



Great teachers on teaching adults : comparison of philosophy and practice from antiquity to the present
by Marsha Elaine Covington

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University

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Abstract:

To supplement the existing body of research in adult education, a comparison of the philosophies and practice of great teachers of adults from ancient times to the present was undertaken. Initial review of the literature produced a list of those considered great teachers. Delimiters were used to choose fourteen representatives: Pythagoras, Socrates/ Plato, Aristotle, Confucius, Gautama, Jesus, Aurelius Augustine, Thomas Aquinas, Desiderius Erasmus, Benjamin Franklin, Francis Bacon, Alfred North Whitehead, Nadia Boulanger and Myles Horton. Another literature search was conducted to examine each great teacher for: 1. a brief biography; 2. personal vision or philosophy about learning and teaching; 3. characteristics as a teacher; 4. attitudes toward learners; 5. attitudes toward subject matter; and 6. teaching methods used. Case studies were written about each focussing on the aforementioned criteria. These nine principles of educating adults were derived by comparing each of the representatives: 1. Learners are their own best teachers; 2. Teachers play a significant role in guiding learners through the learning process; 3. The primary underlying purpose of education for the adult is personal development rather than acquisition of knowledge that relates to facts and skills; 4. A teacher's responsibility, as lifelong learner, is to model that which learners are trying to become; 5. Each student is unique, therefore teaching should be constructed to fit individual differences; 6. Discipline in learning involves the expectation that the student needs to exert his own effort toward the accomplishment of his learning; 7. Knowledge is not just for the keeping, but for action in the world; 8. Learning requires personal assimilation coupled with some type of interaction with others; 9. The teacher/student relationship can be the highest form of relationship and can include intimacy, support and love as well as challenge and discomfort. Teachers sacrifice something of themselves that learners might succeed—and even exceed—their best efforts.

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ABSTRACT

To supplement the existing body of research in adult education, a comparison of the philosophies and practice of great teachers of adults from ancient times to the present was undertaken. Initial review of the literature produced a list of those considered great teachers. Delimiters were used to choose fourteen representatives: Pythagoras, Socrates/Plato, Aristotle, Confucius, Gautama, Jesus, Aurelius Augustine, Thomas Aquinas, Desiderius Erasmus, Benjamin Franklin, Francis Bacon, Alfred North Whitehead, Nadia Boulanger and Myles Horton. Another literature search was conducted to examine each great teacher for: 1. a brief biography; 2. personal vision or philosophy about learning and teaching; 3. characteristics as a teacher; 4. attitudes toward learners; 5. attitudes toward subject matter; and 6. teaching methods used. Case studies were written about each focussing on the aforementioned criteria. These nine principles of educating adults were derived by comparing each of the representatives: 1. Learners are their own best teachers; 2. Teachers play a significant role in guiding learners through the learning process; 3. The primary underlying purpose of education for the adult is personal development rather than acquisition of knowledge that relates to facts and skills; 4. A teacher's responsibility, as lifelong learner, is to model that which learners are trying to become; 5. Each student is unique, therefore teaching should be constructed to fit individual differences; 6. Discipline in learning involves the expectation that the student needs to exert his own effort toward the accomplishment of his learning; 7. Knowledge is not just for the keeping, but for action in the world; 8. Learning requires personal assimilation coupled with some type of interaction with others; 9. The teacher/student relationship can be the highest form of relationship and can include intimacy, support and love as well as challenge and discomfort. Teachers sacrifice something of themselves that learners might succeed—and even exceed—their best efforts.

INTRODUCTION

Every discipline needs a history. As Confucius taught in the fifth century, our history gives us the foundation for all our future learning. To the ancient Chinese, history was thought to serve as a guide to present conduct. In a common Chinese metaphor history was portrayed as a mirror in which men could see their own actions, understand their own motives and judge their own behavior. The past was understood to provide a bridge to the understanding of the present. On this point Cicero shared with Confucius the belief that to be ignorant of what occurred before you were born is to remain always a child. Both shared with George Orwell the understanding that whoever controls the past also controls the future (Dawson, 1981).

In addition, every discipline needs a methodology, a set of procedures which, if followed, are likely to result in success. In the discipline of education, the methodology provides each new practitioner with at least some of the tools they need to approach the task of designing learning programs without having to reinvent all the techniques they'll use with their students.

Finally, to be truly effective, every discipline needs emulators of its methods who, by their example, leave a record written in their own "sweat and blood" as proof of the validity of the recommended methodology. A real-life example is perhaps the most powerful form of scientific proof. Sir Isaac Newton reasoned that if we achieve something of value, it is because we stand on the shoulders of giants who have come before us (Novak & Bowin, 1984). Francis Bacon stated in *The Advancement of Learning*, "now that the times abound with history, the aim is better when the mark is

alive" (Bacon in Wallace, 1943, p. 96). Though he valued the persuasive power of fictional parables, in education as well as politics Bacon preferred historical examples. Because they recount events and encounters that really happened, examples drawn from history produce a unique effect on the psyche. They are pure in that they rely for their effect on nothing but their true and accurate retelling; in addition they are closely aligned with action and hence especially fitted for the influencing of people.

Those who built the foundations of the adult education movement over the past several decades have approached the compilation of a certain methodology for practicing their discipline. While the adult education movement is relatively short, some historians and theorists have dedicated themselves to the task of recording its history as it has been practiced over the past several decades, going back as far as a few centuries. But missing still in the adult education literature are histories that include a review of the education of adults as it was practiced from ancient times through the Middle Ages and the Renaissance and into the modern era.

Harold W. Stubblefield, a foundational historian for the movement, while recognizing that several avenues of adult education, from the chautauguas and lyceum lectures to women's organizations and service clubs, were in place in the United States before World War I, he none-the-less assigns the first real theoretical analysis of the adult education movement to a group of theorists who gathered after World War I (Stubblefield, 1988). His history of the movement, *Towards a History of Adult Education in America*, goes no further back in history than this period.

Malcolm Knowles is also considered an important historian for the movement. Though very early in his career he expressed interest in studying "great teachers from ancient history" and the practice of adult education in the Middle Ages (Knowles, 1972)

none of his published writings have undertaken a serious study of the practice of adult education in these historical times.

John Elias and Sharan Merriam's important work *Philosophical Foundations of Adult Education*, a comprehensive analysis of the philosophical foundations of six major systems of educational thought, certainly does contribute to our understanding of the personalities, issues and programs of adult education. In the process of delineating various philosophies, Elias and Merriam mention many people who have provided the foundation for the discipline of adult education. But mention is the operative words here; none are given much more than a page describing their philosophies and/or methods of teaching. As important as this much-needed work is, it does not provide the basis for the indepth analysis of the way each teacher practiced his art, and the ways in which his or her students reacted to and learned from these methods. As Elias and Merriam admit, "The philosophy of adult education does not equip a person with knowledge about what to teach, how to teach, or how to organize a program. It is more concerned with the why of education. . . ." (Elias & Merriam, 1980, p. 8).

A review of the published history of the adult education movement shows that a comprehensive history and analysis of the art of educating adults centered on teachers and their interaction with their students going back to the earliest records has yet to be undertaken by modern scholars in the field of adult education.

While Bacon believed that histories make men wise, Carlyle was convinced that the history of the world really consists of nothing but the biographies of great men (Hook, 1943). The other element missing from the discipline of adult education is the compilation of such biographies—the stories of the emulators, the philosophies and activities of the heroes and heroines—of adult education, those who have been the living

examples of the art of teaching through the centuries. Though history abounds with examples of great teachers who have worked with adults, the writers, theorists and philosophers of the adult education movement have neglected to hold them up as the best examples—the best proofs—that the methods taught within the field today have worked for centuries.

Note that this reference is to adult education theorists. Pedagogical writers who focus on the teaching of children have paid fair tribute to their best teachers from the past and, to some degree, have continued to do so. Writers eager to illumine the path for present and future teachers of children have provided several notable volumes portraying the acts of and reactions to teachers who have come to be known as "great teachers." But to date adult educators have neglected to study their own great lights in delineating the teaching methods they profess.

