. We desire that our children should study to the best advantage. In order to do this, employment should be given them which will call the muscles into exercise. Daily systematic labor should constitute a part of the education of the youth, even at this late period. (White, 1948a, p. 37)

Although Brownsberger did not understand the need for manual labor and training within the educational program, and chose to reject the concept at that time, it will be shown that he later would became a strong supporter of the concept.

Despite their differences of opinion as to the type of education offered at the school, Brownsberger and Bell continued to work together for many years. According to Lindsay (1983), both Brownsberger and Bell had one peculiar trait in common; both were struggling with severe health disorders resulting from the load they shared at Battle Creek College. Brownsberger was the first to leave, resigning his leadership position in May of 1881. Despite their differences, Brownsberger developed great respect for
Bell. Reflecting on the development of Battle Creek College fifty years later, Brownsberger (1924) credited Bell as "one of the most important factors that contributed so much to the success of the school" (p. 48).

With the resignation of Brownsberger and the appointment of a new school leader, more troublesome years were still ahead for Bell at Battle Creek. Two years after Brownsberger's resignation, Bell resigned as teacher, realizing that perhaps he had not been consistent in following his own expectations of a teacher and setting the standards expected of students too high (Lindsay, 1983).

Having been relieved of his administrative duties early in the history of Battle Creek College, it was not until his appointment as principal of a new school at South Lancaster, Massachusetts, that Bell was able to begin implementing the reform concepts of education, including manual training. The years he spent there (1882-1884) were the last educational administrative years of his career and allowed him an opportunity to implement a system of education he felt was needed and supportive of the style of education encouraged by Mrs. White. Bell (1882a) explained the curriculum to be followed in the March 7 issue of the Review and Herald.

The course of study will embrace English Language; Mathematics; Geography; Human Psychology and Hygiene; and Bible History; together with practical instruction in Tract and Missionary Work, and in the most useful of the Agricultural, Domestic and Mechanic Arts. (p. 159)
It was through this curriculum that Bell (1882b) hoped to meet the goal for true education. True education, he said:

... begins on the inside. ... with that which is practical. It builds up and strengthens a symmetry of character that by and by, in after life, will show itself in some grand, good, and noble work for the world. (p. 786)

Bell returned to Battle Creek in 1886 and spent the remainder of his life writing and supporting the educational development of the denomination. On January 16, 1899, he passed to his rest following an accident with a runaway horse in downtown Battle Creek (Bartholf, 1899).

Lindsay (1983), having completed the most exhaustive study on the life of Bell in Seventh-day Adventist history, concluded that:

It has been established that Bell did indeed blaze a trail for others to follow. In practically every aspect of his work he was the pioneer. Or to change the figure, he laid the foundation for what has since become one of the most extensive Protestant church-school systems in the world. Furthermore, if the work of education is understood to include the church, the school, and the home, then Bell helped to lay the foundations in all three, but especially in the church and the school. (p. 377)

A practical education, he believed, was to be prized above all else. His emphasis upon the thorough study of the common subjects and his commitment to the principle of combining useful labor with study led to this end. These contributed to the mental, physical, and spiritual development of his students and, therefore, to the balanced development of a character after the divine model. (p. 392)
Sidney Brownsberger
(1845-1930)

If ever one of the early Adventist educators were to be overlooked as to their contributions to the development of manual training and a nation-wide educational program, it would most certainly be Sidney Brownsberger. Joseph Smoot (1983) referred to Brownsberger as "a forgotten man in Adventist education" (p. 72). Brownsberger held many "firsts" within the denomination but is given little recognition, except in a few history books, for his contributions. He holds the distinction of being: (a) the first degreed president of a Seventh-day Adventist school (He replaced Bell as principal of Battle Creek College in 1874 and Elder White in 1880 as president. Neither Bell nor White held college degrees.); (b) the first to administer two separate schools within the church (He was president of Healdsburg College and Battle Creek College.); (c) the first administrator to house students in dormitories (At Healdsburg he established the family educational concept by living in the dormitories with the students.); and (d) the first to establish an Adventist school supporting manual labor and training (the school at Healdsburg, California) (Smoot, 1983).

As many of the early Adventist leaders, Brownsberger was a relatively new member of the church when he accepted the responsibility of leading its only educational
institution at Battle Creek. Born at Perrysburg, Ohio, on September 20, 1845 (Smoot, 1983), Brownsberger was the youngest of eight children. Leigh Johnson (1976), writing on the early life of Brownsberger, noted that he was raised on an Ohio farm, started his collegiate career at Baldwin University but received his degree in 1869 from the University of Michigan. It was here, at the University of Michigan, that Brownsberger became acquainted with the beliefs of the Seventh-day Adventists and chose to join this relatively new group of worshipers.

As stated earlier, there were those who felt it would be more appropriate for the head of the newly formed Battle Creek College to be a degreed person. As a response to those wishes, the name of Brownsberger was suggested because of his educational background and the teaching and administrative experience gained at Maumee, Ohio, in the years following his graduation. When the fall term of 1873 opened at Battle Creek College, the returning students found Bell as an English teacher, and Brownsberger their new principal.

As noted earlier, the philosophies of the two individuals were noticeably different, Bell having received part of his training at Oberlin in manual labor and Brownsberger being traditionally educated at the University of Michigan. Despite this difference they both insisted on quality education and were to spend the next eight years
supporting each other as friends and colleagues (Smoot, 1983).

Looking back at his term of service at Battle Creek, Brownsberger felt that the major error of his administration there was in not following the counsel given him by Mrs. White in September of 1874 (Smoot, 1983). Addressing a meeting of the board of trustees at which Brownsberger was present, Mrs. White (1872) reread counsel given two years earlier.

Provision should have been made in past generations for education upon a larger scale. In connection with the schools should have been agricultural and manufacturing establishments. There should also have been teachers of household labor. And a portion of the time each day should have been devoted to labor, that the physical and mental powers might be equally exercised. If schools had been established upon the plan we have mentioned, there would not now be so many unbalanced minds. (p. 35)

Smoot (1983) interpreted Brownsberger's response as:

He [Brownsberger] knew nothing about this kind of education. . . . [he] understood that his appointment signaled the desire of the church leaders to have academic credibility for the college. To that end he devoted his energies and efforts. (pp. 76-77)

In the eyes of many of the constituents and the students attending the college, the school continued to thrive under the leadership of Brownsberger, in spite of the rejected counsel given concerning its operation and the need for manual training (Spalding, 1962, vol. 2). As the enrollment increased yearly, Vande Vere (1972) explained that the school was drawing closer to a crisis that would
require the resignation or removal of Brownsberger as
president. First, the school was wandering too far from
its original plan and not heeding the counsel given.
Second, Brownsberger, being a traditional educator, kept
trying to push for a graduate school. The *Seventh Annual
Catalogue of Battle Creek College, 1880-1881* school year,
lists the offering of a "Master of Arts Degree" (p. 14),
but the board minutes do not indicate that it was ever
approved. Third, with the growing enrollment of the
school, there was also a decrease in the discipline.

By October of 1880, following considerable
contemplation and a lot of listening and reading concerning
the type of education that should be offered at Battle
Creek, Brownsberger (1880) realized he had been following
the wrong curriculum for true Christian education, but it
was too late. In his report to the sixth annual meeting of
the Educational Society he expressed his new feelings.

Physical training, too, must receive that attention in
our college which its importance would seem to demand.
. . . opportunities to devote some time each day to
physical exercise on the farm or to some mechanical
industry; and the lady students are required to spend a
part of each day in some department of household
employment. (p. 356)

The following school year was extremely difficult for
Brownsberger, and he was unable to finish because of poor
health. The one lesson that he took with him as he left
Battle Creek was that if he ever were to have an
opportunity to work in another denominational school, of
which there were none at the time, three major changes must be made: (a) it must be operated in a family setting; (b) it must involve the curriculum outlined by Mrs. White in "Proper Education"; and (c) the Bible must be the center of all studies.

Little did Brownsberger realize when he left Battle Creek that he would again have such an opportunity. Within just a few months of his termination at Battle Creek, he was invited to establish a school on the West Coast. Accepting the appointment as principal of Healdsburg College in California, Brownsberger was indeed true to his word. Cadwallader (1958) summarized Brownsberger's philosophical change.

Professor Sidney Brownsberger had been President of Battle Creek College for eight years . . . he learned much from his experience as manager and from the counsel given him by Mrs. E.G. White. . . . During a period of convalescence and rest following his retirement he had had time to restudy and rethink the instruction and experiences of the past several years, and there evolved in his mind a new philosophy of education, a philosophy of education which had in it a large place for the religious, physical, and vocational aspects of learning. As a result of his "a school in the wilderness" experience, he was well prepared to help establish a college in the West where some of the mistakes that had been made in Battle Creek might be avoided and where the principles of education enunciated by Mrs. White in her 1872 testimony entitled "Proper Education" might be put into effect. (p. 73)

Brownsberger continued at Healdsburg until 1886. This was not, however, to be his last teaching station. In 1909 Brownsberger and Arthur Spalding, another educational visionary, established the self-supporting Asheville
Agricultural School and Mountain Sanitarium in North Carolina. Here he served until his death in 1930.

