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The use of peer teaching as a technique for cooperative programs between museums and schools.

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The Use of Peer Teaching
as a Technique for
Cooperative Programs Between
Museums and Schools

A Dissertation Presented

by

SALLY P. WILLIAMS

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

February 1988

School of Education

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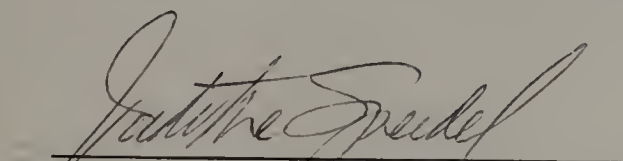
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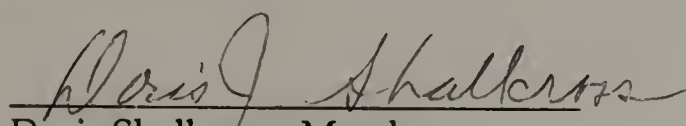
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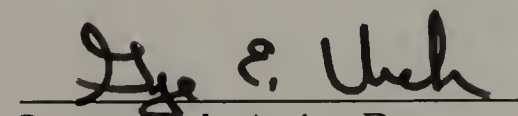
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The staff and the trustees of the Noah Webster House made this project possible, and I want to extend my appreciation to them. Last and most important, I want to thank Bill Fuller, my husband, for his unfailing encouragement and support.

ABSTRACT

THE USE OF PEER TEACHING AS A TECHNIQUE FOR COOPERATIVE PROGRAMS BETWEEN MUSEUMS AND SCHOOLS

FEBRUARY 1988

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The purpose of this study is to explore the learning possibilities of using students who visit a museum as peer teachers. The investigator hypothesized that a follow-up classroom experience to a museum visit would lead to better mastery of certain historical concepts, selected thinking skills, and a more positive attitude about visits to historic houses. Twenty fifth grade students visited a historic house and took part in a simulated school lesson. After the visit the students prepared four projects which they presented to their classmates, acting in the role of peer teachers. They completed a questionnaire at three different intervals throughout the study – directly after the museum visit, at the conclusion of the classroom activities, and one month later. The results were compared to a quasi-control group of students who visited the museum but did not take part in the follow-up activities. These students completed the

questionnaire immediately after the visit and two months later. Statistically significant results indicated that the students who took part in the follow-up program retained more factual information and improved their ability to identify similarities and differences than the students who did not take part in the follow-up activities. There was no significant change in the attitude of the students toward historic houses.

This study presents a method by which students can reinforce their learning experience and at the same time share their knowledge with other students by acting as peer teachers. It provides an effective way in which history museums and schools can work together to teach history in a manner which actively involves the students. The method can be adopted for use by any museum wishing to develop follow-up programs to reinforce the knowledge gained from a field trip.

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CHAPTER I

INTRODUCTION

When museum professionals talk about education in museums, they consider the topic in its broadest sense. When the man on the street, however, is asked about museum education, he is most apt to think of groups of children being herded through hallowed halls on a one-hour field trip. When education staffs are asked where they devote most of their time and effort, the chances are that the answer will also refer to this activity. Despite the fact that group visits by school children represent only a small amount of total museum visitor attendance, museum educators have traditionally placed a major emphasis on school tours because they are the situations most akin to traditional classroom learning, where the audience is known, the time and subject matter can be controlled, and formal teaching can take place. Unfortunately, all too many museums still offer children rapid marches through the museum, led by middle-class ladies who lecture at their charges, referring to "Chippendale", "trencher," "ormalu" and other terms far beyond the children's level of comprehension. It is no wonder that only 3% of adult museum visitors attribute their present interest in museums to school field trips as a child (Newsom 260).

The school field trips which museums offer all too often seem to have little educational value. Museum staff members in general are not familiar with educational goals and procedures and develop their programs in isolation from the audiences they wish to serve. The programs are one-time visits, with little

preparation or followup.

Although museum staff members are vividly aware of this problem, they are at a loss as to how to solve it. School teachers, too, are often frustrated by their inability to utilize the community resource which museums and historic houses represent. They have had little training in the use of objects as sources for learning and are often unfamiliar with the ways in which museums use their resources for teaching. By working together as a team, museum educators and teachers can combine their skills, resources and abilities to create innovative programs that utilize approaches with which teachers are comfortable, are inexpensive, and capture students' interest and enthusiasm. This dissertation will attempt to develop such a program which, although limited in scope to a particular small historic house working with one classroom, may serve as a model for other museum-school collaborations.

Background of the Problem

Museums have always considered themselves as educational institutions. The expressed intent of the founders of America's first museums, opened in the middle of the 19th century, was to teach, through art and artifacts, the important and enduring values of civilization. In 1900, Charles Cotton Dana of the Newark Museum stated, "A museum is an educational institution, set up and kept in motion that it may help the members of its community to become happier, wise and more effective." Theodore Low, writing in 1950, says,

With the broad culture history ideal in mind, the museum has the opportunity of becoming an incomparably powerful instrument for the purpose of public enlightenment. It can become, if it so desires, the great popular institution of learning, ranking in importance with and outdistancing in scope the universities which, with their dependence on the printed word, will long be reserved for use by a chosen few. (178)

Despite the fact that education is one of the major aims expressed in the charter of many museums in the United States such as the Boston Museum of Fine Arts, the Art Institute of Chicago, and the New York Metropolitan Museum of Art, museums do not begin to fulfill their potential as educational institutions. Part of the problem lies with the uncertain position that museum education holds in the museum hierarchy. Elliot Eisner, in a recent study, The Uncertain Profession: Observations on the State of Museum Education in Twenty American Art Museums (The Getty Center for the Arts, Spring, 1986), identifies three major problems which museum educators face. First, they tend to feel that the important work they do in the museums is unacknowledged and unappreciated; secondly, they do not have much professional contact with their colleagues in other museums; and thirdly, they have had no theoretical training in museum education as a discipline (23).

Although Eisner's study focuses on art museums, the same situation exists with history museums. Although many museums and historic houses are charged with the dual responsibilities of preservation and interpretation of the past through their charters and mission statements, they, all too often, simply have considered that being open to the public will adequately meet their interpretive function. It is only within the past three years that the Connecticut Historical

Society, that state's major history museum, has created an education department and made an aggressive and deliberate effort to cultivate a school audience. The difficulties in serving this audience are compounded by the small size and budget of most historic museums and houses. Many historic houses have no professional staff at all; others have a staff of only one or two who attempt to fulfill all the staffing roles required by a museum, such as registrar, public relations officer, development officer, curator, educator, and custodian. History museum educators tend to be trained as historians. Even when their formal training has included education, it has usually prepared them for classroom work and given no theoretical training in those things such as working directly with objects and providing "hands-on" experiences which make museum education unique.

Fortunately, the situation for museum education is changing. The American Association of Museums founded an education committee in 1973 which is growing in membership and visibility annually; at least two universities, George Washington University and the Cooperstown program of the State University of New York, offer graduate degrees in museum education; and several other schools such as the University of Massachusetts offer courses in the subject area. A few excellent publications have appeared in recent years, among them The Art Museum as Educator, Barbara Newsom and Adele Silver; Museums, Magic and Children, Bonnie Pitman-Gelles, and Time Machines, Jay Anderson, which provide a source of ideas through surveys of current programs.