This study is being offered in an attempt to provide a much-needed examination of the educational activities of some of the best practitioners of the art of teaching adults that can be identified as far back as the ancient Greeks and the Orient and to use the examples of the world's finest teachers to begin to build a history, case by case, of the practitioners of adult education. Specifically it will look at several aspects of the man or woman who has been a great teacher including:

1. A biography in order to get the flavor of his or her experiences with learning and teaching as well as his or her personality and temperament
2. His personal vision or philosophy about learning and teaching
3. His personal characteristics as a teacher, looking at such matters as his expertise and personal qualities such as morality, integrity and behavior
4. The teacher's attitudes toward learners

5. The teacher's attitudes towards the subjects he teaches
6. The teaching methods used. For this last category an attempt will be made to determine as clearly as possible: a) the reasons the teacher had for choosing certain methods; b) the manner in which the methods were applied; and c) the success or failure of each method as it has been recorded in history. In addition it will examine as closely as possible d) the reactions of students to the use of particular methods to determine, from their own commentary and by historical analysis, the relative success of the methods used from the student's perspective.

Though this review is being offered not in the infancy of the adult education movement but well after the development of a strong theory and methodology, nevertheless the findings of this study should provide much needed insight into the foundations of the discipline and a platform for the analysis of various educative philosophies and teaching methods to determine how they have or have not stood the test of time.

Statement of the Problem

Why is this study coming so relatively late in the development of the adult education movement? Why has an important examination of great teachers not previously been undertaken by adult education scholars for the benefit of those being trained as educators of adults? Why has it been neglected by the adult education movement but not by the general education community? Has this simply been an oversight?

One major contributing factor may be the attitude many adult educators hold toward the role of the teacher in adult education. A review of the current literature in adult education reveals that the role of the teacher has been minimized by adult education

theorists in this century. Many educators and writers strongly prefer the role of the "facilitator" over that of "teacher." Some of these actually use the term "teacher" as a pejorative. This preference is not merely a controversy over semantics; just as the two words "teacher" and "facilitator" carry their own separate meanings, so do they each imply very different roles, and with them very different activities, responsibilities and relationships as applied within those roles.

The reasons for the preference among adult educators for the role of facilitator are clearly delineated in the literature. Research and observation of adult learners in this century has shown that adults are distinctly different from children in how they learn. They do not come to a learning experience as *tabula rasa*, but full of experiences by which they have learned to judge their worlds. The adult education theorists who have developed the principles of adult education have challenged the traditional methods and attitudes of teachers who have treated adults like children, using directing and controlling techniques, calling instead for a new teaching style which would be more learner centered. No more the authority figure who lectures at blank faces, the new teacher trained within the adult education movement is more an equal with the student, giving the student not what he or she thinks the student needs, but what the student decides she wants. The new teacher no longer necessarily teaches what he has learned from a point of expertise, but facilitates the learning of those assigned to work with him. As a result, some feel that the new "teacher" in adult education is really not a teacher at all, but rather a "facilitator" of learning.

This attitude may have had a major impact upon the amount of attention (or lack of attention) that has been given to studying teachers of adults. Another reason may be the swing of the pendulum over the last several decades away from interest in biography as a means of understanding people.

Whatever the reason, there has been a neglect of any effort within the field of adult education to review case histories of those who have been the most successful at their art. Rare are references in the literature to the great lights of education such as Plato, Pythagoras, Confucius, Jesus, Bacon, Franklin and others, teachers of adults who have had a profound effect on numbers of students, and on the evolution of the discipline as a whole. Though references to these and other great teachers and their teaching methods are not completely absent, they are often so fleeting that the effect is to make the teacher seem to reflect the exception and not the rule. One reference to great teachers of the past stands out as especially intriguing, perhaps specifically because of the lack of a follow-up study or any further references in subsequent literature. I refer here to the very brief mention made by foundational adult education theorist Malcolm Knowles regarding the relevance of great teachers of the past to the adult education movement.

Knowles claimed in his early article "Innovations in Teaching Styles and Approaches Based Upon Adult Learning," published in the *Journal of Education for Social Work*, Vol. 8, Spring 1972, that there indeed was an ancient art of teaching adults which flourished in the centuries before the life of Jesus, but that the practice of the art was lost and all but forgotten with the rise of Christianity. He proposed that this loss resulted from the power struggle which took place during the Middle Ages between the hierarchy of the Catholic Church and other religious elements:

I believe that the cultural lag in education can be explained by the fact that we got hemmed in from the beginning of the development of our educational system by the assumptions about learning that were made when the education of children became organized in the Middle Ages. Pedagogy became a millstone around education's neck. Tragically, the earlier traditions of teaching and learning were aborted and lost with the fall of Rome; for all the great teachers of ancient history—Lao Tsé and Confucius in China, the Hebrew prophets, Jesus, Socrates, Plato, Aristotle,

Euclid, Cicero, Quintilian—were chiefly teachers of adults, not children. And they made assumptions about learning (such as that learning is a process of discovery by the learner) and used procedures (dialogue and "learning by doing") that came to be labeled "pagan" and were therefore forbidden when monastic schools started being organized in the seventh century (pp. 32-33).

This brief acknowledgment that the great teachers of the past were important practitioners of the art of teaching adults has never been followed up with subsequent commentary. This researcher has been able to uncover no other references to this theory in any other published writings of Knowles, or in the works of any other writer. Why was this fascinating question dropped by Knowles?

We find in this passage excellent material for further inquiry. Most interesting is the theory that the reason the art of adult education was lost as a discipline was due specifically to the religious objections of Middle Age Catholic educators to the study of "pagan" teachers of antiquity. In addition, several questions surface regarding the statement that "the earlier traditions of teaching and learning were aborted and lost with the fall of Rome." What were these "traditions" and their accompanying educational philosophies? What methods were practiced within these traditions, and who practiced them? How effective were they in the education of earlier generations? Did these traditions go underground, and how might they have been in part assimilated into or synthesized by subsequent educational systems?

Finally, the passage leaves this researcher with another, more personal question of Knowles and other recent scholars: Why did they not, at the time of this reference or at any other time, "return to the scene of the crime" and undertake thorough research to determine just what these traditions consisted of in the practical everyday life of a teacher and his student? Why was such a study not undertaken, and how and why has a

methodology of teaching been developed which seems to have almost completely ignored these very great teachers who were acknowledged as far back as 1972 as possessing perhaps the first awareness of the best methods for teaching adults. In fact, Knowles is implying here that these figures held the great key to the practice of adult teaching and learning which was snatched from us in the seventh century and which adult educators in this century have gone about reinventing.

Purpose of the Study

This research focuses on some of the same teachers mentioned by Knowles as well as other, more recent teachers who have been recognized as great. The specific goal is to examine the philosophy of and methodology used by these teachers as they created programs of learning for their students. This research is being conducted under the premise that these individuals truly were the practitioners of a well-developed art of teaching practiced among adults within adult communities, and that those who have been acclaimed by their students as being particularly effective did have (and that their counterparts from more recent history do have) important insight into a methodology for teaching adults.

This research is based on the premise that, by studying the methods used by effective teachers, students of adult education can better determine which qualities and methods they would emulate in their own teaching. From the study of effective teachers of the past and present and within various cultures we can outline the qualities, attitudes and methods which help to make teachers particularly effective.

Specific questions to be answered by this research include:

1. What have been the educational philosophies of teachers studied? What have they believed about how adults learn?

2. How have they designed their teaching programs to reflect beliefs about learning?
3. What have been the personal characteristics of these teachers?
4. What attitudes have they held towards their students, and how has this effected their relationships with them?
5. What have been their attitudes toward their subjects?
6. What methods were used by teachers studied?
7. What have been the failures, mistakes and unfortunate long-term effects of the theories and practice of some who have been considered great teachers?
7. What general principles can be drawn from the practices of the teachers studied?