**Ellen G. White**  
*(1827-1915)*

From the small town of Gorham, Maine, in 1827 came an individual who would leave an impression on the Seventh-day Adventist church and its educational system stronger than any teacher, preacher, or conference administrator in the history of the church. This individual was Ellen G. Harmon. Born a twin on November 26, 1827 (*Noorbergen, 1972*), Ellen spent many years as an invalid following a nearly fatal injury to her face at the age of nine. The injury was so severe, in fact, that Ellen never returned to school for formal education. By the time of her death, however, Ellen had written thousands of pages of manuscripts, letters, and testimonies concerning the beliefs of the Seventh-day Adventist church and its operation. Married August 30, 1846, to James White, Ellen spent the remainder of her life committed to helping her husband spread the message of the Seventh-day Adventist faith.

Although Mrs. White was not an educational administrator or teacher within the Adventist educational system, her inspired writings represent the foundational principles for early Adventist education as well as for
today (Cadwallader, 1958; Vande Vere, 1972; Graham, 1983; Knight, 1985). For nearly 50 years Mrs. White gave counsel concerning the needs of Christian education (1872, 1903, 1904, 1913) and left enough unpublished material at the time of her death to allow her estate to publish additional volumes, in her name, over the next several years (1923, 1948a, 1948b, 1948c). Inspired instruction was given during the life of Mrs. White about the type of instruction that should be presented before the students in Adventist schools.

"Proper Education," the first inspired statement of Ellen White (1872) on education, provided a philosophical foundation not only for Battle Creek College but for Adventist education in the years to follow. It emphasized the importance of a balanced education between mental, physical, and spiritual capabilities of the individual. Here is found Mrs. White's initial concern for the use of the Bible as the center of the school curriculum and the value of manual training.

Battle Creek College was designed not only to acquaint students with the teachings of the Bible and general knowledge but to train them for spreading the message of the church to the world. George Butler (1873), president of the General Conference of Seventh-day Adventists, explained the reason for establishing such a school.
We have no great respect for that kind of education which is provided in many theological schools. We would not spend years in poring over heathen mythology and the opinions of the fathers and the commentators, but would rather come directly to the source of true knowledge, God's holy word. It is not so much what men say about it, as what God Himself says that we want to understand. But we want hundreds of our people to take three, six, twelve, eighteen, twenty-four months' schooling, as soon as they can consistently do so. (p. 124).

From this early beginning, the context of White's "Proper Education" has become the cornerstone of the Adventist educational philosophy and expanded upon in the books she has written concerning education since (1903, 1913, 1923). Vande Vere (1972), writing on the program at Battle Creek, called the curriculum practiced during the 1870s a "philosophical betrayal" (p. 23). As explained earlier, this betrayal in not following the counsel of Mrs. White was realized when the college was closed in 1882. The previous year Mrs. White warned, in a presentation before conference delegates and leading workers for the church, of the problems facing the school and that closure of Battle Creek College was imminent unless changes were made. She said:

If a worldly influence is to bear sway in our school, then sell it out to worldlings and let them take the entire control; and those who have invested their means in that institution will establish another school, to be conducted, not upon the plan of popular schools, nor according to the desires of principal and teachers, but upon the plan which God has specified (White, 1948c, pp. 25-26).
Throughout her writings Mrs. White endeavored to outline the objectives, standards, and curriculum that should be placed before students in Adventist schools. It is here in her writings that the foundational stones of Adventist education are best described.

The Nature of Adventist Education

Included in the thousands of manuscripts and letters written by Mrs. White are numerous articles and books dealing with the purpose and nature of Christian education. According to her, Christian education should be holistic in the development of the complete person. Christian education was to be unique and go beyond the mental development aspects of a traditional education. The teaching of basic reading, writing, and mathematics were to be used in helping the development of spiritual and physical abilities of the student as well. "True education," wrote Mrs. White (1903), "means more than the pursual of a certain course of study. . . . It is the harmonious development of the physical, mental, and spiritual powers" (p. 13). She went on to explain that Adventist education is to prepare workers for "service in this world, and for the higher joy of wider service in the world to come" (p. 13).

The new church was expanding and in need of employing specially trained workers. Workers that were trained in
agriculture, for example, that could go as missionaries equipped with the necessary skills to help others be more self-sufficient. Unique schools were needed that would allow men and women to develop their basic educational skills and receive this special training at the same time.

The true object of education is to fit men and women for service by developing and bringing into active exercise all their faculties. The work at our colleges and training schools should be strengthened year by year, for in them our youth are to be prepared to go forth to serve the Lord as efficient laborers. (White, 1913, p. 493)

Her counsel, however, was not always heeded, as was seen by the closing of Battle Creek College. Mrs. White was striving for the development of model educational centers, not copies of public institutions. So strong was her feeling on this point that when Battle Creek College refused to follow the counsel provided concerning the uniqueness of Adventist schools and their operation, she moved to Australia with the intended purpose of establishing a model school (Hook, 1979).

In a general letter to the Australian constituency, Mrs. White (1900) defined the ultimate goal of the school: "The gospel of Christ lies at the foundation of all true education and progress. . . . The truth that Christ is a personal Savior is to be taught so clearly that souls will submit to be led and taught by God, and in their turn win other souls to Christ" (p. 9).
Milton Hook (1979), an historian on the founding of Avondale College, listed five strategies to reach that goal as recommended by Mrs. White. Although they were given years earlier, she followed her own counsel in establishing the school. First, the location of the school being in a rural area provided ample space for agriculture programs as well as keeping students from the lures of the city; second, artificial amusements and games were downplayed; third, the development of a strong manual labor and training program was required of all students attending the school to help provide a balance of the physical, mental, and spiritual aspects of man; fourth, the Bible became the central frame of the curriculum; fifth, learning was integrated with missionary activities.

Curriculum for Adventist Education

Constantly striving for the harmonious development of students in Adventist schools, Mrs. White continued, after her stay in Australia, to outline the curriculum that would make the school she envisioned unique. First and foremost in the curriculum was to be the study of The Bible.

The Holy Scriptures are the perfect standard of truth, and as such should be given the highest place in education. To obtain an education worthy of the name, we must receive a knowledge of God, the Creator, and of Christ, the Redeemer, as they are revealed in the sacred word. (White, 1903, p. 17)
Aside from her special emphasis on Christian education, Mrs. White was much like the educational reformers of her day in the public schools of America. The teaching of the classics and language were overpowering in the classroom. American reformers like Mann were advocating a new common school curriculum, and so was Mrs. White (1913).

When voice culture, reading, writing, and spelling take their rightful place in our schools, there will be seen a great change for the better. These subjects have been neglected because teachers have not recognized their value. But they are more important than Latin and Greek. I do not say that it is wrong to study Latin and Greek, but I do say that it is wrong to neglect the subjects that lie at the foundation of education in order to tax the mind with the study of the higher branches. (p. 218)

All subjects, however, should be taught from a Christian perspective. History, for example, she noted should be studied not to simply observe the past but should be studied in its relation to the fulfillment of prophecy.

There is a study of history that is not to be condemned. Sacred history was one of the studies in the schools of the prophets. In the record of his dealings with nations were traced the footsteps of Jehovah. So today we are to consider the dealings of God with the nations of the earth. We are to see in history the fulfillment of prophecy, to study the working of Providence in the great reformatory movements, and to understand the progress of events in the marshaling of the nations for the final conflict to the great controversy. (White, 1913, pp. 379-380)

One subject in particular about which Mrs. White gave considerable counsel concerning its importance for Adventist education was manual training (1872, 1882, 1903, 1913). As a part of her concept for holistic education,
manual training was the central part of one's physical development. In fact, if choices were to be made on what should or should not be included in a Christian school, manual training was to be on the non-negotiable side.

If youth can have but a one-sided education, which is of the greater consequence, a knowledge of the sciences, with all the disadvantages to health and life, or a knowledge of labor for practical life? We unhesitatingly answer, the latter. If one must be neglected, let it be the study of books. (White, 1913, p. 289)

Many of the branches of study that consume the student's time are not essential to usefulness or happiness; but it is essential for every youth to have a thorough acquaintance with every-day duties. If need be, a young woman can dispense with a knowledge of French and algebra, or even of the piano; but it is indispensable that she learn to make good bread, to fashion neatly-fitting garments, and to perform efficiently the many duties that pertain to home-making. (White, 1903, p. 216)

Recognizing the concern of public educators like Runkle and Woodward concerning manual training, Mrs. White (1903) urged again that wherever possible, classes should be taught in agriculture, carpentry, plumbing, and other trades that would help students to be self-sufficient. Manual training was being rejected by practicing Adventist educators and not being considered seriously as a part of the curriculum for their school. Adventist schools were to be established that, along with curriculum to develop one's mental and moral cultures, would provide facilities for physical development as well. This curriculum, Mrs. White (1903) said, should contain instruction in agriculture,
manufacturing and "covering as many as possible of the most useful trades" (p. 218). The Whites, James and Ellen, considered it a solemn responsibility of the church to provide a practical education for Christian youth that would prepare them for a life in this world and in the world to come.

The Reform Movement

The future for Adventist education was not promising at Battle Creek in 1881. Bell, a believer in strong discipline, manual labor and training, and high educational standards, was still teaching for the college and endeavoring to support the leadership of Brownsberger; while Brownsberger, exhausted from his eight years of administrative battles with liberal-minded board members not willing to support Mrs. White's counsel on education, found it necessary to resign as president of the college (Smoot, 1983). Replacing Brownsberger, however, was not an easy task for the board. After a period of searching and listening to recommendations, the board chose to make the replacement with Alexander McLearn, a new believer of the Adventist message but not yet a church member. This action, according to Spalding (1962, vol. 2), was disastrous to the institution.
Since the college board had been successful in replacing Bell with Brownsberger, another new believer at the time, for the purpose of having a degreed person as president of the school, a precedent had been set for the supporters of McLearn (Vande Vere, 1972). After all, McLearn was the holder of a Doctor of Divinity degree and came to Battle Creek very highly recommended by James White.