Other publications exist. The Journal of Museum Education: Roundtable Reports, is published quarterly by the Museum Education Roundtable. The

American Association of State and Local History has published many pamphlets dealing with aspects of museum education and Museum News, published by the American Association of Museums, has devoted entire issues to the subject.

Museum education is just beginning to be recognized as a profession. Although the future looks bright, the present group of museum educators is in much need of recognition, professional training, and opportunities to share information with others.

Museum educators in historical societies and historic houses have a particular need to sharpen their educational skills. In the schools, on both the elementary and the high school level, there is a growing movement to bring history closer to home, to relate it more directly to the student's own experience, and to focus more on the events and experiences of everyday life. On the elementary level, there has been an increase in the amount of time devoted to state and local history, as opposed to a regional approach. Local history becomes a vehicle for the more intensive study of social developments with a broad historical significance. This movement has direct implications for history museums, whose resources are usually strong in the local history area.

The use of local history in the classroom is not new. Serious interest in the use of this topic as a teaching resource dates back at least to the 1890s (Metcalf 3). As part of the general movement in curriculum reform at that time, teachers who questioned the central role of the textbook in history instruction offered as an alternative the "source method" in which students worked with primary materials. In the 1930s, local history was of particular interest to educators

involved in questions of propaganda analysis, who advocated the use of local materials to help students develop critical thinking skills. In the late 1940s a new group of educational reformers once again urged the use of local resources.

The present interest in teaching local history coincides with a movement on the part of historians and other scholars to look at history in terms of the everyday life of common people. This interest in social history has been taken up by museums as well. Museums featuring "living history" such as Plimoth Plantation, Old Sturbridge Village and Colonial Williamsburg, are increasingly popular. The Smithsonian's Museum of American History has just opened a major permanent exhibition entitled "After the Revolution: Everyday Life in America."

Yet, despite this interest in local history and the life of everyday people, local resources have never played a very large role in the history curriculum. Teachers have not been trained to use local history resources and curricula have not been developed which utilize this approach. The publication, History in the Schools, prepared by the National Council for the Social Studies in 1985, is the result of a study funded by the National Endowment for the Humanities to examine the status of history instruction in the United States. Its findings show that many states no longer require courses in United States history for high school graduation. Traditional survey courses have been replaced with an array of electives on topics or themes dealing with current events. Surveys show that students believe history and social studies courses are far less interesting than other subjects they study. They see history as repetitious, uninteresting and

largely meaningless.

Historical museums may help to solve this problem. History classes can benefit from the "shot in the arm" which hands-on activities dealing with daily life can provide.

Educational activities such as the use of community resources, the utilization of objects, and the direct involvement of children in experiential activities, have risen and fallen in popularity as educational philosophies have changed. Certain education movements have been particularly conducive to museum-school programs.

In the 1920s, John Dewey, leader of the progressive education movement, advocated learning by experience. He called upon teachers to utilize objects (the very stuff of museums) in their teaching. He said "Learning by experience is never learning in a vacuum. There must always be interaction between an individual learning and certain objective conditions --things and events in his environment. These may be people, toys, materials of an experiment, or imaginary persons and things called up by reading, by talk, or by pictures" (Mason 109). When speaking of the teaching of history, he said, "History must be presented, not as an accumulation of results or effect, a mere statement of what happened, but as a forceful, acting thing" (The Child and the Curriculum 152).

After World War II and the advent of Sputnik, educational theory changed from a focus on the student to a focus on subject matter. Even with this change, there was room for museums to play a role. Jerome Bruner, leader of the

"structure of disciplines" movement, advocated teaching children the process of thinking through use of the inquiry method, a system that educationally sophisticated museums try to inculcate in their docents and museum teachers. For Bruner, as for Dewey, active involvement of the student is crucial to the learning process. Advocates of the inquiry method say, "In the new environment, the student participates directly in the formation and testing of ideas. The new teacher role is dialectical rather than inactive in the sense that it assumes that students will learn more when they are given the opportunity to participate in discovering ideas and relationships for themselves"(Massialas 27). This is very much in line with the progressive museum education philosophy, which advocates programs in which children find out all they can about an object through careful observation and speculative discussion.

Much of current educational theory is based on developmental theories of learning. For Jean Piaget, the key to the child's development as it relates to educational practice is the activity of the child; his action on objects, events, and other people. For Piaget, "The meaningfulness of written and spoken information to a child is dependent upon the actions he has had" (Wadsworth 56). Barry Wadsworth, in his book Piaget for the Classroom Teacher, says, "Concrete experience, like the experience with the colonial crafts [which he had described earlier] can help give meaning to the past for children. Reading and talks can be better appreciated if some concrete experiences described as appropriate for preoperational children retain their value at this level" (189).

Despite the fact that both museums and schools are showing an increased

interest in the use of museums as educational resources, and that respected educational theorists have advocated the type of activities which museums can provide, the fact remains that museums and schools do not, in actuality, make use of each others resources to enhance and improve the teaching of history in the schools.

Purpose of the Study

This study describes a way in which history museums and schools can work together to teach history in a manner which actively involves the students. Active involvement with the students begins with a museum visit. Unfortunately, that is where it often ends as well. In most cases, no opportunity is provided for students to explore subjects to which they have been introduced during the museum visit, or to share their findings with others. The benefits of a museum visit remain confined to one classroom. Museum visits are costly in terms of time and money. Other students in a school who do not go on the field trip receive no benefits from these expenditures.

One means of expanding the benefits of a museum visit would be to have the students share the information they have learned with the other students in their school. They could function, in effect, as teachers for their peers.

This option, although not necessary to a successful museum-school program, is worth exploring. Although I have found that teachers use their students as peer teachers informally nearly every day to help slower students to

catch up or to share experiences with the class as a whole, peer teaching as a formal educational technique is not common. It has been used primarily in situations in which individual students assist their classmates who have difficulties learning classroom material. Peer counseling, although not directly used for teaching information, has become a popular means of helping troubled students cope with such problems as drug and alcohol abuse, divorce, suicidal impulses, and other emotional problems. To my knowledge, few programs exist which are organized around the idea of peer teaching as a means of conveying a body of information that has not been covered in the classroom.

The purpose of this study is to design, implement, and evaluate a program which uses students as peer teachers to share the information that they have learned on a museum visit.

Research Questions

This study is based on the assumption that historic house museums have a role to play in education. I hypothesized that a follow-up experience to a museum visit involving peer teaching would lead to better mastery of certain historical concepts, selected thinking skills, and a more positive attitude about visits to historic houses than a one-time visit would do. Based on that hypothesis, the research questions which were investigated were the following:

1. Does participation as a peer teacher in a guided follow-up program to a museum visit facilitate the learning of specific historical concepts?
2. Does participation in follow-up activities after a museum visit

enhance the peer teacher's ability to utilize the thinking skill of making comparisons?

3. Does participation in a peer teaching experience as part of a guided follow-up to a museum visit affect the peer teacher's attitude toward historic houses?

Significance of the Study

This study has been worth doing because it used a simple teaching technique -- having students act as peer teachers -- as a means of reinforcing the learning experience of a museum field trip. Practical experience tells us that the best way to learn a subject is to teach it to someone else. This project can serve as a model for activities which museums and schools can develop together to incorporate community resources into the classroom, and to provide satisfaction for students through the opportunity to share their knowledge and experience. It has the further advantage of involving little cost.