Scope of the Research

Of utmost importance to the success of this research is the question of which great teachers of the distant past and more recent history should be studied. While there have surely been thousands of highly effective teachers throughout the centuries, this study must necessarily be limited in its scope. The following criteria have been applied in choosing those who will be studied:

- A. The candidate must be a "great teacher" worthy of study. Some students of education (albeit, not students of adult education) have attempted to determine what makes a teacher a "great" teacher. Others have been satisfied to examine "famous" teachers, including in a large general category any well-known teacher who has been recognized for some real contribution to the field of education. Some studies have concentrated on great or famous "educators" which category can include those who have had a well known philosophy and/or have administered a school or college. For the purposes of this study, a great teacher who may be included must be recognized as a great teacher as opposed to a

famous teacher, a great or famous educational philosopher or great educator. A major concern with this subject is the difficulty of defining greatness and of determining who is "great" and who isn't. *Webster's New World Dictionary* (1989) defines "great" as "1) of much more than ordinary size, extent, etc.; 2) much above the average; 3) most important, main" (p. 189). Other elements defined in Merriam Webster's Collegiate Dictionary Tenth Edition (1993) include: "predominant, major;" "remarkable in magnitude, degree or effectiveness;" "eminent, distinguished;" "chief or preeminent over others;" "remarkably skilled;" and "marked by enthusiasm" (p. 410). This research focuses on those teachers from the ancient Greeks to our modern era who have been particularly noted by a number of reviewers as being "great" in the sense of being preeminent, remarkable and influential in changing the lives of the people they taught and, in most cases, of subsequent generations. Many of these people have been called "great" by their own students, by those generations which came after them and by educational historians. They have also been regarded as "great" by the general public as their teaching has impacted subsequent cultures.

What "great" does *not* mean in the context of this research is morally superior. A great teacher is not necessarily one who has perfected himself, even according to his or her own standards. All the teachers studied strove, as lifelong learners, to fulfill their own ideal of what a teacher should be; some succeeded more than others. Still some held to a different set of standards than we do today. For the modern researcher, some are a disappointment when their human characteristics and educational theories are held up against those who have come to represent the highest that human minds and hearts can achieve: Socrates and

Plato both appear to have tolerated what we would consider improper sexual relations between adults and young boys; Plato's concepts about how learners should strive to become all they can be is toppled by his ideal educational system (recorded in his *Republic*) which denies the power of adults to grow out of their state-imposed classes; Augustine's intensity and fanaticism resulted in his codifying several doctrines in the Catholic church that actually hampered learning through the dark ages; and the scientific attitudes and methods of Aristotle and Aquinas, while they have advanced outer knowledge, have overshadowed the power of the individual learner to "know" without the aid of outer proofs.

"Great" teachers in the context of this research implies teachers who have had great influence through the centuries, whose influence has been expansive and who have been noted over and over again by educational critics. They are influential role models for certain principles they taught or certain techniques they popularized. They are not necessarily "great" by all standards. They are not all great moral exemplars, and there is no suggestion intended that all that these teachers stood for or believed in should be held up for teachers to emulate today.

Another word which requires definition is "teacher." By teacher is meant (for the purpose of this study) one who assists in the education of adults and who can be said to have had some impact upon the successful achievement of learning on the part of the students with whom he or she has interacted. Dictionaries almost unanimously define "teacher" as "one who teaches." But the definitions of what it means to "teach" vary widely. *Webster's Ninth* (1973) defines "teach" as "1) to cause one to know something; 2) to guide the studies of, 3) to impart, 4) to instruct by precept, example, or experience, 5) to conduct instruction regularly."

Teaching is treated as synonymous with "instruct, educate, train and discipline" (pp. 440-441). *Webster's New World Dictionary* (1989) adjusts the more traditional definitions by defining "teach" as "1) to show or help to learn to do something, 2) to give lessons to, 3) to give lessons in, 4) to provide with knowledge, insight, etc. (p. 441)." An underlying assumption is that one who teaches also has some philosophy or beliefs about how students learn, and how to be of most assistance to learners.

These definitions imply that a teacher is one who takes an active role in some way in the education of learners. As part of this research it has been noted that for most of history, the one-on-one, personal "oral" tradition has been the format for teaching. But since the scientific revolution, the possibilities for teaching expand well beyond the close, personal teacher/student relationship. Now it is possible for one teacher to assist hundreds—even thousands—of students around the world simultaneously. With the invention of the printing press and more recently other forms of communication technology our concept of who is a teacher is challenged. Is a seminar presenter a teacher? Is a media anchor fulfilling the role of teacher? Can someone whose main form of interaction with learners is through publications a teacher if he fulfills all other criteria for a teacher?

For this research, when considering those who taught before the scientific revolution, only those teachers who have had personal interaction with learners have been considered. For those teachers who have lived after the scientific revolution, the scope was broadened to include some teachers who taught using mass communication methods (the printing press).

- B. The teacher must specifically teach adults. The presumption here is based on the understanding that there are differences between children and adults in the way they learn, their reasons for learning and their methods of going about their studies. At this point it is necessary to define the word "adult." Though there are legal definitions which state that an adult is one who has reached a specific age, Websters also defines an adult as "fully developed and mature; grown up." The adult education movement has attempted to apply what we know about adult learning to the teaching of adults. This is an important distinction in the current search for the qualities which make a teacher effective. Effective teaching of adults in many instances will not be equal to effective teaching of children.
- C. The teacher must have been recognized as a highly effective teacher over time. For this reason, none of the teachers being considered for this study are living at the time of the research, and most belong to distant centuries. It usually takes some time for the effectiveness of a person or his or her students to be recognized and recorded in history. (The exception in this study is Myles Horton, a modern teacher who has not been deceased long enough for his reputation to grow.)
- D. Additionally, there must be sufficient record of the teaching methods used and philosophies promoted, and those records must be available to the researcher on this project.

Who Qualified for the Study?

As mentioned earlier, a number of attempts have been made to identify the world's greatest teachers, though few studies have focused on great teachers of adults exclusively. Joseph Epstein's *Masters: Portraits of Great Teachers* (1981) includes a compilation of essays by twentieth-century writers about their favorite college teachers. It features

several modern instructors including Alfred North Whitehead, C. S. Lewis, Christian Gauss, Arthur O. Lovejoy, Hannah Arendt and Leo Strauss. Houston Peterson's *Great Teachers Portrayed By Those Who Studied Under Them* (1946) has a similar theme. Of particular interest are chapters on William James and Emerson. Neil Lamper's Ph.D dissertation at Michigan State University, "*Characteristics of Great Teachers*," (1959) comes closest to the current research project. It lists twelve great teachers from antiquity through the twentieth century. However this work does not deal with adult educators but concentrates on learning theory and the education of the youth.

A good review of famous woman teachers is offered by Alice Fleming in *Great Woman Teachers*, though many of the teachers studied taught children. Elbert Hubbard's well known series *Little Journeys to the Homes of Great Teachers* (1916) includes biographies of several of the world's most well-known teachers of children and adults including Moses, Confucius, Booker T. Washington, Erasmus, Hypatia, and Mary Baker Eddy. Several other books attempt to establish a list of the world's best teachers.

From a review of these and other works on great teachers the following list of the teachers most often mentioned was devised:

Pythagoras	Homer
Plato/Socrates	Lao-Tzu
Aristotle	Cicero
Gautama	Quintillian
Confucius	Saint Bonaventure
Jesus	Thomas Jefferson
Hypatia	Benjamin Franklin
Saint Augustine	Sexton Knapp
Thomas Aquinas	T.S. Elliot
Erasmus	Alfred North Whitehead
Myles Horton	C.S. Lewis
Ghandi	Martin Buber

Mary Baker Eddy
Dorathia Dix

Jane Adams
Nadia Boulanger

From this list, fourteen teachers were chosen for study. Each meets the criteria listed above, and there was sufficient material for each to warrant inclusion in this study. In addition, an attempt was made to choose teachers from each epoch of history, from ancient Greece to the modern era, and to include a few people from the Eastern tradition as well. The following teachers have been included in this study:

From ancient Greece and Italy:

1. Pythagoras
2. Socrates
3. Aristotle

From the ancient Eastern tradition:

4. Confucius
5. Gautama

From the Early Christian era and Middle Ages:

6. Jesus
7. Aurelius Augustine
8. Thomas Aquinas

From the Renaissance

9. Desiderius Erasmus
10. Francis Bacon

From the American Revolution

11. Benjamin Franklin

From the modern era:

12. Alfred North Whitehead
13. Nadia Boulanger
14. Myles Horton

Research Parameters

Though much of this study involves historical research, the purpose of the study fits more precisely into the category of historical case study. Some limits must necessarily have been applied to the gathering of this research. Availability of primary sources has been limited, so while some primary sources have been used where they were

available, much of the research has been done using secondary sources. For these historical case studies, secondary sources have been invaluable sources for opinions about great teachers. While primary works give the actual words of the teacher about his or her philosophy and practice, the influence of the teacher, the effects of her methods, her relationships with learners and the learners' feelings about the experience are generally not known through primary sources. A person does not establish her own greatness; others do. Also, teacher relationships with students are rarely written in primary sources. For this reason the researcher must access various categories of secondary sources. The majority of the sources used for this research have therefore been secondary sources.