It did not take long, however, for the board to realize the mistake they had made. Unable to deal with the administrative problems which developed during McLearn's first year as president of the college, including staff unrest, student discipline, and issues relating to curriculum, the board requested his resignation. This he refused, and the board voted on September 12, 1882, to close the school (Smoot, 1983). Displeased with the way he had been treated, McLearn then left the community and joined the Seventh Day Baptists.

Stunned by the closure of Battle Creek College, the cause of Seventh-day Adventist education, however, was not halted. During the school year of 1882-83 there was not a school operated by the Seventh-day Adventist denomination in Michigan, but two new schools, operated by the denomination, were to open elsewhere. The first, only by a
few days, was on the West Coast in Healdsburg, California: its president—Brownsberger. The second was on the East Coast in South Lancaster, Massachusetts, with a president also formerly associated with Battle Creek—Bell. Both men had accepted their new positions with an understanding that the new schools would not follow the pattern set at Battle Creek but would be patterned after the counsel given by Mrs. White (1872) in "Proper Education."

It took the dedicated efforts of a blind man to see the light and reopen the college at Battle Creek. Wolcott Hackley Littlejohn, blind since an accident at the age of 17 and serving as the pastor for the Battle Creek Seventh-day Adventist Church, was chosen by the college board to be the third president of Battle Creek College on June 6, 1883 (Vande Vere, 1972).

Having lost many of its students because of the one-year closure, the college was reopened on September 5, 1883, with only 80 students. Battle Creek, however, was no longer the center of Adventist education. With schools at Healdsburg, California, and South Lancaster, Massachusetts, much of the attention on Christian education was shifted away from Battle Creek. In accepting his new assignment, Littlejohn knew that major changes in housing, curriculum, and manual training must be made if Battle Creek College were to regain its position of leadership within Adventist
education. Of the issues facing Littlejohn as a new administrator, Vande Vere (1972) wrote:

No problem brought the directors such indecision, perplexity, and pocketbook searching as establishing an industrial or manual labor department. Like a white elephant, it trumpeted in nearly every meeting. (p. 51)

All through his administration, Littlejohn struggled with the delicate problem of establishing a manual training department. Encouraged by John Harvey Kellogg, George I. Butler, and others, he was still unable to establish an acceptable manual training department until the spring of his last term. The bulletin shows at that time (1884) that courses in "printing, book-binding, shoe making, tent making, and household economy" were offered (Battle Creek College, 1884, pp. 33-35).

Littlejohn was president for only two years, but during that time this sightless man had given Battle Creek College a new vision, including the feasibility of a manual training program. Although he struggled during those two years, he was successful in laying a foundation upon which William Warren Prescott, his successor, would take the college into its golden years. The golden years for Battle Creek College were 1885-1895, and mark the heart of the educational reform within the Seventh-day Adventist educational system (Vande Vere, 1972).
William Warren Prescott
(1855-1944)

September 2, 1855, in the small village of Alton, New Hampshire, was born another individual of importance to the development of Adventist education. This third son of an Adventist preacher, James Prescott and his wife Harriet, William Warren Prescott would be raised to love his Lord and serve Him as an influential educational leader (Valentine, 1983).

There is no record of where Prescott received his early educational training, but according to Valentine (1983) he attended Berwick Academy, "the oldest and probably the most prestigious school in all Maine" (p. 17) as a boarding student. By 1877 he had completed the requirements for graduation from Dartmouth College and was eager to enter the profession of teaching.

For three years Prescott taught school, but immediately after his marriage to Sarah Panacook on July 8, 1880, they moved to Biddeford, Maine, where he and his brother began a publishing business. Here they would remain for five years until the real challenge to his belief in the Advent Movement was to come in 1885. Prescott was by this time well established in the printing business but yet deeply committed to his church. Valentine (1983), writing on the life of Prescott, gives this explanation as to why Prescott
accepted the call to be president of Battle Creek College in 1885.

Prescott had not come to Battle Creek to earn money. He had come because he felt a large burden to contribute more directly to the advancement of the Advent cause, and his arrival in Battle Creek in the late summer of 1855 marked the commencement of a career of fifty-two years of service to the Adventist church that ended officially with his retirement in 1937. (p. 62)

Prescott holds the distinction of being the first second-generation Adventist to lead a major educational institution for the denomination. When Prescott accepted the presidency on July 12, 1885, he was immediately faced with two key issues (Vande Vere, 1972): First, how to deal with the expansion needs of the physical campus; and second, what should be done about the increasing pressures by the board in the area of manual training?

In evaluating the situation, Prescott felt he had a solution and convinced the board to allow the construction of a new facility to house the manual training program. This in turn would allow other areas, where manual training programs had been taught, to be used for other needs. By April of 1886 construction on the new facility was begun.

Prescott's meager efforts for quality manual training programs were hampered, however, not so much by faculty or board members but by the actions of the students in March of 1889. Meeting in an all-day session to debate the need
for such activities within the curriculum, the students concluded that it should be eliminated. Vande Vere (1972) quoted Charles W. Irwin, a denominational education inspector who was present at the session, as saying:

The whole future of industrial training at Battle Creek College was staked on the outcome of a monster debate by the students. It occupied one entire Sunday afternoon, and was discussed by about eight students on each side of the question. In consequence, industrial education was abolished. (p. 57)

Vande Vere (1972) saw an even greater impact on Adventist education, which Prescott had not, resulting from this failure.

For the time being, the ill-supported and crowded manual training program died. Had the college been successful with it during the 1880's [sic], it would have been a vocational leader in Michigan. But its directors, faculty, students, and constituents did not yet envision a system of balanced, practical education including applied arts. (p. 57)

Although Prescott was unsuccessful in maintaining the manual training program, he was able to bring the college back as the established leader, in respect to size, of denominational schools (Hook, 1979). In fact, Hook noted, during Prescott's administration, Battle Creek College was to become the largest Protestant college in the state of Michigan.

To see the full impact of Prescott on Adventist education, however, one must look beyond the time he spent as president of Battle Creek College. Besides being president of Battle Creek College, the denominational
Yearbook for 1894 listed Prescott as president of Union College in Nebraska and Walla Walla College in Washington State. This multiple presidency was in part due to the responsibility given him as the first educational secretary of the General Conference in 1887 (Vande Vere, 1972).

Concerned over the apparent slackness among teachers in their attitudes for following the direction of Christian education as established by Mrs. White, Prescott called the first teachers' convention within the denominational schools to be held at Harbor Springs, Michigan, in July and August 1891 (Knight, 1984). With the broadening educational program of the church and the growing dissension as to its intended role in supporting the needs of the church, it was felt necessary, by Prescott and other church leaders, to hold a special convention for teachers and administrators to reevaluate the educational goals and curriculum being used in denominational schools.

There were about one hundred educators and administrators in attendance for this special six-week convention at Harbor Springs, Michigan (Willis, 1979). From this session the conclusion was drawn that if Adventist schools are to be unique, as compared to public schools, then the biblical principles should be the center of instruction and not the classics of the traditional curriculum (Knight, 1984). Prescott (1893), reflecting on the Harbor Springs convention, wrote:
The convention ushered in a remarkable change in the history of our educational work. . . . While the general purpose up to that time has been to have a religious element in our schools, yet since that institute, as never before, our work has been practically [rather than theoretically] upon that basis showing itself in courses of study and plans of work as it had not previously. (p. 350)

Another individual present at the Harbor Springs convention was P. T. Magan (1901) and, writing in the Review and Herald several years later, he recalled:

Just ten years ago . . . there was held at Harbor Springs . . . the first general gathering of Seventh-day Adventist teachers for the purpose of studying Christian education. The meeting was a remarkable one, and the definite beginnings of the work of an educational reformatory movement owe their birth to this gathering. In those days the subjects of reform which were for the most part studied and discussed were the elimination of pagan and infidel authors from our schools, the dropping out of long courses in the Latin and Greek classics, and the substitution of the teaching of the Bible and the teaching of history from the standpoint of the prophecies. (p. 508)

Knight (1984) expresses his value of Harbor Springs as:
"the first step in the Adventizing of Seventh-day Adventist education" (p. 91).

Three months after the Harbor Springs convention another major event took place that would add importance to the educational reform movement. Having tried for almost 20 years to convince the educational leaders of the importance of manual training in the school curriculum, Mrs. White, accompanied by her son, W. C. White, left for Australia where they remained for nine years helping to develop a new school model for the church. Many of the
reform ideas which were recommended for Battle Creek College were thus first tried successfully at Avondale College.

Although Prescott was able to bring Battle Creek College back as a denominational leader in respect to size the focus of Christian educational reform was to rest on other institutions including Avondale. The support of Prescott for manual training at Walla Walla and Union College was indeed instrumental, however, in helping the reform movement.

**Edward Alexander Sutherland**
*(1865-1955)*

Prescott, as noted earlier, was extremely influential in the reform of Adventist education, but Edward Sutherland was quite possibly the most successful school administrator (Ashworth, 1987). His powerful influence is seen at all levels of Adventist education for well over a half a century.