This study is significant because it provides research and program development in two areas of interest to educators -- namely, cooperative programming between historic museums and schools and the use of peer teachers to convey information that has been acquired outside of the classroom.

The results of this study have been beneficial from several points of view. It has created an additional link between the educational system of the town of West Hartford and the Noah Webster House. It has provided an opportunity for the students who are involved in the project to become familiar with the house

and, perhaps, has kindled their interest in other historic museums.

The program is built around the recreation of a Colonial School lesson as Noah Webster would have experienced it when he was a child. This program has given the Noah Webster House an opportunity to refine and improve its Colonial school lesson, to form closer ties with West Hartford teachers, and to develop a follow-up activity for use with its school programs.

The study of a Colonial school lesson is an appropriate topic. Metcalf notes, "The public school is one of the most ubiquitous and enduring of American social institutions. It can be investigated as a social phenomenon worth studying for its own sake, or it can be approached as a source of evidence to document other aspects of social history...It has, over time, reflected with considerable accuracy the values, aspirations, and fears of the society in which it has existed. The school is a sensitive barometer of social change" (183).

Other museums in the area will benefit by the chance to discuss the program with the participants and by the increased awareness on the part of local teachers on the use of museums as educational resources. The results of this study will be disseminated to museum educators and classroom teachers across the country through presentations at regional and national conferences, and through any articles which may be developed. Museums will be able to consider a new technique for cooperative programming, and classroom teachers may benefit through knowledge of another teaching tool for them to use.

Delimitations of the Study

This study has several limitations. A major one is that no attempt is made to measure the effectiveness of the peer teaching which is done by the students. The study looks only at the sixth grade class involved in the project. The purpose of this study is to utilize the peer teaching as a technique to involve the students in a follow-up program after a museum visit and to study the effect of this experience on them. Should the project convince teachers and administrators of its educational value and, more importantly, be well received by the classes who are taught by the students, this technique can be developed into a means by which more than one class can benefit from a single class visit. A follow-up study can be done at another time to determine how much the students learned from the experience of being taught by their peers.

A second limitation is that the Noah Webster House is a specific type of museum -- a small historic house. The material used in this study is historical in nature, and based on a personage who, although nationally important, is being studied because of his local origin. Every museum has a different set of resources with which to work, but it is assumed that the technique developed is one which can be adapted to each individual set of circumstances.

A further limitation is the selection of students and teachers. Although the school involved in the program draws pupils from the less-affluent section of town and from the inner city in Hartford, the students are primarily from

reasonably affluent, well-educated families. The students are apt to have visited museums with their parents. The parents are interested in their children's education and, as volunteers, support the school's activities in many ways. Historic houses are common in New England, and many classes plan field trips to them. Many classes from the school have visited the Noah Webster House. Because we worked with a small and pre-selected population, it is not possible to generalize about the effectiveness of the technique with other classes. However, it is believed that this limitation will not affect the application of the peer-teaching method by other museum educators and teachers.

The participating teacher is exceptionally creative and willing to experiment with innovative programs. She has a strong interest in history, and probably gives more attention to it than other sixth grade teachers do. Although she was an ideal person to work with on a pilot project such as this, it is important to structure any future materials in such a way that they do not demand too much from the classroom teachers who will be using them.

CHAPTER II

REVIEW OF THE LITERATURE

In my review of literature, I have looked at several topic areas including the status of history teaching, the use of local history, "hands on" learning, and peer teaching.

The Status of History Teaching:

Mason, in the previously cited study done for the National Council of Social Studies, finds that students consider the content of history courses to be uninteresting and meaningless. Their textbooks emphasize events and developments remote from students' own experience, and students consider them tedious to read. A recent survey of textbooks done by the Hartford Courant underlined this observation. Researchers say dull, lifeless writing is commonplace in books from all major schoolbook publishers (deSilva June 15, 1986).

Revolutionaries and presidents routinely are portrayed as mere stick figures devoid of personalities and passion, and inherently interesting topics are stripped of their drama. Paul Gagnon, professor of history at the University of Massachusetts, examined the ten best selling high school history texts. What he found, he says, is that the books are packed with badly organized and unrelated details and fail to give insight into important historical figures or to explore fundamental ideas. In a recent experiment, former Time-Life editors rewrote history texts which were then tested on high school students. Students who read the revisions by the editors remembered 40% more than students who read the

original versions. One of the editors reported that when she and her partner first read the history book passages, they were aghast. "Before us lay some of the driest prose we had ever had the displeasure of reading" (deSilva, June 15, 1986). Robert Douch believes that history courses have been obsessed with a procession of events in time which students have learned rather than understood. He feels that the courses have been too reliant on the written word as the only source of knowledge, too general, and too intellectualized. "There are the strongest reasons for supposing that in a great many schools history is excruciatingly, dangerously dull and what is more, of little apparent relevance to the pupils. Many boys and girls agree" (Ballard, 109).

The Use of Local History

What is the solution to this problem? James Shenton observes, "The new direction of the writing of American history during the past two decades has been toward the development of a new social history. The focus on dominant elites has given way to a concern for the history of every person, an emphasis that has been popularized as 'history from the bottom up.'" (469) There is a growing movement to teach history by looking at one's own community. The use of local history as a means of making the subject more meaningful to students is not a new phenomenon. Mary Sheldon Barnes, writing in 1895, observes, "In local history alone can the teacher most nearly bring a pupil face to face with all the sources and give ...the best training that history has...in accuracy, the nice weighing of evidence, the sympathetic interpretation of the past. ... Through local history the

citizen finds a close and intimate connection with the great whole," as quoted in Metcalf (12). Fay Metcalf underlines the growing importance of the local community as a resource for teaching history. She believes that it is a reflection of the growing interest in community history that has been developing in society at large in recent years. It seems to be a deeply rooted movement, that has gained an intellectual respectability. Lester Stephens, in his book on the study and teaching of history, says, "One of the best ways to create an interest in history is to bring it home to the local community, and one of the most fruitful opportunities for developing elemental research skills is in the pursuit of the history of some aspect of the local area" (32). Robert Dauch notes the value of studying history on the local level, "When a historical period is studied locally, this may well be regarded, not as an illustration of national history, but as something vital in its own right, study of which could lead to some understanding of a national situation or a general development"(113).

Because the study of local history does not, in most cases, involve major historical events and nationally known individuals, it can become by its very nature a study of the everyday life of common people. Metcalf notes that there has been a distinct change in the past decade in the study of history. There has been, she thinks, a deliberate attempt to shift the focus of historical investigation from the influential elite to the ordinary Americans who did not "make history" in the traditional sense. The investigator believes this movement has strong implications for the teaching of history to children.

Matthew Downey says, "Students need a history closer to home, one more

directly related to their own experience, a history focusing on the events and experiences of everyday life, while relating such matters to the larger social and economic developments of the past" (20). Robert Douch concurs. He believes that the starting point should be the children, their world, and their interest (109). Hallam, too, supports the approach. He believes that it is easier to stimulate younger pupils through the study of concrete topics such as writing, houses, entertainments, clothing, transport and so on, rather than in trying to force them to understand abstract political, constitutional, and religious changes (Ballard, 170).