PYTHAGORAS

Pythagoras was one of the first great teachers to influence Western civilization. Known as the "long-haired Samian" (Guthrie, 1987), Pythagoras has been honored as the first historical philosopher, mathematician and astronomer (Philip, 1966). Unfortunately, most of the resources available today come down from the epistles and writings of later-day Pythagoreans like Diogenes, Porphyry, Iamblicus, Ovid, Diodorus and Siculus as a mixture of fact with fiction (Heninger, 1974; Clark, 1957). Many Pythagorean stories fall into the category of legend and represent the exaggerated tales of a folk-hero. But they remain valuable to us as they bridge gaps in the history of early Greek thought, offering possible explanations regarding the origins of philosophy, music and other sciences. They also give us clues to the impression Pythagoras made on his contemporaries, and they help us understand the philosophy and character of one of the most important and well-respected teachers who has ever lived.

Life of Pythagoras

Various dates are given for the birth of Pythagoras. The event appears to have occurred between 582 and 566 BC at Sidon in Phoenicia, and Pythagoras is said to have died in 500 BC. His parents were Mnesarchus and Pythias, descendants of Ancaeus who colonized the island of Samos in the Aegean Sea, reportedly by the order of the Pythian oracle who promised in return "a son who would be useful to all men through all time" (Theosophical, 1925, pp. 11-12). His father was a wealthy jeweler, and the prominent family were very religious in their devotion to Apollo. Because the child had been promised by the Oracle, the birth was treated as a special event.

The family moved to Sidon in Phoenicia during the time of Phthias' pregnancy in order that the child might be gestated away from any disturbances. When he was one year old the boy was taken to the Temple of Adonai in the valley of Liban where he was consecrated to Apollo. The family then returned to Samos. Pythagoras later stated that his parents were very much in love with each other, declaring that this kind of relationship was a prerequisite for parenting in its highest form (Theosophical Press, 1925).

The name Pythagoras signified one whose birth had been predicted by the Pythian oracle. The name in Welsh means "explication of the universe" and derives from the verb *pythagori*, "to explain the system of the universe." The name has also been traced back to the Hindu word *pitha-guru*, or "teacher of the essential substance, or pith, of things." Laertius states that at the time there were at least four men with the same name within close geographic proximity to one another, and that tradition has falsely ascribed to the Samian some things actually done by his contemporaries (Theosophical Press, 1925).

Pythagoras was tutored by some of the most advanced teachers of this time including Creophilus, Pherecides and Anaximander, but Thales had the most long-lasting influence upon him. Iamblicus says that the young man "pursued his studies . . . out of a love for knowledge and a fear lest anything worthy to be known should escape him" (Theosophical Press, 1925, p. 25). At the age of eighteen Thales urged the youth to escape the political tyranny of Polycrates and to leave Samos for Sidon. Thus began a long series of journeys which would provide intellectual food for the making of a great philosopher and teacher.

Pythagoras' travels led him to Egypt where he spent much time studying the mystery religions. Eventually Egypt was conquered by Babylon and Pythagoras was taken captive. In Babylon he acquired much new knowledge from the Magi. Next he

traveled to Palestine, Arabia, Crete and Sparta. He may also have gone to Brittany and to India, though evidence for these travels is sparse. Diogenes said that Pythagoras received much of his education and insight by way of his travels to other nations. It was the philosopher's ability to assimilate the wisdom of several cultures into one philosophy which made him such a learned man and his contribution so unique (Guthrie, 1987).

By the time he returned to Samos Pythagoras was considered an eminent teacher, and his countrymen called upon him to impart to them all he knew. Pythagoras therefore established a school known as the Semicircle of Pythagoras in which Samians assembled to discuss civic affairs. But because of its focus on public negotiations, Pythagoras spent most of his time outside the city away from the controversy that began to surround the school (Theosophical Press, 1925).

After much time and effort spent trying to teach philosophy in his own country, Pythagoras was only able to attract to himself one student, a boy who had athletic talent but no money to afford to practice. The story is told that, as Pythagoras was visiting in the gymnasium one day, he noticed this young man very skilled in playing ball. Pythagoras wondered if this lad, once supplied with the necessities of life, could be induced to study with him. He therefore called to the youth and proposed to furnish him with the means to continue his physical training if the boy would study with him. Moved by hope of financial reward, the boy gladly took up the study of arithmetic and geometry with Pythagoras.

The young man became captivated by the study of logic. Pythagoras then wondered if the boy would continue to study even if he were not being paid to do so. So Pythagoras feigned poverty and said he could no longer afford to pay for instruction. The youth replied that, even without the fee, he would go on learning and receiving

instruction. Then Pythagoras said, "But even I myself am lacking the means to procure food! " Loath to discontinue his studies, the boy replied, "In the future, it is I who will provide for you, and repay your kindness." From that time on the boy continued to study with the Master and became the only Samian to leave home to follow Pythagoras to Crotona in southern Italy when the teacher moved with his mother to open a new school (Guthrie, 1987).

Establishment of the School At Crotona

Pythagoras' aim at Crotona was not just to teach esoteric doctrine to those who wished to be initiated into the mysteries, but also to apply his educational ideas to a program of education for the entire community. According to extant writings Pythagoras was highly honored and esteemed in Crotona and throughout Italy. The following story is told about his initial visit to the town.

A few days after moving to Crotona Pythagoras was surrounded by a group of young citizens. Pythagoras took the opportunity to address them, exhorting them to honor their elders. He advised the youth never to revile anyone, that they should never become enemies to their friends but become friends to their enemies. He also encouraged his hearers to devote themselves to learning. When the young people went home and told their fathers what the teacher had said, hundreds of parents summoned Pythagoras to a meeting with the Senate, commending him for giving such good advice. In addition they asked him to continue discoursing with them should he have other important messages to convey (Theosophical Press, 1925).

His response to the Senate of Crotona was to present a formal educational plan. First he suggested that the town should collectively build a temple to the Muses in which all the people could worship and which would also provide a focus for community

education. In addition Pythagoras proposed that he would found an institution for himself and his immediate disciples (who eventually came to number about six hundred). He proposed that some of his students would live together as a brotherhood in a building constructed for that purpose, but that they would not separate themselves from public life. Those students who were already qualified to teach would teach physical, religious and psychic sciences. Men and women would be equally admitted to the lessons of these teachers, and also to the different grades of initiation within the mystery religion according to their intelligence and earnestness in study. Pupils would have to submit themselves to the rules of the community and would spend their days as students under the supervision of these teachers.

Pythagoras' educational design divided students into two groups; one group was to live as a community, each sharing possessions in common. The other students would continue to live in the outer community, owning property but assembling together for classes in pursuit of the same wisdom. Nicomachus reported that this later group eventually came to number two thousand.

The plan was accepted by the Senate. The city erected a Temple to the Muses, and later Pythagoras received a portion of land on which he built his esoteric institute. Thus his educational program provided two kinds of educational experiences for the adults in the community. One was open to anyone wishing to learn the sciences he and his other instructors taught as long as they agreed to basic spiritual practices. The other Pythagorean school was quite a formal school, with strict criteria for admittance, and representing a confined society with a curriculum and a code of conduct governing every phase of human activity (Theosophical Press, 1925).