Sutherland was born on March 3, 1865, while his parents were crossing the bridge between Prairie du Chien, Wisconsin, and Iowa where they were to take up farming near the small town of Otranto. The lessons Sutherland learned as a farm boy from Iowa would be of untold value to him in years to come (Ashworth, 1987).
Having taught school for one year at a local Iowa country school, Sutherland was encouraged by George Butler, the president of the General Conference, to attend Battle Creek College to pursue a course in medicine. When he arrived at Battle Creek, however, he was disappointed to find only one other premedical student, and as a result, the courses were not offered. For Sutherland, Ashworth (1983) pointed out, this may have been a blessing. Choosing to stay at the college rather than return home to Iowa, Sutherland studied English rather than medicine. As a result, he had considerable contact with Bell, the founder of the school and now an English professor.

Following graduation from Battle Creek College in 1890, Sutherland was married two months later to Sallie Bralliar, also of Iowa. By October of that year the new Sutherland family found themselves in Minnesota as teachers in Minneapolis (Vande Vere, 1972). Following one year of teaching and administrative duties, however, the Sutherlands were back at Battle Creek, this time as faculty.

The summer of 1891, according to Ashworth (1987), was an unforgettable period for Sutherland. The Harbor Springs Conference, held in Michigan, impacted Sutherland in the following ways: First, his understanding of the doctrine of righteousness by faith, a major concern of all leaders within the church at that time; second, his personal
position on vegetarianism and healthful living; third, his understanding and acceptance of the writings of Ellen G. White; fourth, the true meaning of "Christian education" and how it should be presented; and fifth, his choice of a lifework: teaching or medicine?

One individual who was helpful to Sutherland in making decisions that summer was his roommate from a short stay at Union College—Magan. Reunited at Battle Creek College, they would spend many of their remaining years of service in education together working as a team.

In the summer of 1892 the Sutherlands again found themselves on the move, this time heading west to Washington State. A new college was opening near Walla Walla, and Sutherland was chosen to be the first principal; Prescott, who was the General Conference Educational Secretary, also served as president of the new school (Cadwallader, 1958).

Recalling the conversation he had with Mrs. White, Bell, Kellogg, Prescott, and others concerning the reform of Adventist education, Sutherland realized that this was the time for action. For five years Sutherland experienced the difficulties of establishing manual training programs, elimination of classics from the curriculum, introducing vegetarianism and establishing a Bible-centered curriculum. This, however, was to be only a learning experience for Sutherland. In 1897, amidst much turmoil at
Battle Creek, Sutherland was to return again to his alma mater as president.

Two major issues were to await Sutherland as he spent the next four years leading Battle Creek College; vegetarianism and training for manual labor (Schwarz, 1979). Sutherland had already indicated his intention to follow the counsel of Mrs. White from his experience at Walla Walla. Although he was criticized on some points by Mrs. White, he never lost faith in the counsel she provided. Those who had preceded him at Battle Creek—Brownsberger, McLearn, Prescott, and Littlejohn—had all failed in reforming the school to meet its intended goal. The big question now was, could Sutherland?

In his first letter to Mrs. White, following his election as president of the college, Sutherland (1897) expressed his goal on manual labor. "We are making some changes and are endeavoring to plan the work so that we can take some time for manual labor." Within four years it appeared that many of Battle Creek's problems had been overcome (Ashworth, 1987).

By 1901 the Battle Creek College board felt it would be better for the college if it were moved to another location. Within one year Sutherland, with the assistance of Magan, had located a farm in Berrien Springs, Michigan and moved the school's belongings there. The new school was named Emmanuel Missionary College. Speaking of the
establishment of this new school in 1924, the 50th anniversary of Adventist education, Sutherland (1924) emphasized the importance of manual training.

The first substantial structure on the farm was the manual arts building headquarters for the woodworking department. . . . Next followed the printing office, then domestic arts building. . . . It was an unusual experience for teachers educated very largely for intellectual work to carry on a school, with a number of industries and a heavy building program, with student labor. A number of the young men who worked on these buildings in those days learned their trade so well that they walked into positions of responsibility. (p. 43)

The reform movement of the 1890s and early 1900s helped refuel the concepts of Adventist education. Educational levels had been expanded. Battle Creek College divided its curriculum to provide a "normal department" in which teachers could be trained and established the preparatory program under subordinate administration. The rapid expansion from college and secondary schools to encourage the elementary work as well as the involvement of lay persons in education through the self-supporting programs of the South combined to make this period of time unstable for Adventist education. As is often the case, however, such rapid development led to overreaction and weakness within the system. Just as the last quarter of the 19th century brought reform to Adventist education, the first quarter of the 20th century would be a period for development and stabilizing the Adventist education.
The Stabilization

During this period of growth and organizational development, Adventist education experienced not only moderation movements and rapid growth rates but increased communication of educational ideas through educational journals. By the close of the 19th century, Adventist education in the United States had gone from one extreme, in providing a classical education for Adventist youth, to the opposite extreme of only providing short-term, practical training for missionaries and local church workers. As noted earlier in this chapter Brownsberger, McLearn, Prescott, and Sutherland were all responsible for this extreme shift.

As the new century emerged, so did new problems for the rapidly growing Adventist educational system. Increased counsel by Mrs. White (1900, 1903, 1913) fueled the interest of church members for Christian education. Growing from this increased awareness, however, was a highly organized system of education that by the 1920s operated hundreds of schools across America and around the world. One individual that should not be overlooked in leading this phenomenal increase in Christian education and helping to stabilize it into a global system was Fredrick Griggs (Knight, 1983).
Fredrick Griggs
(1867-1952)

Born March 23, 1867, at St. Charles, Michigan, Griggs spent his early years working with his father on their Michigan farm. It was there that Griggs learned many valuable lessons that would help moderate his leadership in education stabilization in the years ahead. Arnold Reye (1985) explained four distinct elements from Griggs' early farm experiences that later influenced the quality of his leadership. First, a strong work ethic was instilled in him from working with his father on the family farm. Faithfully doing the chores and working in the fields helped him to develop a respect for the dignity of manual labor along with the acceptance of responsibility. Second, the religious atmosphere in which Griggs was raised was not something only talked about but was lived by his parents. Their example was to impress him deeply as he became an adolescent and developed his personal value system. Characterizing the Christian influence of his home life, Griggs (1896) said:

My father purchased, read, and studied in our home, each publication of the Testimonies as it came from the press. He sought to obey their counsel. It was then but natural that his children should believe that God was thus speaking to us. (p. 11)

Third, Griggs' parents and grandparents were well-educated individuals and were supportive of their children and grandchildren in the pursuit of a proper education.
Literature and music were to become an enjoyable part of this total educational experience. The fourth, and possibly the most important element, according to Reye, was the personal support of Griggs' parents not only in his educational endeavors but in support of his choice of a life occupation other than farming.

Following his educational work at Battle Creek College, Griggs returned home to teach at a local country school. Near the end of his second year of teaching, while visiting his sister on the Battle Creek College campus, Griggs was invited to take the new position of principal in the preparatory department of the college. By establishing the preparatory department under separate administration, Prescott, as college president, was hoping to improve the status of the college as a school of higher education.

Griggs readily accepted the invitation and took up his new responsibilities at the beginning of the 1880-81 school term. Thus Griggs began a career of administration within the Adventist church that would span nearly a half-century.

New to the educational leadership ranks of the Adventist educational system, Griggs found the 1891 Harbor Springs educational convention to be an important milestone in the development of Adventist education (Reye, 1985). Deeply moved by the challenges of Mrs. White for reformed education, Griggs was one of the first to implement curricular changes in an effort to reach that
goal. For the first time a specific course was listed in the school calendar. The Battle Creek College calendar of 1894-95 gave this description.

The importance of doing the best quality of work in the early years of a child's education is fully recognized. Modern methods of instruction are employed, and an effort is made to lay such a foundation as can be built upon safely in later years. In addition to other means already employed to make the training complete and symmetrical, regular instruction in sewing and paper and cardboard sloyd will be introduced. This scheme of industrial training will be extended in other lines as rapidly as provision can be made to carry forward the work. (p. 30)

Vande Vere (1972) credited O. A. Olsen, the General Conference president, with encouraging Griggs and Prescott to move forward in curriculum development and implement the new concepts of sloyd. Reye (1985), on the other hand, gave four reasons for not agreeing with Vande Vere and gives the credit to Griggs.

Evidence against Vande Vere's contention is as follows: (1) Olsen made his visit to Scandinavia and to the Mickelson Sloyd School in Copenhagen in the summer of 1894, which means he was away from Battle Creek at the time the decision to introduce Sloyd was made; (2) a Teachers' Institute held at Battle Creek College, July 22 through August 6, 1894, recommended that Sloyd be introduced into elementary classes below grade seven, and that prospective teachers take "an approved course in Sloyd work" as part of their professional training; (3) Sloyd was already known in the United States, having been introduced in 1886 (a private Sloyd normal school had been established in Boston in 1889); and (4) Griggs recalled that at the time they were considering its introduction the Sloyd system was receiving considerable attention in American educational circles. It is more likely, therefore, that Olsen's visit to the Sloyd School in Denmark was to confirm the appropriateness of the innovation in meeting some of the needs of the educational program. (p. 52)
Another indication of Griggs' concern for educational stabilization through curriculum development comes from his interest in the observational method of instruction. Griggs (1898) explained the uniqueness of this form of instruction.