Kieran Egan presents a refreshingly different point of view. He disagrees with the developmental viewpoint that young children cannot understand history. He feels that Piaget draws his conclusions from looking at a narrow range of logico-mathematical concepts, whereas, in reality, even young children have vivid imaginations. They are capable of understanding causality in stories. Good and bad, power and weakness, generosity and oppression have meaning for them. Furthermore, they have the ability to understand relative time. They grasp the concepts of before, after and "long, long ago." Egan feels that the children's immediate surroundings are too taken for granted to be meaningfully explored. He proposes that history be taught by incorporating materials which are real --real events, real characters, and real times and places --but that have within them dramatic possibilities that permit children to use their imaginative powers. His theories counteract the prevailing tendency to begin with everyday life as the source for teaching history. Creative teachers can build drama and

imagination into a study of daily life through role playing exercises at historic houses.

A local focus, with a stress on everyday life, as a means of teaching history receives strong support from educational theorists. Supporters of the progressive education movement advocated merging the school with the community in as many ways as possible, including an examination of its history. John Dewey, writing in The Child, The Curriculum, said that the question of how human beings live, indeed, represents the dominant interest with which the child approaches historic material (153).

Piaget's stage theories lend support to this approach. Since a full understanding of chronology does not occur until about the age of 16, history for pupils under the age of 14, many still at Piaget's concrete operations stage, should not be overly abstract (quoted in Ballard, 167). Studies by Hallam, Peel and others have shown that the formal operations thinking skills required to understand history develop relatively late. Hallam has found that children do not understand the basic implications of historical dates until the age of 11 (Ballard, 167). Even at that age, problems exist. Roy Hallem investigated 100 pupils ages 11 - 26 on three historical passages, and discovered that children reasoned on a lower level than one would expect. They were only able to hold four concepts simultaneously(18). His findings lend support to the idea that, for successful history teaching, the material should be simple, concrete, and closely related to the child's own experience.

Metcalf points out that, although ideal, teaching with local resources is not

easy. Few teachers are trained in the use of local history as a teaching tool. It requires skills and interests of a different kind from the more traditional textbook-centered approach.

Historic houses and museums can help solve this problem. Such museums, particularly those which use a "living history" approach, offer the possibilities of showing the everyday life of ordinary people. Children can experience for themselves day-to-day tasks such as cooking, gardening, spinning, and weaving, and can, through discussion, fit these activities into a larger framework that forms the pattern of daily life. Downey supports this approach: "The historical imagination, which the story of history should cultivate, develops not just through reading or hearing about statements about the past but through acquiring for oneself a sense of the concrete circumstances of life --its sights, sounds, smells, tastes, textures. Students need to use all their senses in gaining an understanding and feeling for the past" (26-27). Commager concurs: "Apart from the obvious necessity to use as many illustrations as possible, simple dramatic episodes can often quickly clarify abstract ideas or events. Visits to historical sites and buildings are invaluable as a means of introducing children to the reality of history" (10).

"Hands-On" Learning

In my research I looked for theoretical support of the "hands-on" active learning approach that I believe is essential for meaningful museum programs. Three theorists, John Dewey, Jean Piaget, and Jerome Bruner speak directly to

this issue. In the research, I was particularly concerned with the educational implications of their theories, as expressed by their own writings and analyses by other writers.

John Dewey's advocacy of learning through actual experience, with its implications for the use of community resources in education, supports the role that museums can play. Those of his writings which were found to be most helpful include Experience and Education; The Child, The Curriculum; The School and Society; and Schools of Tomorrow. For Dewey, learning is doing.

"It is the rare mind that can get relations or draw conclusions from simply hearing facts. Most people must see and handle things before they can tell how these things will behave and what their meaning is" (Schools of Tomorrow, 173).

Contemporary educators applaud the return to a stress on learning through experience, but point out some cautions which are relevant to museums. Robert Mason says, "Disconnected experiences are miseducative when they are not organized in such a way that their interconnections become clear. Field trips ...frequently exhibit this weakness" (108). Adele Silver quotes Dewey on the importance of selecting the kind of present experiences that live fruitfully and creatively in subsequent experiences and challenges museums to be sure that the museum experience does indeed relate in a meaningful way to the activities of the classroom.

Several writers have written on the educational implications of Piaget's developmental theory of learning. Barry Wadsworth discusses the difference between "development" and "learning," pointing out that development is a

spontaneous process, whereas learning is provoked by the situation.

Development directs learning in that it sets the limits of the learning which can take place. For Piaget, the key to the child's development, as it relates to educational practice, is the activity of the child –his action on objects, events and other people. Therefore, as Deanna Kuhn points out in her article on "The Application of Piaget's Theory of Cognitive Development to Education," the responsibility of the classroom teacher is to provide an environment rich in opportunities for such activity. Wadsworth says, " A Piagetian classroom is active. Children do things: they do not work exclusively with symbols. There is a lot of manipulation and exploration of the objects that the teacher places in the child's environment" (xi).

Herbert Ginsburg and Sylvia Opper point out that Piaget's theory stresses the interaction of current cognitive structure and new experience for learning to take place. They emphasize the importance of making sure that the activity is relevant to the child's experience: "One way of putting the matter is to say that interest and learning are facilitated if the experience presented to the child bears some relevance to what he already knows but at the same time is sufficiently novel to present incongruities and conflicts" (223).

Although most classroom educators are familiar with Piagetian theory, museum educators are not. Nina Jensen, in an article entitled "Children, Teenagers and Adults in Museums: A Developmental Perspective," presents the theories of Piaget and discusses the implications for museums. She points out that because children's thinking is so concrete, they are often confused about what

is real and what is representational. She, too, stresses that interaction is the most important method of learning.

Jerome Bruner is one of the most influential writers of learning theory for museum educators. His writings On Knowing, Essays for the Left Hand; The Process of Education; and Toward a Theory of Instruction as well as his autobiography In Search of Mind have been inspirational sources for people concerned with teaching with objects. Bruner believes that students should be given an understanding of the fundamental structure of subjects and that the foundation of any subject can be taught to anybody at any age. These theories challenge museums to examine the basic foundations of their interpretive philosophies and educational procedures. The technique of learning by discovery, strongly advocated by Bruner, forms the basis of most contemporary museum interpretive techniques, as it supports the approach of asking questions about an individual object and drawing more general conclusions from a specific experience. Bruner maintained that a child who finds things out for himself not only gains a deeper understanding of the principles involved but is more satisfied and motivated than a child who is taught didactically. He says, "Discovery and the sense of confidence it provides is the proper reward for learning. It is a reward that, moreover, strengthens the very process that is at the heart of education --disciplined inquiry" (On Knowing, 223).

Robert Messialas and Jack Zevin expand upon the concept in their book Teaching Creatively: Learning Through Discovery. They define discovery learning as situations in which students are presented with subject matter in an

incomplete form and are required to organize it by finding relationships among the facts or events presented through their own efforts rather than passively registering information supplied by the teacher (15).

The role of the teacher is important to each of the educational theorists which have been cited. Mason, discussing the implication of Dewey's theories says "With this tremendous emphasis on meeting the needs of children and youth on their own terms- the role of the teacher increasingly becomes that of counselor or adviser. .. Young people must be helped to make their decisions, but they must do the deciding: they must not be told what to do" (88).