Pythagorean Educational Philosophy

Pythagoras is considered the first philosopher. He has been called the "high priest, par excellence, of the divine wisdom" (Burkert, 1972, p. 1). It is unanimously agreed that Pythagoras coined the word "philosopher," and many see him as the father of Greek philosophy. The way he determined to call himself a philosopher is an interesting story: Once, as a group of learned men discoursed with Pythagoras, they asked him if he was the most perfect of men. Pythagoras answered that he was a "lover of wisdom," or a "philosopher" (Needleman, 1982). As he later talked about how philosophers differ from other men, he compared mankind to the three kinds of groups that frequent public games—contestants, vendors and spectators. People, he said, are like these who come to the games, some seeking glory and some money. But very few come simply for the contemplation of nature. These, he said, are the true "lovers of wisdom" (Guthrie, 1987).

In his philosophy of education, Pythagoras firmly established the idea that the power to know and to understand resides with the individual. To this first philosopher, self knowledge was man's greatest wisdom. Truth is an ideal which one finds only within one's self. His famous expression "Man, know thyself" is best revealed in the analogy of the microcosm and the macrocosm: Pythagoras believed that by fully knowing oneself, the individual will have knowledge of the entire universe; conversely, when he studies the sciences of the world, it helps him to better understand himself. This concept that the student is ultimately his or her own best teacher became the basis of ancient educational theory, as will be shown in this research. So strongly has this principle been inculcated that it has crossed geographical barriers East to West and has survived for centuries in the work of the best teachers who have lived.

Based on his philosophy concerning how student's learn, Pythagoras did not focus in his teaching on facts and figures, though lectures were given in the application of various scientific principles (such as mathematics and music theory). Even these teachings were offered as a help to the student in the understanding of himself.

The teacher's job, according to Pythagorean educational philosophy, was to create an atmosphere in which the student could contemplate his or her own experiences. By providing time and space for such contemplation, the teacher assists the student to reach his own wisdom, to find truth within himself.

In discussing Pythagorean educational theory, Neopythagorean scholar Proclus explained the teacher's thinking on the role of the teacher in learning: Pythagoras saw both learning and discovery as a process of recollection. In the lower degrees, the pupil is guided by the teacher to discover within himself knowledge that is innate in his soul. More advanced students also discover knowledge innate in themselves, but they are capable of accomplishing this without needing so much interaction with a teacher. This is the reason there are different degrees in learning. At lower degrees students require teachers as guides to arouse or provoke in them this process of self discovery; at higher degrees students are more capable of such discovery on their own, thus they require less guidance (O'Meara, 1989).

The other principle which Pythagoras established is the idea that every teacher is also a student constantly striving for his or her own perfectionment. The teacher must stay ahead of his pupil in order that he might help the student understand the reason for the performance of various disciplines, and to provide the student with the perfect example of one who has attained to self knowledge. Therefore, foundational to the path of both student and teacher in the Pythagorean system is the importance of living a moral

and virtuous life. The principle purpose of a Pythagorean student was to find and follow a simple life lived in accord with nature.

The letter Y was an important symbol to Pythagoreans, It represented the choices each person must make in his life. This anonymous verse explains its meaning:

The Pythagoras Letter, two ways spread,
Shows the two Paths in which Man's life is led.
The right hand track to sacred Virtu tends,
Through steep and rough at first, in rest it ends;
The other broad and smooth, but from its Crown,
On rocks the Traveller is tumbled down.
He who to Virtue by harsh toils aspires
Subduing pains, worth and renown acquires:
But who seeks slothful luxury, and flies
The labour of great acts, dishonor'd dies (Guthrie, 1987, p. 158).

According to Pythagoras, the only way to attain wisdom is to purify and harmonize oneself. A student's life was, therefore, rather austere and entirely engaged in the practice of various disciplines designed to assist with learning and contemplation. In addition, Pythagoras was very strict in determining who would be admitted to his inner school, saying, "Not every kind of wood is fit for the making of a Mercury" (Theosophy, 1925, p. 50).

Series of Tests and Trials Prior to Admission

Pythagoras did not accept a student without first examining him or her and putting the prospective student through several trials. First he would inquire about students' relationships with parents and kinsfolk. He surveyed their laughter, speech or silence, their desires, their associations and conversations. He would ask what they did during leisure, and what gave them grief or joy. He observed their body language. Pythagoras looked at the students' modesty. He tested other qualities, for instance, whether they were

astonished by the show of any immoderate desire or passion, and how they were affected by anger or ambition, friendship or discord.

In addition students seeking admission first participated in the Pythagorean gymnasium in which aspirants played games suitable to their ages. This gymnasium was peculiar in that no boasting or displaying of strength was permitted as it was at facilities in other schools. Rather, groups of courteous and distinguished-looking people walked and played, with Pythagoras at times joining in their talk and games in order that he might be able to form a better idea about the quality of each participant.

A story is told about the kind of trial a prospective student might be subjected to. Often students were required to spend a night in a lonely cavern located at the edge of town which was alleged to be haunted. Those whose strength and courage were insufficient, and those who either refused altogether to enter or escaped before morning were deemed too weak for initiation.

Another test is discussed in a publication by the Theosophical Press (1925):

The would-be disciple found himself in a dismal prison cell with nothing but a slate and orders to solve the meaning of some Pythagorean maxim or symbol like, "Why is a dodecahedron confined in the sphere, the symbol of the universe?" Many hours he would spend in his lonely cell with only water and a piece of dry bread for food. Finally he would be removed to a room in which novices were assembled, there to prove his victory or his failure. If successful in proving the symbol, he would be greeted with applause and honored by all, but if he had not succeeded in this, he would be further tested by being tantalized and ridiculed without mercy, [all] the while being implored to impart his discoveries. The master stood by, observing the youth's attitude and expression. Some would weep, others rave, still others would give sarcastic replies and yet others would, in a state of rage, dash their slates to the ground, uttering insinuations against the school, the masters and the novitiates. Then Pythagoras would quietly inform them they had also failed in their test of self-respect, and they were asked not to return to the school, as respect for the school and its masters was one of the elementary virtues. Then the candidate, ashamed of the

way he had acted, would retire, though often he would become an enemy of the school, as did the expelled student Cylon, who later excited the people against the Pythagoreans, bringing about their downfall (pp. 50-51).

Those students strong enough to withstand everything with firmness were welcomed into the congregation. The candidate was therefore self-accepted, chosen by his or her own powers of self-control, silence, temperance and courage.

Becoming a Novice

For the first few years of their relationship with the school, Pythagoras did not draw close to the student but continued to watch his or her stability and genuine studiousness, and to see whether the student was averse to glory and ready to despise popular honors. At this level the student was called a novice. Novices were admitted to a five-year probationary period during which they were allowed to attend lectures but could not speak. This coincided with the first rudiment to wisdom taught by Pythagoras: "to learn to think, unlearn to prate." This practice was thought to help the novice learn to better contemplate the deity. During this probation, the student's property was held in common. Also during probation the student could hear Pythagoras but couldn't see him (Pythagoras taught from behind a veil). During this trial period of enforced silence, the novices were called acousmatici, or "listeners." Once successful, they passed into a more active phase and were called *mathematici*, or "students." These members could hear Pythagoras lecture in person, and were encouraged to search into the principles of things, and not just to accept a statement without analysis (Gutherie, 1987).

Even while a student was still a novice, Pythagoras continued to test her in order that he might help the pupil correct and amend habits and faults. Another reason for testing was so that Pythagoras could determine if the novice could hold his counsel, not

speaking of what she had heard. If, after a thorough survey Pythagoras still approved of the novice, he would then direct his attention to a study of the student's facility in learning as well as her ability to follow what was said and to undertake the disciplines with temperance and love. Those who were adapted to receive the wisdom he possessed were finally received as disciples.

Any student who didn't make it through all this was invited to step down and sent away with double what he had come into the program with.