I wish to make a plea for observation as a means of study, which is often opposed by a blind adherence to books and definitions, because I firmly believe that it is the purpose of the Creator of man that man should arrive at truth in such a way that the truth shall become a part of his very being. This can result only when his study is conducted in such a manner as to develop his originality; and observation employs and develops the originality of the student, and results in independent thought. (p. 120)

It was this innovative type of leadership that was to help Griggs become the stabilizing, middle-of-the-road, educational leader through the first quarter of the 20th century.

During this period of growth and organizational development, Adventist education experienced not only moderation movements and rapid growth rates, but also increased communications of educational ideas through increased writings in educational journals and denominational conventions for teachers. The 1937 educational convention for the church is of particular concern showing its emphasis on the stability of education that had taken place. Knight (1984) wrote:

By the time of the 1937 educational convention the Adventist educational system had become well regulated. Its organizational structure had been developed, its curricular stance had solidified, and
the denomination was in the process of upgrading its schools at all levels. The machinery was all in place even though it would still take some years to bring about the complete implementation of the upgrading process. (p. 100)

Adventists had indeed taken seriously their need for quality education programs. Through the 1940s, 50s, and 60s Adventist education continued to grow but now as a worldwide educational system. Griggs, in his desire to establish a quality educational program for the church, was able to look beyond the local needs and established an organizational system that would allow for a global educational system. Leaving Battle Creek, Griggs went on to serve as principal of South Lancaster Academy, secretary of the General Conference Department of Education, president of Union College, Emmanuel Missionary College, Far Eastern Division, and Pacific Press (Spalding, 1962, Vol. 2). In all his administrative experiences, Griggs continued to practice moderation and avoid the extremes. As the 20th century draws to a close, Adventist education remains committed to developing Christian youth through a balanced spiritual, mental, and physical program for each student.
CHAPTER IV

MODERN ADVENTIST EDUCATION

Growing from its small beginning of a one-room twelve-student school at Battle Creek, Michigan in 1868 (Lindsay, 1983), Adventist education has become the world's largest Protestant parochial school system (Rogers, 1985). Today there are over twelve hundred Seventh-day Adventist educational institutions in operation around the world, with over one-third (41%) within the North American Division (Yearbook, 1987).

The operational structure of Seventh-day Adventist education is controlled at four levels. This multiple-level administration helps establish consistency between schools and quality education within each educational center. The General Conference, which is responsible for the global church operation, divides the world into eight divisions, of which the North American Division is one, to direct the affairs of the church within a given region. In educational matters the division administration is responsible for establishing the philosophy of education that will be used at all levels within its territory.

Each division contains a number of Union Conferences. Unions, as they are referred to, within the North American Division are usually made up of a group of states or...
provinces. The Lake Union, for example, covers the states of Indiana, Illinois, Michigan, and Wisconsin. Following the philosophy of education as established by the Division, the Union is responsible for providing the goals and objectives to be taught in each of the local conference schools.

The fourth and final level is the local conference. Each state within a Union often represents a local conference. It becomes the responsibility of the local conference to provide quality educational control. This responsibility is met through curriculum selection, teacher placement, and the implementation of programs that meet the requirements of the Union, Division, and General Conference as well as the public laws of the state in which the school is located.

Philosophy

A controlling factor for the development of the Seventh-day Adventist educational system has been the philosophy on which it was built. Ellen G. White (1903) wrote: "In the highest sense, the work of education and the work of redemption are one" (p. 30). This philosophy of education is characteristic of the attitudes of church leaders concerning education and its problems, with special reference directed toward the purposes and goals to be
achieved, and to the methods by which the goals may be reached. The present Seventh-day Adventist educational philosophy, according to the North American Division, is:

The North American Division of Seventh-day Adventists operates a school system which seeks to ensure that its youth may receive a balanced physical, mental, spiritual, social and practical education in harmony with denominational standards and ideals, with God as the source of all moral value and truth. . . .

The North American Division of Seventh-day Adventists operates its own schools, elementary through higher education, for the purpose of transmitting to its children Biblical ideals, beliefs, attitudes, values, habits and customs. In addition to being patriotic law-abiding citizens, Seventh-day Adventists want their children to be loyal, conscientious Christians. . . . There is peculiar to the church a body of knowledge, values and ideals that must be transmitted to the younger generation in order that the church may continue to exist. . . .

The educational program makes provision for the acquisition and interpretation of that which is appropriate from all areas of knowledge and skills for mental, social, vocational and physical development. The schools strive to give primary emphasis to character building and to the spiritual foundation of the life of the children and youth. (Columbia Union Conference, 1983, pp. 5-6)

Seventh-day Adventist education is based on the belief that all true wisdom and knowledge come from God (John 14:26), that the very foundation of true education is in the fear of the Lord. The highest education is found in the word of the living God, and a correct knowledge of the scriptures lies at the foundation of all true education. The precepts and principles of religion are the first steps in the acquisition of knowledge.

To restore in man the image of his Maker, to bring him back to the perfection in which he was created, to promote the development of the body, mind, and soul,
that the divine purpose in his creation might be realized—this is the object of education, the great object of life. (White, 1903, pp. 15-16)

Seventh-day Adventists accept divine revelation, through the writings of Ellen G. White, as the primary explanation for their philosophy of education. Much of this revelation has been articulated through the writings of Mrs. White (Rogers, 1985). When addressing the subject of education, White (1903) wrote:

True education means more than the pursual of a certain course of study. It means more than a preparation for the life that now is. It has to do with the whole being, and with the whole period of existence possible to man. It is the harmonious development of the physical, the mental, and the spiritual powers. It prepares the student for the joy of service in this world, and for the higher joy of wider service in the world to come. (p. 13)

Objectives

The philosophy of an institution is the ideal, the goal for which it strives. The objectives, on the other hand, are more immediate. They are the attainable goals for today and tomorrow. In fulfilling its intended purpose within the church, Seventh-day Adventist education embraces a holistic understanding of education. There is no doubt that when addressing its curricular objectives Adventist education considers spiritual development as its first and foremost responsibility. Spiritual development, however, is not the only objective. Adventist education also
includes a concern for the mental and physical development of the student as well.

For an evaluation of the objectives within Adventist education, there are two types of documents that may be considered. First, since it is the responsibility of the Union to provide the teachers with curriculum guides, enabling teachers to establish a continuity between the schools within the region, they represent the Union's standards and suggested objectives for implementation. The second is a document provided by the local school or conference and referred to as a local school bulletin. Besides explaining the philosophy, goals, and objectives of the institution, the bulletin explains to parents and students the institution's operational policy.

The examination of 57 Adventist secondary school bulletins from across the North American Division (Appendix A) and six Union educational curriculum guides for Industrial Education (Appendix B) indicates that the basic philosophy and objectives for Seventh-day Adventist education are similar. Although the individual objectives vary from school to school or Union to Union, they are all in agreement with a holistic approach to education through developing the spiritual, mental, and physical abilities of each student.
Spiritual

The most prominent objective of Seventh-day Adventist schools is the commitment to the spiritual development of the student. Adventist schools endeavor to provide an atmosphere where students, instructed by Christian teachers, may grow in their relationship with God, improve their understanding of the scriptures, and are encouraged in the development of their abilities to serve God as well as their fellow man. Adventist education is typically represented by these objectives:

1. To assist students in understanding and accepting the Bible as the inspired Word of God, an inspiring example of faith and practice for the Christian.

2. To assist students in the discovery of Christ's love for all people, regardless of religion, race, economic or social status and man's response to that love through faith and obedience.

3. To assist students in knowing Christ as their personal Savior and find Him as their life center and His word the source of principles which control their lives.

4. To provide an environment conducive to the development of Christian character and assist students in finding God's plan for their lives through following the Holy Spirit.

5. To stimulate individual spiritual growth through personal devotions and participating in religious services.

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As mentioned earlier, Seventh-day Adventists believe that all true knowledge comes from God and to understand and interpret it fully requires the development of one's mental abilities. In addition, through using these developed mental powers, students become productive members of society in this world and are preparing for the world to come. The mental development of Adventist education, across North America, is represented by these objectives:

1. To guide students in understanding the revelations of God and how they form the basis of all knowledge required of man.

2. To acquaint the student with the core of knowledge concepts in the major field of study and to stimulate the student to apply the spirit of inquiry and intellectual curiosity to all problems.

3. To provide the student with a background of knowledge which aids in meeting intelligently the demands of everyday life.

4. To develop in the student the highest possible achievement in independent and creative thinking skills and intellectual curiosity.

5. To assist students to view current religious, political, social, scientific, and economic forces which shape contemporary life from a historical perspective and a Scriptural basis.
Physical

The holistic approach to education includes proper physical development along with the spiritual and mental development of the student. Students need to understand that in order to develop a deep spiritual life and vigorous mental qualities, the delicate relationship between mind and body must be carefully balanced. Adventist education therefore seeks:

1. To help students understand the importance of a sound body and to understand the basic facts concerning health and disease, with particular emphasis on health and maintenance.

2. To develop good health habits in the area of diet, rest, self-discipline and exercise and realize the value of a balanced life-style.

3. To teach the student how to use leisure time by participating in physical activity for the primary benefit of health.

4. To show the strong sympathetic relationship between a healthy body and sound spiritual and intellectual development.

5. To introduce the students to vocational and technical occupations along with developing practical skills for future employment including a respect for the dignity of worthwhile labor regardless of supposed social status.
Practical Training

True education is the harmonious development of the physical, the mental, and the spiritual powers. It embraces physical, mental, and moral training in order that all the powers shall be fitted for the best development, to do service for God, and to work for the uplifting of humanity (Rogers, 1985). Education comprises more than a knowledge of books, and will be of little value if there is no physical strength to use it after it is gained (White, 1903). Even the Bible explains that a knowledge of labor for practical life is essential (Proverbs 12:11; Psalms 14:23). Moral, intellectual, and physical training should be combined to have well-developed, well-balanced men and women.