Ginsburg and Oppen note that the most important single proposition that the educator can derive from Piaget's work, and thus use in the classroom, is that children learn best from concrete activities. The teacher's major task, therefore, is to provide for the child a wide variety of potentially interesting materials on which he may act (221).

Messias and Zevin address the role of teachers in the inquiry method. They point out that teachers no longer exercise a monopoly over discussion, and they are no longer the undisputed authority on all matters of importance. They believe that the teacher's role is dialectical rather than didactic in the sense that it assumes that students will learn more when they are given the opportunity to participate in discovering ideas and relationships for themselves (27).

Peer Teaching Techniques

If teachers are to give up their role as the primary source of knowledge,

who then shall do the teaching? In the classroom situations envisioned by the theorists discussed, the children are called upon to serve as teachers. Dewey, in Schools of Tomorrow, describes the public school system in Gary, Indiana. He says, "Every advantage is taken of the social instincts of children in the teaching. Instead of isolating each grade and cutting off the younger children from the older, the two are thrown together as much as possible ...the older children learn responsibility and cooperation from having to look out for the little people, and the latter learn an astonishing amount about the subject from waiting on, watching, and asking questions of the older pupils" (195).

Hallam, in his book on Piaget for classroom teachers, strongly advocates peer teaching. He says, "Using children to teach other children has always been a successful procedure. As all teachers know, there is a dual benefit in children teaching children: benefit to the child being taught and benefit to the child teaching...It is probable that students remain by far the largest source of untapped teaching talent in schools at all educational levels" (110). Ginsberg and Oppenheimer concur (227).

Bruner identifies the natural energies that sustain spontaneous learning, and includes among them social reciprocity. Of social reciprocity, he says, "What can most certainly be encouraged is something approximating the give and take of a seminar in which discussion is the vehicle of instruction. This is reciprocity. Surely one of the roles that will emerge is that of auxiliary teacher --let it, encourage it. It can only help in relieving the tedium of a classroom with one expert up here and the rest down there" (Toward a Theory of Instruction 126).

Gartner reinforces this view, "It has long been obvious that children learn from their peers, but a more significant observation is that *children learn more from teaching other children* [italics theirs]. From this a major educational strategy follows: namely, that every child must be given the opportunity to play the teaching role, because it is through playing this role that he may really learn how to learn" (1).

Peer tutoring has long been recognized as a valid teaching method. John Comenius, a Moravian teacher, said in 1632, "He who teaches others teaches himself." Charles Hoffman, Carl Kaestle, Warren Land, and Maurice Kouyate review the history of peer teaching in their writings on education. Land cites the use of peer teaching by the ancient Greeks and Romans. Andrew Bell, a Scottish clergyman, wrote on "mutual tuition", a system which he developed in 1797. In about 1800 Joseph Lancaster, an Englishman, devised an elaborate plan of instructions according to which older students drilled small groups of younger students. Due to the use of student monitors, children were able to be continually engaged in active, competitive groups and yet proceed at their own rates of speed. The system was highly regimented and, as a result, a single master could operate a school with as many as 500 children in attendance. Lancaster claimed to have been able to teach 1000 students by himself.

The advantages of the Lancastrian system were many – the system was cheap, efficient and easy to implement. It inculcated obedience, promptness and industry. The system had great appeal to towns which were limited in their funding, because they were able to hire one teacher to teach all of the students in a

one room school. "The Lancasterian system became the most widespread and successful education reform in the Western world during the first thirty years of the nineteenth century" (Kaestle 42). The system continued to be popular in Europe, even after World War I, and today is being used in some African countries (Kouyate).

Although American school systems have abandoned the Lancasterian system, the use of peers as teachers is a normal part of many classroom situations. Ten fifth and sixth grade teachers who were queried in the West Hartford school system said that they used it in some form. The most common way was for individual drill on such things as math facts and spelling words. Teachers use it to help students catch up on work they have missed because of absences. Others use it to assist in understanding concepts. "In reading literature books, strong readers read aloud with weak readers and talk over what they have read to insure comprehension." Some of the teachers have students work with foreign students to improve their English speaking and reading skills. One teacher said she used students to teach how to do something they knew well.

With this one exception, however, the teachers I talked with use students as peer teachers to reinforce skills learned in the classroom. Teachers do not call upon students to share knowledge which they have learned outside of class. A 1985 New York Times article cites one instance of a student sharing his skills outside of a traditional classroom setting. An 11 year old boy in South Windsor, Connecticut, is running introductory classes in how to use the library's new coin-operated personal computer. Surely there are other examples. However, I

believe that many teachers do not perceive of such situations as "peer teaching."

"Peer teaching" as a formal method of instruction has been shown to create negative responses on the part of teachers. Jerry Aldridge and Joey Harris cite the following reasons why teachers feel it won't work:

"I feel threatened."

"What if the peer teacher teaches something wrong?"

"It takes too much time to train peer teachers."

"Kids won't behave themselves."

"If I have to supervise I might as well do it myself."

The article offers rejoinders to these complaints and attempts to build a case for the use of peer teaching in the classroom.

Benajmin Bloom has also noted the problems that teachers have with peer teaching. He believes that teachers receive their primary personal and professional satisfactions from helping students who are having difficulty. They are reluctant to relinquish this responsibility since it may limit their rewards. They may also feel a sense of guilt at abrogating their responsibilities as teachers when the students do the learning themselves (24).

Nevertheless, there are many benefits to teachers, among them the ability to use the extra time to plan lessons, to consult with other staff, and to program materials for future tutorial sessions. Jan Roberts (1981-83) found that 50% of the teachers felt that their teaching ability had improved as a result of participation in a program involving the use of students as tutors.

Numerous studies have documented the benefits of peer teaching for the

students involved. Charles Greenwood, in a study of 128 third to fifth graders in inner-city schools in 1984, found that peer tutoring produced superior weekly achievement effects for inner city students. Hoffman and Land, who have each surveyed the effectiveness of peer tutoring programs cite many other examples. Bloom (1984) found that the average tutored students outperformed 98% of the students in the control group. Berman (1973) suggested that tutoring programs increased student motivation and improved self concepts. Reed (1976) found that tutors reinforced their own knowledge, which in turn enhanced their self concept and self esteem. Slavin's mega-analysis showed significant academic achievement in 19 of 27 studies, improved inter-group relations in 6 of 6 studies and significant improvements in self-esteem in 2 of 3 studies. Other studies showing positive results include those by Cohen and Kulik (1981), Lazerson (1980) Baldwin (1975) and Bierman and Furman (1981).

I have been particularly interested in the effects of tutoring on the tutors themselves. Gartner proposes that solid academic gains occurs occur for the tutor. " In the cognitive area, the child having taught another may himself learn as a result of a number of processes. He reviews the material, he has to organize, prepare, illustrate the material, he may try to reshape or reformulate it, and thus himself sees it in new ways; he may need to seek out the basic character of the subject, its structure, in order to teach it better and may thereby himself understand it better" (62-63). Gartner et al examine in detail several programs that utilize peer teaching. One of the earliest American experiments using this method as a teaching technique was done in the early 1960s by Peggy and Ronald

Lippitt. Because they were more concerned with socialization, they did not focus on the cognitive area and did not produce much hard evaluative data. The results were considered highly positive for both tutors and tutees. The Mobilization for Youth Program in New York in 1963 worked on reading. The tutors showed a mean growth of 3.4 years as compared with 1.7 years for control groups. In 1967, Thelen worked with underachievers and emotionally disturbed children in Chicago. Among the benefits to the tutors which he cites are the development of a sense of community with the other students, an enhancement of ego development and self-esteem, and the opportunity to see a new use for subject matter, a chance to practice the adult role of teacher, and the training in leadership skills (26-27). Gartner observes: "The tutor and tutee do not benefit alike—they each benefit but in different ways. And from the data it appears that the tutor may benefit in a greater number of ways, as a greater number of mechanisms appear to be tapped by the process of tutoring" (52).