The Accepted Student

After being admitted as disciples, students were separated into several classes according to individual merit. Pythagoras believed that people, by their attainments, are arranged in a hierarchy, and that they vary enormously in their receptivity to philosophy. To him some people seemed little more than children, and required the same loving attention, while others he saw as little short of gods. Consequently, Pythagoras reserved different degrees of teaching for different levels of students. Therefore, participation in his school featured distinct levels.

Three kinds of lectures were given at Crotona. The objective lectures studied such questions as "What are the islands of the Blessed?" or "What is the Oracle at Delphi?" The practice lectures studied what should or should not be done, and considered questions of practicality like how to raise children. The most extended lectures concerned religious issues such as the proper place of sacrifices.

Within his school, Pythagoras communicated to each student only that part of wisdom which he believed to be appropriate to the recipients' nature. An example was his treatment of Abaris the Scythian who entered the school at an already advanced age. Pythagoras did not compel him to go through the normal period of silence or long lectures or other trials, but considered him fit as an immediate listener to his doctrines.

Daily Routine at Crotona

The daily routine at the school, though austere, allowed ample time for meditation and study. The day began with a solitary walk in the woods to compose the soul. This was followed by a period of group study during which students discussed various doctrines and disciplines. Next was a period of exercise and attention to the health of the body. Students raced, wrestled with one another or used weights. After a modest noon meal, the students dealt with community affairs. Late in the afternoon came another walk, but this time in pairs or small parties to allow students to discuss what they had learned. After washing, the students had supper in groups of no more than ten, performing ritual libations and observing the dietary laws of the sect. After supper they sat for lectures, the youngest reading the text chosen by the eldest. After another group walk, the day ended with another ritual libation and a recitation from Pythagoras' *Golden Verses* by the eldest student.

To aid the memory, before going to sleep a Pythagorean recounted the events of the day to see what he had accomplished and what he had done poorly. In the morning he took time to plan his next day in an orderly and productive fashion.

Iamblicus describes a special blessing students received from their teacher just as they were going to sleep. According to Iamblicus, Pythagoras liberated his students from unhappy feelings, purified their intellects and also rendered their sleep quiet and their dreams prophetic by playing and singing certain odes and songs to them as they drifted off. Again, when they rose from sleep, Pythagoras was said to have cured his charges of heaviness with certain songs and modulations by striking the lyre or singing to them. Pythagoras used music as a form of medicine to cure mortal ills and to aid in purification, for he believed that music contributes greatly to health when used in an appropriate

manner. He actually arranged for his disciples mixtures of certain diatonic, chromatic and enharmonic melodies through which he led the passions in a contrary direction when they had gotten out of alignment through rage, sorrow, pity, pride, etc.

Pythagoras' Family

Pythagoras was sixty when he married Theno, a young woman of great beauty and one of his disciples, the daughter of a Crotonian named Brontinos. Theno entered into the life and work of her husband and, after his death, was said to have become the central figure in the Pythagorean Order and an authority on the doctrine of numbers. To these two were born three sons and four daughters. Stanley in his *History of Philosophy* states that after the death of Pythagoras, Theno married a disciple named Aristaeus who was apparently worthy to succeed Pythagoras as teacher and to raise his children. Upon the death of Aristaeus two of the sons of Pythagoras, Mnesarchus and Telanges, governed the school and became renowned teachers themselves (Theosophical Press, 1925).

Death of Pythagoras

Apollonius of Tyana tells us that from childhood, Pythagoras aroused envy. So long as he conversed with all who came to him, everyone liked him. But when he later restricted his discourse to his disciples, the general public's good opinion of him was altered. People became indignant at his preferring some citizens over others, and they suspected his disciples of being hostile to the community. In the end, the school of Crotona was destroyed by students rejected from the inner school (Guthrie, 1987; Theosophical Press, 1925).

One record reconstructed by the Theosophical Press (1925) states that a certain aristocrat named Cylon who had been rejected from the inner esoteric school because of his ignorance and ineptitude became full of rage and anger and began to stir the

townspeople, spreading false rumors and calling into question the ceremonies and rituals of the religious group. Because this man had high standing in the community he was able to create strong opposition within the Senate and among the townspeople. A decree was ordered banishing Pythagoras. The teacher managed to escape but he died in Metapontum not long afterwards. A fierce persecution was instituted against his followers, many of whom were killed while others were banished from the area.

Another version of the end of the school states that Pythagoras' death occurred at the hands of an angry mob of townspeople who, joining resentful students, set fire to the house where he was meeting with his students. Pythagoras and a number of students were killed, and the school gradually waned from want of the focus of the teacher (Heninger, 1974).

Since the time of his death Pythagoras has been revered and, in some respects, has been made into a demi-god. He was called "divine," and eventually was referred to simply as "that man." Homer said of him, "I, to pronounce his name, the absent, fear; So great is my respect and he so dear" (Theosophical Press, 1925, p. 113).

Personal Accomplishments and Influence

The school at Crotona was short-lived. With its destruction perished much of the teaching and science of the Pythagoreans, for their knowledge was not written down but passed on in the oral tradition, from mouth to mouth. Disciples who were in foreign lands at the time of the death of their teacher, fearing the philosophy might be entirely lost, brought together certain commentaries and collected certain writings of what some of the older Pythagoreans remembered about their teacher. But when these students died, they are believed to have left their collections to their wives or children with strict instructions not to give them to anyone outside the family (Theosophical Press, 1925).

It is questionable whether Pythagoras actually left any writings. Some say that he wrote at least three works: "On Education," "On Statesmanship" and "On Nature." Iamblicus said, "there is nothing pertaining to human knowledge which is not accurately discussed in these writings" (Heninger, 1974). Unfortunately these works have not survived; some suggest that at his death Pythagoras left his writings with one of his daughters, charging her not to share them with anyone outside the family. However a compilation of Pythagoras' sayings, the *Golden Verses* remains as an aid to understanding Pythagorean philosophy.

Above all Pythagoras was revered for the example he embodied of a great teacher. He has been called the "teacher of teachers." Pythagoras had great success as a lecturer. The image which remains of him, reconstructed by the poet Ovid, emphasizes his powers of persuasion. A great reputation grew up around him, and he won many disciples, both men and women, from the city itself, as well as from territories throughout Italy, Greece and Sicily.

Many of the teachers who came after Pythagoras quoted him or referred to him; most admired him and many adopted his philosophy as their own. Plato was the most important of his students to pass on some of his traditions and teachings. There is some evidence that the idea for Plato's Academy was inspired by the school at Crotona. Aristotle also expressed an interest in Pythagoras and even wrote an essay "On the Pythagoreans" which unfortunately has not survived (Guthrie, 1987).

In later centuries the teacher/orator Cicero was vocal in his praise of Pythagoras. A few centuries later Apollonius focused much of his attention on Pythagoras and even wrote a *Life of Pythagoras*. Later Plutarch celebrated the teacher, and Iamblicus, the most noted Neopythagorean scholar, wrote a number of books on Pythagoras and his

philosophy. Additionally, many of the early church fathers—notably Clement of Alexandria and Augustine—held Pythagoras and his teachings in high esteem, enlisting his name and philosophy regarding number symbolism in their interpretations of scripture. Pythagorean ideas continued to be discussed down the centuries by Christian thinkers and applied in the realm of sacred architecture by groups of medieval masons. In the twelfth century the ancient teacher became a primary focus of the Cathedral school of Chartres in France (Guthrie, 1987).

Interest in Pythagoras was renewed during the Renaissance with the discovery of many ancient classical writings. The serious minded, including Erasmus, were charmed by the principles behind his science and philosophy which provided the humanists with both a scientific and divine orientation for their own philosophies (Guthrie, 1987). In each case, those who respected the understanding of this first great teacher adapted some part of his educational philosophy as his own.

Pythagoras' Educational Legacy

The Samian “lover of wisdom” has been acknowledged as the first great teacher in a chain of great teachers which continues today. The most important legacy he left was the understanding that the pupil is not *tabula rasa* but possesses innate knowledge. The primary agent in learning is the student himself. A teacher's actions are not the sole agency assisting the student's self discovery. Though the student requires the outside stimulation of scientific questioning, the primary purpose of the teacher is to stimulate the student to discover that which is within himself while acting on him in such a way as to not override the primary agency for which the pupil is responsible—his own interior teacher (O'Meara, 1989).