Not only does this discipline [Industrial or Technology Education] serve as a springboard to career, job and leisure time opportunities, but its "head-heart-hand" characteristics give it unique potential effectiveness for the inculcation of traits, qualities, and truths that affect the life of the learner for his entire lifetime. Through careful training of the head, the heart and the hands, unlimited opportunities are opened for service. (Columbia Union Conference, 1983, p. 7)

The North American Division of Seventh-day Adventists provides each Union with the following general goals for Industrial Education programs as guidelines for fulfilling the educational philosophy for Seventh-day Adventist schools.
1. **Philosophy:**
   To enable students to recognize labor as an essential part of the gospel plan, experience its moral, mental and physical benefits in their own lives, and embark upon a lifestyle and career in which unselfish service to God and man will be paramount.
2. **Concepts:**
   To enable students to develop conceptual understandings based upon data, generalizations and personal experience, fitting them for independent thinking, careful decision-making and a commitment to a life of service to God and man.
3. **Values:**
   To enable students to understand, respect and develop their own set of personal values in harmony with essential Christian principles.
4. **Skills:**
   To enable students to develop and practice a variety of manual skills, as well as intellectual, valuing, self-direction, reference-study, safety, coordination and social participation skills.
5. **Habits:**
   To encourage and enable students to develop and practice habits of industriousness, wholesome recreation, neatness, accuracy, creativity and dependability.
6. **Social Participation:**
   To encourage and enable students to demonstrate Christian concern at home and abroad by participating naturally in service-oriented activities in society as individuals and as members of groups. (Columbia Union Curriculum Guide, p. 10)

Bruce Rogers (1985) completed the most recent study on the impact of Ellen G. White in the development of present-day Adventist work programs and training for work, and concluded:

1. The evidence obtained from the data indicate that the academies, in general, support the educational value of work.
2. The vocational offerings of the academies provided opportunity for exploratory work, and, in some academies, for extended skill training.
3. The value of saleable skills is so varied among the academies that a definitive conclusion cannot be drawn.
4. Providing for the development of the survival skills is a matter of local policy and practice.
5. Career guidance, providing training in employability skills, and providing academic credit for work experience are matters of local consent. (p. 74)

Using the concepts of education, as given by the North American Division, and the findings of Rogers as evaluation guidelines, the 57 Adventist secondary school bulletins and six Union curriculum guides for Industrial Education, referred to earlier, were examined. The goal of this examination was to see how the philosophy for practical and vocational education was being implemented in respect to present day curriculum and institutional offerings at the secondary level. In examining the schools for their requirements in practical education, the following results were found.

1. Over three-fourths (81%) of the schools and all the Union curriculum guides referred to the concept of practical training (industrial arts, technology, practical arts, work, vocational, etc.) for students in their philosophy or objectives. The remainder (19%) of the schools, however, did not feel practical training was important enough to include as part of their educational philosophy or objectives. In most schools, not including practical training within their philosophy or objectives, mention is made elsewhere in the bulletins with respect to work or employment opportunities to help meet educational expenses. This point is also stressed in almost all the boarding school bulletins.
2. Slightly over one-half (54%) of the schools required or allowed academic credit for supervised work experience. Day schools, as compared to boarding schools, comprised the majority (46%) of those that would not consider work as part of the educational experience.

3. Greater than four-fifths (82%) of the schools required at least one course in practical training (home economics, typing, work experience, drawing, agriculture, woods, etc.) for graduation. About one-tenth (11%) of the schools required more than one course while less than one-tenth (7%) of the schools had no required practical training at all.

4. Schools offering three or less courses to the students in practical education were about one-third (37%). More than one-third (40%), however, offered between four and six courses, while the remaining schools (23%) were offering more than seven.

Seventh-day Adventist education is dedicated to the preparation of young people to the services of God and their fellow man (Standish & Standish, 1984). As noted earlier in Chapter III, emphasis within Adventist education is directed toward character and intellectual development rather than on intellectual development alone. It is the purpose of Adventist education to teach its students to be honest, obedient, courteous, prompt, and industrious workers. This is accomplished through the study of the
Bible, teachers' examples, work experience, nature, and academics.
Summary

Statement of the Problem
What role did manual training have in the development of educational curriculum by the founders of the Seventh-day Adventist educational system, and has this role remained the same or been modified since its inception?

Significance of the Study
The "Educational Reform Movement" (Schwarz, 1979) of the 19th century was an instrumental period for addressing social and educational changes in America. The traditional private schools of the 18th century were to give way to the rise and triumph of America's "common schools" (Meyer, 1975). During the last half of the 19th century, however, there was a private educational system established by the Seventh-day Adventist church which has grown into the world's largest Protestant educational system.

George Knight (1985) suggested that members of the Seventh-day Adventist church often misunderstand the relationship of educational reform and the establishment of
Adventist education, particularly in light of manual training. Church members today, who are unaware of the fundamental principles of early Adventist education and the public school systems of the time, may easily misunderstand the position taken by early Adventist educators in their desire to combine academics with manual training and labor.

This study, therefore, has been conducted to help improve the quality of education within the Adventist educational system by examining the historical development of manual training and relating it to the principles of the Seventh-day Adventist system of the 1980s. As circumstances have changed and are likely to continue changing (DeVore, 1983), the review of those fundamental principles will be helpful in establishing alternatives for meeting the educational demands of the church in the 21st century. This study also addresses the issues presented in the following questions.

1. What were the principles, or foundation stones, of the Seventh-day Adventist educational system at the time it was organized?

2. Who were the developers of these foundation principles, and what philosophical ideas were they drawing upon to develop programs based on those principles?

3. Were these foundational principles unique to the Adventist educational system during that period?
4. Was manual training included in the general education curriculum of the church and for what purpose?

5. How and why have the church's foundational principles of education and the need of manual training changed since their inception?

6. What is the present place for manual training, or its modern day equivalent, in the church's educational system?

Methodology

In the writing of historical works there are three essential elements to be followed: (a) the location of the source material; (b) the evaluation of the source material; and (c) the author's interpretation of the source material (Gottschoke, 1950; Hockett, 1955; Brickman, 1982).

Location

In locating the primary material for the development of manual training within the Adventist church, it was necessary to review documents from the early years of the church, which at present are available in the James White Library on the campus of Andrews University in Berrien Springs, Michigan. Current documents from Seventh-day Adventist educational institutions and union curriculum guides for industrial education were studied when dealing with the present-day status of manual training. Secondary
and tertiary interpretations of other historians were used as a major source of establishing the background for manual training in Europe and the United States.

Evaluation

The source material was evaluated to answer the question: Is it what it is reported to be? The focus was to validate the material as to when, where, and by whom the material was written. Chronology and location are important in helping to evaluate the biases of its author.

Interpretation

The writer of this study has attempted to evaluate the material with respect to the time in which it was written and under the conditions of that time. Primary emphasis has been given to the development of manual training within the Seventh-day Adventist church and how that development compared to the programs developed in the public sector.

Findings

The philosophies and theories of educators in the past have been researched and analyzed for centuries (Quick, 1890; Dexter, 1906; Cubberley, 1920; Knight, 1941; Mulhern, 1959; Connell, 1980). From the movers and shakers of educational history come two distinctive classes: the
"thinkers" and the "doers" (Quick, 1890). The doers are those individuals who not only challenge established theories, as did the thinkers, but also implemented new educational practices.

Contributions of the Renaissance and Reformation periods to the field of education were made by a number of individuals. Francis Bacon established the scientific method of inquiry; John Comenius encouraged the universal education of boys and girls through the establishment of infant schools; John Locke established the basis for modern behavioral psychology with his theory that the mind is like a blank tablet upon which the environment makes the imprint, and development comes only by the formation of habit through discipline; Jean Jacques Rousseau promoted developmental psychology; Johann Pestalozzi with the development of object lessons as a principal teaching method for elementary education; Friedrich Froebel established the first kindergarten; and Johann Herbart with his five steps for instruction (Keatinge, 1896; Doughton, 1935; Cahn, 1970; Van Til, 1971).

Throughout the 17th and 18th centuries the predominant responsibility for education in America rested with the family and religious organizations (Graves, 1919; Drake, 1955; Lee, 1967). These years, as well as the 19th century, were indeed troublesome years in regard to the development of education in America (Aspinwall, 1912;
Meyer, 1975). Public and private schools were in the process of shaping a new style for education that has over the years developed into the backbone of American education. The reform of the educational system of America was brought about by the work of a new breed of educators and philosophers such as Ralph Waldo Emerson in heralding the methods of Pestalozzi; Herbert Spencer through the promotion of curriculum development in basic sciences; William Harris implementing Froebel's concept of kindergartens; William James and the development of faculty psychology; and Horace Mann, an educational visionary, advocating universal and free education for all (Mason, 1960; Jones, 1966; Carper & Hunt, 1984).