Cohen and Kulik, in their mega-analysis of studies on tutoring, found that in 90% of 38 studies, students who served as tutors performed better than control students. Four of five studies of tutors' attitudes toward the subject matter showed that they became more positive. They conclude, "Tutoring programs have positive effects on students who serve as tutors. Tutors not only develop more positive attitudes toward the subject they are teaching, but they also gain a broader understanding of the subject." This study investigates whether that is, indeed, the case.

CHAPTER III

HISTORICAL BACKGROUND

American Education in the Colonial Period

The colonists who arrived on the shores of the new world came from a life of established patterns. They had known what to expect of the world and what the world expected of them. In England, family, community and church were the means by which English culture was transmitted from generation to generation. Formal instruction in elementary and grammar schools and in the universities was highly utilitarian. Its avowed purpose was the training of the individual for special social roles. "Nothing disturbed the confident expectation that the world of the child's maturity would be the same as that of the parents, and that the past would continue to be an effective guide to the future" (Bailyn 18).

Even though the colonists emulated the traditional patterns and maintained the traditional values they had known back in England, education in America was fated to follow a different route from that which the colonists had known. Life in the new world was characterized by instability, absence of established patterns, and the unexpected. The wilderness was strange and new. Familial prestige was humbled by the menial labor necessary for survival, and the established institutions of community and church were yet to be built.

The Role of the Family

In the 17th century, children were regarded as depraved and sinful young

creatures, needing to be disciplined, tamed and civilized (Frost 7). In the 18th century, under the influence of Enlightenment thinkers, that view began to change. One of the most significant writers responsible for this change was John Locke. Locke, in contrast to earlier philosophers, considered children as unformed clay. He saw them as highly malleable rather than inherently wicked. He believed, however, that without discipline children could be easily and quickly drawn into wickedness (DeMausey 365). This discipline was to be achieved through education. For Locke, the four great ends of education were virtue, conceived as the good life based on belief in Christ; wisdom, the able management of one's business affairs; breeding, the ability to think well of oneself and others; and learning, the possession of an ample stock of useful knowledge. Learning, the last to be listed, was of little value unless joined to a properly formed character (Cremin 361).

The formation of good character was traditionally seen as the responsibility of the family. As it long had been done, the household carried on much of its educational function in the ordinary exchanges accompanying routine activities. A great deal of formal and informal education, intellectual, technical, and attitudinal, continued to take place in the course of daily life, with the young learning mostly by imitation and partly through explanation (Cremin I: 480). In some realms, however, families tended to be quite deliberate about their teaching. One such realm was discipline and the whole complex of attitudes and behaviors associated with it. Another area was values. Boys and girls were taught what was deemed appropriate and inappropriate for their stations in life.

Parents ought properly to institute a government over their children as soon as "the first glimmerings of reason and understanding" made their appearances. Every opportunity must be taken to curb the children's willfulness and teach them to obey. A proper government should include not only constant lessons in obedience, manners, and religion, but also in diligence. When children were too young for hard labor, parents should "keep them within doors at their book, and at some little service, that they may be capable of any business rather than let them be idle." Books symbolized civilized refinement and "certainly encouraged the spread of schooling" (Walzer qtd. in DeMausey 367).

As time went on, a number of subtle changes occurred in the nature and character of household education. As life became less dangerous and the death rate fell, the place of the child in the household and in the world of his parents become more secure and, hence, more significant. As a simple pragmatic matter, parents could afford to invest more in their children, emotionally as well as economically, given the enhanced possibilities of their survival. The stabilization of community life led to a gradual easing of the formal burdens earlier placed on households for the maintenance of social order and stability. Cheap land, expanding commerce, geographical and social mobility, and declining parental authority resulted in enhanced mobility and freedom of choice in marriage partners, religious affiliation, occupation and ultimately, of life style.

As a result, educational functions which had in the 17th century commonly been carried on by the family began to be handled by the school. Communities grew, the wilderness was tamed, and institutions were established. Formal

education began early in the colonies. By 1650 Connecticut had passed a law requiring that children and servants be taught to read English, that they be instructed in the capital laws, that they be catechized weekly, and that they be brought up in some trade profitable to themselves and to the commonwealth. In 1647 Massachusetts passed a law requiring all towns of 50 families or more to appoint a schoolmaster to teach writing and reading, and towns of 100 families or more to establish a grammar school. A similar law was passed in Connecticut in 1652 (Bremner I: 39-40,73). By the 18th century Connecticut had developed a wide reputation for the excellence of its schools. It was one of the first states to establish a permanent source of funding for district schools (Bickford, Exhibition).

Schooling became the means by which people moved into the professional and gentry classes of society. The increased social mobility of the population created a situation in which school was widely perceived and used as a vehicle for personal advancement. As almanacs, newspapers, pamphlets and books proliferated, a premium was placed on literacy. By 1790, adult male literacy in New England exceeded 90% (Lockridge 13). Virtually all men must have been literate by the end of the 18th century in the sense that they could read well enough to sign their names and probably to write. According to Lockridge, women's literacy remained at about 50%. However, current research on female literacy by Nancy Cott, Elizabeth Peck and others seems to indicate that it was much higher than had originally been thought. Measurements made on the basis of the ability to sign one's name are now seen to be simply an indication of whether someone could write, not whether they could read.

Cremin notes that by the end of the provincial period, American literacy had shifted from what he calls an "inert" literacy in which people read the Bible but not much else, to a more liberating literacy in which they reached out to an expanding world of print for information and guidance on private and public affairs (I:492).

As the family role in education diminished, more and more responsibility fell on the public school to produce a moral and civilly responsible population. J. William Frost, Connecticut historian, observes. "The state's responsibility to the future of republicanism rested in the creation of a virtuous citizenry. The hallmark of education in Connecticut, whether in church, school, or home, was obedience to a set of standards. Intellectual attainments often appear less important than the creation of character" (8). A Massachusetts law of 1789 enjoined all teachers to "exert their best endeavors, to impress on the minds of children and youth committed to their care and instruction, the principles of piety, justice and a sacred regard to truth, love to their country, humanity and universal benevolence, sobriety, industry, and frugality, chastity, moderation and temperance, and those other virtues which are the ornaments of human society and the basis upon which the republican Constitution is structured " (Massachusetts Laws of the Commonwealth of Massachusetts, chap. xix qtd. in Cremin II:395). Rudolphe adds that there was a bias toward "the good of society" rather than the "good of the individual" (xii).

The District School

In the 1770s, when Noah Webster was growing up in the West Division of Hartford, the elementary or district school was the most common type of school in Connecticut. The basic subjects which were taught included spelling, reading, writing, grammar, arithmetic, geography, and history (Cremin II: 391-4). These schools were almost always a single unit in a single building, frequently enrolling youngsters from three to eighteen years of age (Sammons 15).