Educational activities at Crotona—the long walks, the group discussions balanced with periods of meditation, even the periods of physical exercise which served to keep the mind and body toned, the time spent listening to healing tones and chords—were all designed to aid the student in the process of reflection and assimilation of what he was learning. The intense tests and initiations were designed to provide a way for the student to measure his own state of mind and heart. Learning was up to the student, who was encouraged to undertake various disciplines to enhance his own ability to reflect on and assimilate experience. The disciplines, initiations and instruction given at Crotona were intended to guide the individual in the practical assimilation of experience to reach his own wisdom, to find his truth within himself.

This recognition of the power of the individual learner to attain wisdom by personal striving has been echoed over and over by earth's best teachers down through the centuries. We find these ideas reflected most strongly in Plato and then in the work and practice of each of the teachers studied in this research. Each one's personal philosophy and practice has been founded on this first principle. While many have expanded on it and some have modified it with further understanding, this one idea has remained embroidered in the fabric of our concepts about the way we learn (though it has at times been denied by repressive educational systems). Today it has surfaced once again in many of the "modern" educational theories.

Pythagoras also set other standards which have been adhered to in large part by later teachers:

1. Discipline is needed for students to learn and grow. Certainly the example of Crotona is an extreme one, yet many of the world's best teachers have also

recognized the importance of setting a standard and insisting that students follow it until they have themselves become the example for others to follow.

2. Individual students differ in the level of their attainment and wisdom.

Recognizing this, Pythagoras established an esoteric and an exoteric aspect to his school. Before assigning a student to any level of education, Pythagoras undertook a thorough, even painstaking, study of the individual, scrutinizing his understanding, moral fiber, personal harmony and commitment to the pursuit of learning in order to determine the educational experience right for them. This is the first example of the individualized instruction which has continued in the practice of virtually all great teachers studied in this research.

3. Pythagoras set a high standard for teachers to follow, and because he demanded much of teachers, he expected students to respect them.
4. In Crotona we find the first historical record of a community of learners. In this community we see how powerful is group interaction and discussion in helping the individual reflect on, expand on and assimilate personal experience.
5. In contrast, we also find in Pythagorean educational practice a serious respect for the need of the individual for time for solitary contemplation and reflection on experience. At Crotona such time spent in meditating, in taking long walks, in reflecting each night before sleep and in listening to healing music was considered essential to learning.
6. The exoteric outer school at Crotona was the first recorded example of an adult and community education program, with the educational facility taking center stage in the lives of community members. At Crotona the school even welcomed political controversy and provided a forum for the interchange of political views.

7. Pythagoras was a strong advocate for the idea of lifelong learning. Students of all ages were welcomed and encouraged to participate in the educational programs at Crotona. For Pythagoras the purpose of life was to continually strive to know more and thereby to become more. All the activities he promoted in his school were provided toward this end.

Pythagoras once commented that it seemed absurd for one to know that learning is the most advantageous thing in one's life, to wish to possess wisdom, and yet to be unwilling to bestow the necessary time and pain in the exercise of it. We take care of our bodies which will one day die, he noted, but that which has the possibility of staying with us until death and even beyond, we ignore. This attitude has also been reflected by all the great teachers who followed after him.

8. Pythagoras practiced non-discrimination regarding personal attributes such as sex or race. In fact he was quite vocal in his recognition of the power of women to attain to enlightenment. Where he did discriminate was in the area of a student's personal level of striving. Here he demanded proof of intent from each and every student. Students were regularly tried and tested to discover their worthiness to continue under the direction of the faculty at Crotona. Anyone who lacked true desire to attain to personal perfectionment relative to their level of attainment was invited to take their place in a less rigorous environment. Many were so eliminated from the school, and the resentment of those deemed less fit finally led to the end of the institution itself.

In one other area Pythagoras set the standard for many of the great teachers who followed after him. Unfortunately in his life we see depicted the sad end of many who have set high standards in education. Pythagoras was persecuted and ultimately gave his

life for being a visionary in this field. Though he set some of the highest standards for educators, standards which are becoming re-popularized today, particularly in adult education, he lost his life at the hands of the very people he lived to serve. In this he has been followed by a host of great teachers who have either been killed, have fled for their lives or in some other way have received criticism and condemnation for their convictions.

SOCRATES AND PLATO

Merely recalling the names of Plato and Socrates brings instant and complete admiration in most educational circles. As Alfred North Whitehead put it, it seems that all of Western history is a series of footnotes to Plato. This biography discusses the united contributions of Socrates and his most famous student, Plato. The two seem inseparable. Socrates is known to us because Plato took the time to write down the story of his teacher. Everything we know of Socrates was written by Plato, and to some extent, Plato took the liberty of giving his personal philosophy of education through the mouth of Socrates. There is no way to know where Socrates' thinking stops and Plato's begins. Thus this chapter will present the two teachers as one educational phenomenon.

Life of Socrates

Socrates was born in Athens ten years after the defeat of the Persians. He spent all of his seventy years in that city. He participated in the rise of the city and was blamed in part for her rapid decline.

Socrates was born in 470 BC. Plato tells us that Socrates' father Sophroniscus was a statuary or stone-cutter, and that he was careful to give his son the customary elementary education in the gymnasium as well as in music (Taylor, 1951). Socrates' mother, Phaenarete, had given birth to another son named Patrocles from a previous marriage. She was known to be a skilled midwife. Socrates married a woman named Santhippe with whom he had three children. He lived frugally but was financially independent due to a small inheritance and state subsidies paid out to all Athenians (Jaspers, 1957).

Even from his childhood Socrates was something of a phenomenon both physically and mentally. Both Plato and Xenophon characterize him as physically robust with great powers of endurance, and suggest this as a reason for his excellent record as a fighting man. But, according to his contemporaries, Socrates was "as ugly as a satyr and as gentle as a saint" (Thomas & Thomas, 1941, p. 6). Aristophanes compared his walk to the strut of a waterfowl and noted his habit of rolling his eyes. Plato and Xenophon both mention the breadth of his nostrils and the stubbiness of his nose (Taylor, 1951). When he was forty-seven Socrates became the butt of burlesques by the famous comic poets, Aristophanes and Amipsias. Two years later another comedian, Eupolis, also did a caricature of him (Taylor, 1951). One of his ablest students defended his teacher by comparing Socrates to the trick statues sold in the market place of Athens, suggesting that while the teacher might have the exterior of a clown, when one opens him up they will surely find there the image of a god (Lewis, 1981).

Another of Socrates' oddities was referred to as a mysterious voice or "supernatural sign" which manifested itself sporadically in him, producing a private oracle which gave directions, some positive and others resulting in "bad luck" (Taylor, 1975; Clarken, 1988). Socrates seemed to have access to knowledge which he said came from this voice as it gave him guidance. He would obey the voice even when he did not understand it. Throughout his life this voice spoke to him and gave him directions where his reason could not (Clarken, 1988).

Mentally Socrates was also an oddity. The Oracle at Delphi claimed that Socrates was the wisest person (Clarken, 1988). Socrates was modest about his own abilities. In fact, he claimed to be ignorant. In his *Apology* he told how, after the declaration of the Oracle, he set out to find someone wiser than himself. But in his dialectical meetings

with those thought to be the wise men of his day—politicians, poets, artisans—Socrates found that they were all blinded by their own false knowledge which became a barrier between themselves and the truth. Then he began to believe that he was wiser than they because he was aware of his ignorance:

And I am called wise, for my hearers always imagine that I myself possess the wisdom which I find wanting in others: but the truth is, O men of Athens, that God only is wise; and by His answer he intends to show that the wisdom of men is worth little or nothing. He is not speaking of Socrates, he is only using my name by way of illustration, as if he said, "He, O men, is the wisest, who, like Socrates knows that his wisdom is in truth worth nothing" (Socrates in Clarken, 1988, p. 5).