During the latter part of the 19th century and the beginning of the 20th, changes continued to take place in American education. The common school reform period was indeed a time beneficial to all classes of Americans. Stemming from this period are two fundamental movements of concern to this study. First, one of the major developments in education coming from the 19th century into the 20th was the growing acceptance of manual training as part of the overall educational program (Graves, 1919; Bennett, 1926; Barlow, 1967; Binder, 1974), and second was the establishment of Seventh-day Adventist education and its internal reform (Vande Vere, 1972; Schwarz, 1979; Knight, 1983).
The struggle to establish manual training in America can be seen in the works of educators such as John Runkle in promoting the works of Victor Della Vos and its value in the development of vocational skills, with his establishment of "instruction shops"; Calvin Woodward with his manual training school endeavoring to add a dimension to the educational process that would enable students to comprehend the complexity and value of labor and materials; Henry Belfield, director of the first independent manual training school in Chicago; and James MacAlister with the integration of manual training into the Philadelphia schools (Ham, 1886; Snedden & Warner, 1927; Stombaugh, 1936; Olson, 1957; Cremin, 1961).

As the century drew to a close, there were additional movements which were to affect the style and quality of manual training and the emergence of Manual Arts. With the growing labor demands of the industrial revolution in America, the educational system was called upon to produce not only students capable of reading and writing but those who would be productive workers for an industrial society. Two of the educational movements reflecting this change were the "Sloyd Movement," established at the Sloyd Training School of Boston and directed by Gustaf Larsson; and the "Arts and Crafts Movement," beginning in Philadelphia by Charles Leland (Bennett, 1905; Anderson, 1926; Stombaugh, 1936; Martin & Luetkemeyer, 1979).
Once again the societal influences were altering the role of manual training. The psychological and holistic concepts of manual training had lost their importance with the sloyd and arts and crafts movements, which made it easier for those interested in vocational training to lead the way (Stombaugh, 1936; Barlow, 1967). In attempting to resolve the growing philosophical split between the manual and vocational movements, educators like Charles Richards, James Russell, Fredric Bonser, and William Warner, concerned that the scope of manual arts was too narrow, advocated an industrial content base of instruction called "Industrial Arts" (Richards, 1904; Russell, 1909; Bonser & Mossman, 1923).

By the middle of the 20th century, industrial arts faced a new challenge as the American industrial society gave way to a global information society. Warner foresaw this change in 1947 and initiated the title, "Technology Education" (Olson, 1957; Lux, 1981). Will it be the solution to the original concepts of manual training for the 21st century?

The second event stemming from the 19th century into the 20th, of concern to this study, was the development of an educational system within the Seventh-day Adventist church. In establishing the significance of this event, solutions for the following questions were pursued.
Question (1)

What were the principles, or foundational stones, of the Seventh-day Adventist educational system at the time it was organized?

Findings

The first school operated by Adventist believers at Buck's Bridge, New York, began in 1853 and failed in 1856. A second attempt was made at Battle Creek, Michigan, in 1857, and it also failed within a short period of time. The first official church-sponsored school, however, was not established until 1872 at Battle Creek (Cadwallader, 1958; Vande Vere, 1972). The earlier schools at Buck's Bridge and Battle Creek were established primarily as elementary schools, enabling Adventist believers to provide their children a spiritually based education which was unavailable in public institutions. Although the basics of reading, writing, and mathematics were provided in the first officially sponsored Adventist school at Battle Creek in 1872, its objectives went beyond an elementary education (Olsen, 1925; Knight, 1983).

The goal for the establishment of Adventist education was to develop a denominational school that, in the shortest time possible, would qualify young men and women to enter a work force in the cause of God. To accomplish this meant establishing a school to meet specified
objectives. The first foundational principle of Adventist education, therefore, was that of the mental development of the student. It was assumed that students entering the school for short-term special training in church service would already have basic educational skills. But selected courses were to be offered which would allow for expanded mental development while other objectives, such as training to give Bible studies or literature evangelism, were being fulfilled as well. A second foundational principle was that all curricula should be centered on the Scriptures rather than around the traditional classics. The students were there to learn the Scriptures and prepare to serve and share. The third foundational principle was that of practical training. Workers were needed with skills in health care, printing, agriculture, etc., who would be able to witness and share the message of the church. Students leaving the school at the completion of their studies, whether only a few weeks or months in length, would have developed spiritually, mentally and physically (White, 1857; White, 1872).

**Question (2)**

Who were the developers of these foundational principles, and what philosophical ideas were they drawing upon to develop programs based on these principles?
Findings

The developers of the Seventh-day Adventist educational system during the last quarter of the 19th century represent three critical periods of development. George Knight (1984) referred to these periods as those of the: (a) initiators; (b) reformers; and (c) stabilizers.

Initiators. The primary initiator of education within the Seventh-day Adventist church was James White (Cadwallader, 1958; Vande Vere, 1972; Graham, 1983). In dealing with the importance of education, as compared to other needs of the new church, White originally was opposed to establishing schools as a part of the church organization. However, as the number of church members grew and the problem of Christian education became more prevalent, he realized that action in establishing an educational program must be taken. As editor of the church paper, the Review and Herald, White began explaining the educational need to its readers and calling for the official sponsorship of a school at Battle Creek (White, 1857; White, 1862; White, 1872). White (1862), replying to letters received as the result of some of his earlier writing, expressed his philosophy for Christian education in stating that it was the "well-disciplined and informed mind" (p.29) that could best understand the new truths being presented by the Adventist church.
Although not as actively involved in the development of Adventist education prior to 1870, Ellen G. White, wife of James White, was the most outspoken and prolific writer on Adventist education that the church has ever known (White, 1872; White, 1903; White, 1904). The general theme of these inspired writings reflect her philosophy of a holistic approach to education through the development of the spiritual, mental, and physical powers of the student. The first discourse on education written by Mrs. White (1872) dealt with a topic not fully understood by her colleagues or fellow church members at the time. The central topic of that report dealt with the need of manual training within Adventist education.

Two others who may be classified as initiators of Adventist education were Goodloe Harper Bell and Sidney Brownsberger (Lindsay, 1983; Smoot, 1983). A major issue to emerge during the early years of Adventist education, that would divide the efforts of Bell and Brownsberger, was the emphasis given by the Whites for manual training as a part of one's education. Bell, having received a portion of his education at Oberlin College, understood the concept of manual training, whereas Brownsberger, educated at the University of Michigan, was steeped in the traditional classic form of education (Cadwallader, 1958; Vande Vere, 1972; Johnson, 1976). As Battle Creek College withdrew further and further from the inspired counsel on education.
given by Mrs. White, it eventually reached a time when the church withdrew its support of the program and the college was closed (Spalding, 1962; Vande Vere, 1972; Lindsay, 1983; Smoot, 1983).

Reformers. With the collapse of Battle Creek College in 1882, Adventist educational leaders were forced to reevaluate the operational principles of the school and reconsider the inspired counsel of Mrs. White. Reestablished in 1883 under the leadership of Wolcott Littlejohn, Battle Creek College would once again become a beacon for the Adventist educational movement. The golden years for Battle Creek College were 1885-1895 and mark the heart of the educational reform within the Seventh-day Adventist educational system (Cadwallader, 1958; Spalding, 1962; Vande Vere, 1972).

The reform movement, bringing the educational institutions into closer harmony with the counsel of Mrs. White, was orchestrated by two key individuals: William Prescott, the first educational secretary of the General Conference of Seventh-day Adventists; and Edward Sutherland, the most successful reformer for manual training within the church (Hook, 1979; Valentine, 1983; Ashworth, 1987). The reform movement of the 1880s through the 1900s redirected the concepts of Adventist education sharply. As is often the case, however, such rapid
development led to an overreaction, and the need for stabilization of the system was necessary.

Stabilizers. Just as the last quarter of the 19th century brought reform to Adventist education, the first quarter of the 20th century focused on the development or stabilization for Adventist education. Two individuals fulfilling key roles in trying to make Adventist education truly balanced in its spiritual, mental, and physical aspects, as counseled by Mrs. White, were Calvin Lewis and Fredrick Griggs (Cadwallader, 1958; Reye, 1985). It was the levelheadedness and organizational ability of Griggs in particular that allowed the Adventist educational system to establish the base on which to grow into the educational system of today (Schwarz, 1979; Knight, 1983).

Question (3)

Were these foundational principles unique to the Adventist educational system during that period?

Findings

The foundational principles of a holistic education are certainly not unique to Adventist education. From the reform movements of the 18th and 19th centuries, educational reformers had advocated the development of an educational system for the masses (Ham, 1886; Graves, 1919; Van Til, 1971), church leaders advocated education for
spiritual enlightenment (Reisner, 1927; Carper & Hunt, 1984), and the combining of education with physical development is the heart of the educational philosophy of individuals such as Emanuel von Fellenberg and Johann Pestalozzi (Cubberley, 1925; Monroe, 1935).

Question (4)

Was manual training included in the general educational curriculum of the church and for what purpose?

Findings

Although the concepts of manual training were supported by the initial writings of both James and Ellen White, and were in harmony with the educational philosophy of Bell, they were not included in the general educational curriculum of Adventist education at the beginning. Even with the continued encouragement by supporters for manual training, it was not considered seriously for over ten years. Brownsberger and McLearn, the first two principals of Adventist schools, were trained in the classical form of education and saw no way to include manual training as part of the curriculum (Spalding, 1962; Lindsay, 1983). It was on this point that Battle Creek College was to collapse in 1882. The following year, when the college reopened, marked the first time manual training was recognized as a department within the school (Battle Creek College, 1883).
Question (5)

How and why have the church's foundational principles of education and the need for manual training changed since their inception?