Americans today romanticize the concept of the little one-room schoolhouse -- a natural result, perhaps, of our desire in these complicated and confusing times to return to a simpler past. However, the reality of schooling in the 18th century was quite different from our idealized vision of Winslow Homer's ruddy-cheeked children playing merrily outside their classroom.

The school building itself was usually located on land that was not usable for anything else. Schools stood in swamps, on busy intersections, on hills, and in the glaring sun. Christopher Bickford notes, "The one room schoolhouse, today deemed so quaint, was usually in effect a hovel with poor lighting, heat and ventilation" (CHS newsletter). Buildings were typically 20 to 30 feet square, unpainted or done in cheap iron-oxide red. They had one or two small windows on each side and a single door at one end. Sometimes an outhouse stood behind the school, but many schools had none. There were no play areas (in fact, the school might be located right in the middle of the street), no trees, lawns, and of course no play equipment, sport fields, fences or flagpoles (Sammons 7).

Mark Sammon's study of Massachusetts schools substantiates the grim

picture. Interiors were stark, with small windows providing dim light and inadequate ventilation. On one wall there was a fireplace or a stove. The room might have school desks, with backless benches facing the front of the room, or there could simply have been planked seats lining the walls. These small rooms held from 15 to 60 children. Boys and girls sat on separate sides of the room, with the smaller students in the front and the taller ones toward the back. Inadequate heat was often a problem. Wood was often inferior, green, or wet. Fireplaces were inefficient and drafty. Furnishings inside the building were as sparse as the exterior. There were no blackboards, maps, globes, libraries, flags, clocks, bulletin boards, pictures, charts, graphs, or calendars (7-8).

Teaching was a transitional occupation, not a profession. Teachers were often young (sometimes as young as 17) and single. Many had no more than a district school education, although occasionally a college student would teach a term to earn more tuition money. School was open throughout the year. The winter terms were most often taught by men; the summer terms by women. Pay was comparable to or somewhat below that of hired help on farms. Sammons notes that in 1800 schoolmasters earned about \$8 per month, or 35¢ to 45¢ per day; while women earned about \$3 to \$4 per month, or 15¢ to 20¢ per day. Teachers received room and board in addition to their cash pay. They were usually placed with families for two weeks at a time. The families did not necessarily have children in school since the boarding of teachers was a form of tax payment or credit. Living conditions varied, depending on those of the families with whom they boarded (9).

Poor teacher salaries meant high turnover. Because the teachers were untrained, the easiest method for a new teacher to begin might be to have the children start at the beginning of their texts and work their way through them. It didn't seem to matter that the students had probably covered the same material the previous term.

Teachers were confronted with students who were bigger and in some cases older than they were. Discipline was a problem. Teachers tried to project an air of authority by remaining seated at their high desks while requiring children to stand to address them. Children were taught to "make their manners," to bow, curtsy, and respond politely. Nevertheless, students, particularly the older ones, delighted in making life difficult for the teachers through such pranks as blocking the chimneys and locking out the teachers. Teachers responded with a variety of disciplinary methods. They relied on embarrassment and humiliation. Errant children might spend an hour kneeling with their noses in knotholes, or holding heavy pieces of wood at arms length. Corporal punishment was an accepted part of the school routine, and it was frequently resorted to. Elathalet Nott, who grew up in Connecticut in the 1780s said, "If I was not whipped more than three times a week I considered myself particularly fortunate" (qtd. in Bickford, Exhibition).

Students were given three breaks a day --an hour for lunch and two 15 minute recesses. School was in session Monday through Friday and sessions were held throughout the year. Attendance was not mandatory, and varied according to the season. Students attended school only intermittently, depending on the labor needs of their families. There were few holidays (Frost 36).

Teachers offered some oral instruction, but there was very little time for it. Most frequently, they made assignments to different groups, who returned to their seats to study them out loud. An 18th century classroom was a cacophony of voices. The groups came forward to recite their lessons, either en masse or individually. Sometimes the entire group would go through the drill together, and sometimes individual students would take turns going through a question and answer drill with the teacher (Sammon 17).

The prime method of learning was rote memorization. James Axtell notes, "Sheer memory was called upon time and again to overcome the limitations of poor teaching, to parrot and to squirrel away random nuggets of information in the hope that someday they would make coherent sense" (184). It was believed that reason did not dawn in the child until relatively late, at least ages 8 or 10. Since children were capable of reading at 4 or 5, they could best use the facilities they did have -- imitation and memory -- to learn. Long lists of words were the easiest way for pupils to learn to read, because they were not capable of thinking about content or meaning.

In reading exams, the students stood in turn to read a sentence, paragraph or verse out loud. Warren Burton, writing about the district school in 1852, notes "...we did not always know the meaning of the words, or enter into the spirit of the composition....Parliamentary prose and Miltonic verse were just about as good as Greek for the purpose of modulating the voice according to meaning. It scarcely ever entered the heads of our teachers to question us about the ideas hidden in the great long words and spacious sentences" (qtd in Sammon 18).

Schoolbooks were designed to occupy the children for many consecutive terms. Each child was forced to work individually because the textbooks, provided by the parents, could be by different authors or of different editions. Children normally began with spellers at the ages of four or five. The most popular spelling book in colonial America was A New Guide to the English Tongue, written in England in 1740 by Thomas Dilworth. This book contained lists of words to spell with their pronunciations, reading selections, an introductory grammar, fables and miscellaneous information such as the names of the towns and counties in England. Students might also still be using The New England Primer, which first appeared in the late 17th century. The primer included an alphabet, a beginning speller, and short rhyming couplets illustrated with woodblocks. The contents were primarily religious.

The spelling book was based on the presupposition that children learned by rote, through memorization and repetition. The purpose of the spelling book was to teach children how to read. Reading was oral, not silent. Spelling was designed to teach children to pronounce hundred of words, most of which were not in their oral vocabulary. The children were taught to spell words out in syllables in order to pronounce them. Teaching students to spell was an important but secondary consideration (Monaghan 32).

Students advanced from spellers to readers. Prior to the Revolution, the selections included in the books were overwhelmingly religious and moral in context. They consisted of passages by English philosophers, orators and poets, often grouped by subject. They were extremely difficult for most children to

understand and must have been of little interest to them. To my knowledge, the Bible was seldom used as a reading text in classrooms, although it was the primary subject for reading in the home.

Rules of grammar were usually included in the spellers. Grammar books did not appear in great quantity until after the Revolution. They focused on the parts of speech which were taught by memorization of definitions, rules and models, and offered as their principal exercise the parsing of sentences.

A variety of arithmetic books was used, including Arithmetick (1661) by James Hodder, Arithmetick (1670) by Edward Crocker, and Greenword's Arithmetick Vulgar and Decimal, first published in Boston in 1729. Thomas Dilworth also wrote an arithmetic book, The Schoolmaster's Assistant, published in 1743. Arithmetic books began with simple numbers and operations, and ended with calculation of cubed roots and geometric progressions (Sammons 16). They presented problems, then explanations, then rules, and then more problems. Most students left school before proceeding very far into the book. They learned those mathematic skills necessary for their daily lives and left the others to students destined for more advanced education.