Socrates claimed that he was not a gifted orator. But his words belie him, since his abilities as a speaker were praised by Gorgias, Protagoras and Phaedrus. He was compared to Lysias, one of the most successful speech writers of his day. Some researchers have pointed out that Socrates used the device of irony which he borrowed from speakers before him. He also used other standard rhetorical devices, revealing strong familiarity with the practice of public speaking in his day (Seeskin, 1987).

Philosophy of Socrates

Socrates followed Pythagoras in teaching that, because the soul is immortal and has lived many times, what we call learning is really recollection. He believed that when one learns or discovers the truth, the experience is one of recognition rather than revelation; rediscovery rather than discovery. According to this theory, knowledge already lies latent within the soul. Perhaps the soul looked on pure truth before birth, and the memory of it was obscured by the entry of the soul into the body. Or, if the soul had lived before, it had already learned many things. There is nothing to prevent the soul, once having recalled one thing, to recall all the rest.

Because of his philosophy of learning Socrates came to believe that teaching in the traditional sense was "impossible." Socrates felt that knowledge couldn't simply be poured into a student by a teacher. The student must look within for answers to questions. Perhaps for this reason, Socrates founded no institution or school. He developed no program of education and no system of knowledge. He did not address remarks to any particular assembly. "I always address the individual" he says in the *Apology*. To him education was conversation that aroused and touched another's innermost soul. Socrates believed that truth only opens up during dialogue with another individual. Teaching, to Socrates, was initiating dialogue (Jaspers, 1957).

Though he didn't believe in teaching, Socrates did acknowledge a place for the teacher in the learning process. The teacher's job is to use dialogue to aid the learner to become aware of what is already inside of himself. Truth is in the mind, says Socrates in the *Theatetus*, and like the embryo in the womb, it must be delivered. The deliverer is like the midwife who can help bring on labor, allay the pain, and enable the delivery. Socrates felt that, as a teacher, he was like this midwife who looked after souls as they labored to learn (Lewis, 1987).

A teaching style in vogue at the time was popularized by the Sophists, self-proclaimed educators who attempted to teach ambitious young men how to succeed in the business of life. The philosophy of Socrates and his student Plato was a reaction against their methods.

The Sophists were not interested in the study of natural science, but of popular skill. They taught social effectiveness. The Sophists didn't teach those who sought wisdom, but rather men who aspired to political office. From their teachers these politicians learned the "tricks of the trade"—skill in public speaking and an under-

standing of how to sway audiences and how to gain votes. The Sophists were popular because of their assumption that ordinary people could become educated, and by so doing, could become effective citizens, and could even affect decisions within the political arena.

The Sophists didn't settle in one location or establish schools or academies. Rather they continually traveled from city to city searching for new students. Plato complained that this behavior showed lack of civic responsibility. Nonetheless, the Sophists were able to make money at teaching. And though their practices and basic philosophy seemed the polar opposite of the more serious teachers of philosophy, their presence did help to popularize intellectual inquiry among the Greeks.

Socrates and his prime student Plato stood in opposition to the practice of the Sophists. They disapproved of the goal of preparing people for public life in the here and now. Rather, these more serious teachers were concerned with the education of the soul, that it might be prepared for a happier afterlife.

One thing can be said about the Sophists: at least they taught in an organized way. They were efficient in their methodology; even when teaching their students how to confuse their political opponents, they were careful to in no way confuse their paying students. While Socrates, on the other hand, rarely traveled and did not accept fees for his work, he did confuse students, so much so that this became his trademark (Clarcken, 1988).

The Socratic Method

To Socrates, discovery was not a sudden flash of illumination. It was something which must be prepared for, something which the soul must earn (Seeskin, 1987). One teaching method popular at this time was "demonstration." In demonstration, a teacher

presented, in a systematic way, principles held to be true and primary. Once these were accepted by the student (often on the authority of the teacher), the student could go on to gather new information to add to his understanding.

Socrates hardly ever used this method of demonstration. In the Socratic method of dialogue, true and primary principles are the outcome of an intellectual process, and never the starting point of the discussion. With his method, truth is what participants seek out, and the starting premises are not truths but things to be examined, to be overturned.

The Socrates reflected in the writings of Plato asked questions all the time. The center of every Socratic session consisted of Socrates asking questions and demanding answers. Socrates asked questions of everyone he encountered in life: friends, receptive youths, poets, men of letters, politicians, craftsmen, ordinary Athenians and foreigners. If the interviewee declined to answer, Socrates imagined what he might have said and held a question-and-answer session with him anyway.

Socrates found pleasure in irritating the proud and self confident until they admitted their real ignorance, a condition he felt was necessary for learning to occur. Throughout his interactions with people, Socrates proceeded to confute all their wisdom with his foolishness. He tore down their arguments with a series of unanswerable questions. By so doing Socrates was forcing people to re-examine the knowledge they took for granted. He believed that one must be able to admit one's ignorance before he can learn something new. Socrates, by using this method, was asking people to reveal something about their characters. Such forthrightness required honesty and courage as much as it did logical skill. Most of Socrates' respondents lacked these traits (Seeskin, 1987; Santas, 1979).

Socrates' Interaction with Students

There were times when questioners did not enjoy being questioned. One student who accused Socrates of being a "sting ray" quipped, "My mind and lips are literally numb" (Buchanan, 1981). Nicias says,

Whoever comes into contact with Socrates and talks with him face to face, is certain to be drawn into a discussion with him. And no matter where the discussion begins, he is carried round and cannot stop until he is led to give an account of himself, and of the manner in which he now lives his life and the kind of life he has lived up to this point. And once he has been led to do that, Socrates will not let him go until he has thoroughly and properly put all his ways to the test (Seeskin, 1987, p. 2).

Socrates mixed and talked with all types of people. Day in and day out he went to the same places, talked to the same people, raised the same questions with a mixture of success and failure. Socrates would go anywhere—into the agora, the gymnasium, wrestling schools, festivals, dinner parties, courtyards of great houses. He would choose his antagonist, fix the subject, get the attention of the audience, invite his opponent to speak his mind freely and without fear, elicit an opinion from him. Then he would proceed to counter-punch the man and his opinion, mixing philosophical points and arguments with sarcasm and personal insults. In the end, when it was clear that the opponent would never recover from the ordeal, Socrates would suggest that everyone go home and start in again another time.

Most of his contemporaries did not appreciate Socrates' teaching methods, especially this method of questioning. Reactions included exasperation, anger, resentment, and even fear. What upset the people of Athens was what they felt was the destructive cross-examination of the concepts and principles that the Athenians lived by (Taylor, 1951). Socrates refuted prominent and lesser Athenians on the very things they

were supposed to know. He attacked the most fundamental principles of Athenian life, such as the Greek ideals of moderation, courage, justice, piety and wisdom. And in the end, Socrates was executed for "corrupting the youth" with his continued questioning of the most important principles which underlay the Athenian way of life.

Death and Influence of Socrates

One morning in 399 BC, as Socrates came into the marketplace, he found an indictment posted up against him which something like this:

Socrates is guilty of a crime, first for not worshipping the gods whom the city worships, but introducing new divinities of his own; next, for corrupting the youth. The penalty due—death (Thomas & Thomas, 1941, p. 8).

The chief instigator against Socrates was a leather merchant by the name of Anytus who held a personal grudge against the teacher for advising his son to give up the tanning business and devote himself to the study of philosophy.

Socrates was permitted to chose exile as an alternative to death, but the teacher had no desire to escape. According to Plato, in his final address Socrates said, "Let us face death as we have faced life, courageously. . . . I have been overtaken by death, my accusers by wickedness. . . I submit to my punishment and to theirs" (Thomas & Thomas, 1941, pp. 8-9).

On the last day of his life a number of students visited their teacher in prison. He comforted them saying, "When you lay me down in my grave, say that you are burying my body only, and not my soul" (Thomas & Thomas, 1941, p. 9). Socrates' jailer burst into tears. Plato acknowledged that "the rest of us, too, could no longer forbear, and in spite of ourselves our tears were flowing fast Socrates alone retained his calmness, saying, 'be quiet, then, and let me die in peace'" (Thomas & Thomas, 1941, p. 9).

Socrates died after drinking hemlock.