Findings

The foundational principles of Adventist education have not really changed since their inception. The methods of their implementation, however, have been extremely diverse. In the formative years the counsel for spiritual, mental, and physical education were ignored. During the period of educational reform within Adventist education, extreme emphasis was placed on physical development through manual training to the extent of weakening other aspects of education (White, 1872; Lindsay, 1983; Ashworth, 1987). The stabilization period helped to bring Adventist education back into perspective and balance its spiritual, mental and physical objectives (Reye, 1985).

Outside the church there were societal changes that helped reinforce the value of manual training within the church educational system. Like the American educational system, manual training in Adventist education has progressed through the development of manual arts, industrial arts and into today's technology education (Williams, 1981).
Question (6)

What is the present place for manual training, or its modern day equivalent, in the church educational system?

Findings

Studies by educational administrators at all levels indicate that the interest and support of manual training or its modern day equivalent, technology education, is declining (Reinholtz, 1979; Blake, 1980; Anderson, 1982). Examination of 57 secondary school bulletins from Seventh-day Adventist schools across North America, concerning school requirements in technology education agree with the previous findings. Four-fifths (81%) of the schools still refer to the concepts of technology education as part of their philosophy or objectives. A few more of the schools (82%) require at least one class in technology education for graduation. Just over one-half (54%) of the schools still allow student work, and training for work, to count as part of the overall academic credits.

Conclusions

Seventh-day Adventist education is now over a century old, and time has allowed it to mellow and grow. But what is happening to its foundational principles? Studies over the past ten years by Reinholtz (1979), Blake (1980),
Anderson (1982), and Rogers (1985) indicate that there is a slackening of the emphasis placed on the physical aspects of education within the church.

Responding to the additional study of primary, secondary, and tertiary documents dealing with the establishment of manual training and the Seventh-day Adventist educational system, the following conclusions have been reached. (See Appendix C for further suggestions)

1. The foundational stones of early Adventist education in theory and practice were not the same. The philosophy for Adventist education called for an education that was balanced in the spiritual, mental, and physical development of the student. Programs were to be developed that would be flexible and help train workers for the church. The first school, however, followed the public sector and was strictly a classical education within a church setting. Spiritual and physical development were not included.

2. Following the stabilization period, early in the 20th century with the increased emphasis on basic education in the public sector, Adventist education appears to be modifying its principles and following along. Adventist education, however, shows a history of knowing what should be done, yet following public education. Mrs. White counseled the educational leaders of the church in 1870 on the importance of physical development through the use of
manual training, but the concept was regarded as impractical by the first educational administrators of the church. Had they been implemented, the church may have been a leader in the manual training movement and supporters of men like Runkel and Woodward rather than followers.

(3) The needs of society have changed also over the past century, moving from an agrarian society through the industrial movement into a global information age. Faced with a need to train teachers, preachers, doctors, and nurses to work in denominational health and educational institutions, Adventist educational leaders lost sight of practical training of church workers and laypersons. Practical educational training has always been stressed through the educational objectives of the church, but the training for work outside the "Golden Four" have been a constant battle.

(4) Today, more than ever before, Adventist education needs to adhere to the inspired counsel of Ellen White. The foundational principles of Adventist education is still the holistic development of the mental, physical, and spiritual understanding of its students. Manual training, one of the early foundational elements of Adventist education has been replaced by manual arts, industrial arts, and now technology education in Adventist schools as well as in public schools. With the change in the content
base for this educational discipline, the principles of a practical education for today's students in Adventist schools still remains. This study indicates that there is indeed a decline in the emphasis placed on practical education; fewer classes are being offered as increased demands are made for stronger science and language requirements. This in turn means fewer choices and opportunities for students, thus confining the awareness of students and restricting their opportunity to balance their education from the physical side.

(5) The concepts of manual training could have been used to place Adventist education on the threshold of educational reform during the last quarter of the 19th century. Had Adventist educators followed the inspired counsel of Ellen White, in relation to the uniqueness of Adventist schools, their schools would have taken a special place in history alongside the schools of Woodward and Runkle. Instead Adventist educators struggled for nearly forty years before stabilizing its educational program.
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APPENDICES
Appendix A:

1986-87 Academy Bulletins
Academy Bulletins Reviewed

Adelphian Academy ................................ Holly, MI
Armona Union Academy (D) ........................ Armona, CA
Auburn Adventist Academy ........................ Auburn, WA
Bakersfield Adventist Academy (D) ................ Bakersfield, CA
Bass Memorial Academy ............................. Lumberton, MS
Battle Creek Academy (D) .................... Battle Creek, MI
Blue Mountain Academy .......................... Hamburg, PA
Broadview Academy ................................ LaFox, IL
Campion Academy ..................................... Loveland, CO
Cedar Lake Academy .............................. Cedar Lake, MI
Chisholm Trail Academy (D) ..................... Keene, TX
College View Academy (D) ........................ Lincoln, NE
Collegedale Academy (D) ....................... Collegedale, TN
Columbia Adventist Academy (D) ............... Battle Ground, WA
Dakota Adventist Academy ........................ Bismarck, ND
Enterprise Academy ................................ Enterprise, KS
Forest Lake Academy ............................. Apopka, FL
Garden State Academy ............................. Tranquility, NJ
Georgia-Cumberland Academy ..................... Calhoun, GA
Greater New York Academy (D) ................ Woodside, NY
Highland Academy .................................. Portland, TN
Highland View Academy ......................... Hagerstown, MD
Indiana Academy .................................... Cicero, IN
Jefferson Adventist Academy ..................... Jefferson, TX
La Sierra Academy (D) .......................... Riverside, CA
Lodi Academy (D) .................................. Lodi, CA
Loma Linda Academy (D) ........................ Loma Linda, CA
Lynwood Adventist Academy (D) ................. Lynwood, CA
Madison Academy (D) ................................ Madison, TN
Maplewood Academy ............................... Hutchinson, MN
Mile High Academy (D) ............................ Denver, CO
Milo Adventist Academy ............................ Days Creek, OR
Monterey Bay Academy ............................. Watsonville, CA
Mount Vernon Academy ............................ Mount Vernon, OH
Mountain View Academy (D) ..................... Mountain View, CA
Northeastern Academy (D) ....................... New York, NY
Oakwood Academy (D) ............................. Huntsville, AL
Orangewood Academy (D) ......................... Garden Grove, CA
Ozark Adventist Academy ........................ Gentry, AR
Pine Tree Academy (D) ............................ Freeport, ME
Platte Valley Academy ............................ Shelton, NE
Portland Adventist Academy (D) .............. Portland, OR
Pacific Union College Preparatory School (D) .... Angwin, CA
Rio Lindo Academy ................................ Healdsburg, CA
Sacramento Union Academy (D) .................. Carmichael, CA
San Fernando Valley Academy (D) ............. Northridge, CA
San Gabriel Academy (D) ........................ San Gabriel, CA
San Pasqual Academy ............................. Escondido, CA

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Shenandoah Valley Academy .................. New Market, VA
Shiloh Academy (D) ................................ Chicago, IL
Spring Valley Academy (D) .................. Centerville, OH
Takoma Academy (D) .......................... Takoma Park, MD
Thunderbird Adventist Academy ............ Scottsdale, AZ
Upper Columbia Academy ................... Spangle, WA
Valley Grande Academy ..................... Weslaco, TX
Walla Walla Valley Academy (D) ........... College Place, WA
Wisconsin Academy .......................... Columbus, WI

All schools are boarding institutions with the exception of those marked (D) which are day schools only.
Appendix B:

Union Curriculum Guides
Union Curriculum Guides
for Industrial Education Reviewed

Columbia Union Conference
Office of Education
5427 Twin Knolls Road,
Columbia, Maryland 21045

Educational Director
Dr. Timothy McDonald

Lake Union Conference
Office of Education
125 College Avenue
Berrien Springs, Michigan 49103

Educational Director
Dr. Warren Minder

Mid-America Union Conference
Office of Education
8550 Pioneers Blvd.
Lincoln, Nebraska 68526

Educational Director
Donald Keele

North Pacific Union Conference
Office of Education
10225 Burnside
Portland, Oregon 97216

Educational Director
Dr. G. L. Plubell

Pacific Union Conference
Office of Education
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Appendix C:
Reflections
Reflections for Further Action

It has not been the intent of this study to be prescriptive toward educational curriculum. It was the author's intent to investigate why and how Seventh-day Adventist education became a major element of the Seventh-day Adventist church and the role of manual training in that process. The results are found in the findings and conclusions of Chapter V.

It is the desire of the author that for investigations made by future scholars, this document may be a foundational point. Questions that have arisen during this investigation but not addressed may be of importance to one or more of the organizational levels of Seventh-day Adventist education. In harmony with the findings of his investigation, the following recommendations for future study and consideration are given for the indicated administrative levels.

North American Division - Educational Department

A re-assessment of the philosophy for Adventist education is needed in light of the changing emphasis on curriculum requirements and its effect on the physical, mental, and spiritual aspects of Christian education.
Union - Educational Departments

1. The establishment of curriculum goals, designed to meet the needs of students living in a technological society, are needed to uphold the foundational principles of Adventist education.

2. Implementation of updated curriculum, through the development of inservice training and cooperative educational/work partnerships, for teachers.

Local Conference - Educational Departments.

1. A re-evaluation of existing technology programs should be conducted to determine if they are meeting the objectives of the school.

2. Expanded programs in technology education which would include planned programs for all students K-12 should be developed.