Books on geography and history did not enter the curriculum until the latter part of the 18th century. The earliest ones were English, such as Patrick Gordon's Geography Anatomiz'd (London, 1728) and Daniel Fenning's A New and Easy Guide to the Use of the Globes and the Rudiments of Geography. (London, 1770). The first geography written by an American was Geography Made Easy by Jedidiah Morse, published in 1784. (It contained a section written by Noah

Webster). The first history of the United States was Introduction to the History of America ...designed to instruct American youth in the elements of the history of their own country, written by John M'Colluch in 1787 (Sax 7-25).

Webster's Early Education:

The books mentioned above would have been the texts available to the young Noah Webster. Webster was born in 1758, on a 90 acre farm in the West Division of Hartford, Connecticut. His father, Noah Sr., was a weaver and a farmer -- not an uncommon combination since most craftsmen and tradespeople in the West Division supplemented their incomes with farming. Noah Sr. was a deacon of the church, a soldier and a member of Hartford's Committee of Correspondence. Noah Jr. was the middle child of five. He had an older brother and sister, Abraham and Mercy, and a younger brother and sister, Charles and Jerusha. The family occupied a four room house, still standing, located on the West Division's main street. There were approximately 1200 people in the West Division, which had become a separate parish in 1711. The Congregational church, the parade ground, and the burial ground were located in the center of town, about a mile north of the Webster House. There was a school in the center and one at either end of town --all located on, or in, the middle of the main road. We do not know which one young Webster attended.

In fact, we know very little of Webster's early education. The literature that was available to him outside of the classroom was very limited. He would probably have had access to an almanac and the local newspaper, the

Connecticut Courant, a weekly paper begun in Hartford in 1764. In most homes, the Bible served not only as a basis for religion but also as a reader. Another book which may have been present in the Webster household was The New England Psalter, which contains the psalms of David, proverbs and Christ's sermon on the mount. It was described as "a proper introduction for the training up of children to the reading of the Holy Scriptures" (Sax 6). Reading for amusement was alien to most children. There were libraries in Boston and New Haven, from which the parish minister, Dr. Nathan Perkins, could have drawn books. The Yale library in 1765 was characterized as "a good library, consisting of about four thousand volumes, well furnished with ancient authors, such as the Fathers, Historians, and Classics; many modern valuable books of divinity, history, philosophy and mathematics; but not many authors who have wrote within these thirty years" (President Clap's Annals, 1765 qtd. in Scudder, 23).

Webster's granddaughter, Emily Ellsworth Fowler Ford, writes the 'nurture and admonition of the Lord were almost the only education he received until his fourteenth year, for secular studies were then confined within very narrow bounds. The district school had no books save Dilworth's spelling book, the Psalter, and the Testament" (14).

Webster's early schooling is best described in his own words,

When I was a schoolboy, the greatest part of the scholars did not employ more than an hour in a day, either in writing or in reading; while five hours of the school time was spent in idleness, in cutting the tables and benches to pieces, in carrying on pin lotteries, or perhaps in more roguish tricks (qtd. in Sargent, 6).

Ford continues:

What aroused his interest in study is not now known, but by some means he was led to reflect on the advantages of a collegiate education and the native ardor of his mind, awakened and directed to this end, was able to obtain it .. It was arranged that in the autumn of 1772 [Webster] should commence his classical studies with the minister of the parish, Rev. Nathan Perkins (15).

Nathan Perkins had come to the West Division parish in 1772, and it is likely that young Noah was one of the first students he prepared for college. He was destined to be the minister in the West Division until 1838, a period of 56 years, during which time he prepared over 150 young men for college and over 30 for the ministry. Webster's diaries indicate that he returned to the West Division often after his college career, and we can speculate that the two gentlemen would have continued their dialogue about the issues of the day.

Noah Webster Jr. left home for Yale in 1774, when he was 16 years old. Yale was a hotbed of revolutionary fervor. Loyalist Thomas Jones characterized his alma mater as early as 1750 as a "nursery of sedition, of faction, and republicanism" (qtd. in Moss 16). Timothy Dwight, the tutor for the class ahead of Websters, was an outspoken advocate for independence, exhorting the students to no longer "consider yourselves as members of a small neighborhood town or colony only, but as being concerned in laying the foundations of American greatness" (qtd in Moss 18).

Webster's college career was frequently interrupted by the war. He led the students with his flute when General Washington visited New Haven, he accompanied his brother Abraham back to Canada when Abraham rejoined his

company, he spent his junior year in Glastonbury because New Haven was no longer considered safe for students, and he marched with his father and brothers to the Hudson River in order to reinforce the Connecticut troops preparing to battle General Burgoyne. (News of Burgoyne's surrender reached the soldiers before they arrived at their destination, so they turned around and marched home) (Ford 18-20). These experiences no doubt played an important role in the formation of Webster's conviction that we needed to have an "American" nationality.

Following graduation from Yale in September 1778, Webster found himself at loose ends. He notes in his diary that his father handed him the equivalent of \$8 and declared that this would be the extent of his future financial support. Thirty years later, Webster could still remember vividly the anxiety he experienced at this moment.

Having neither property nor powerful friends to aid me, and being utterly unacquainted with the world -- I knew not what business to attempt nor by what means to obtain subsistence. Being set afloat in the world at the inexperienced age of twenty, without a father's aid which had before supported me, my mind was embarrassed with solicitude and overwhelmed with gloom apprehensions (qtd in Monaghan 23).

The action of his father unsettled Webster so much that he retreated to his room for three days to think over his life plans. He emerged fortified in his desire to study law. Since he could not afford law school, he opted to earn his living by teaching. Webster returned to Glastonbury, where he had spend some of his college career, and taught in a district school for the winter term. In the spring of the following year he moved to Hartford where he taught in another district

school and began to study law with Oliver Ellsworth, later to become chief justice of the United States Supreme Court. That fall he returned to his home parish where he taught in the local school.

In the summer of 1780 Webster moved to Litchfield, Connecticut, to study law with Jedidiah Strong and possibly with Tapping Reeve, founder of the Litchfield Law School. His first try at passing the bar was a failure, but on his second try in 1781, he was admitted to practice.

It proved to be impossible for many young lawyers, Noah Webster among them, to make a living from their law practices in the post-Revolutionary depression, so Webster decided to keep on teaching. He tried to start his own academy in Sharon, Connecticut, but closed it after a few months. He decided to reopen the school in the spring of 1782 and advertised that he would pay particular attention to the literary improvement of females and "to the improvement of the grammatical purity and elegance of our native tongue" (Warfel 49). The school, however, never reopened, and Webster's career, based on his developing theories about education, took another turn.

The war, Webster's discouragement about teaching, the "heady" environment of Yale, and the intellectual ferment characterizing the post-Revolutionary years all had an effect on Webster. His beliefs in education were tempered by his experience, by the current educational theories of European and American philosophers, and by the Enlightenment belief in the indefinite perfectibility of man. Axtell notes the many changes in 18th century culture: the fact that families had either given over many of their educational

responsibilities to the school and the church or neglected them altogether; the trend on the part of the schools toward more practical popular education, the effects of the war, and the ferment of new philosophical ideas. These changes resulted in "a culture temporarily without a center, a culture that could no longer give all its members a strong sense of being a part of something vital, valuable, durable." He concludes,

"Not until the thirteen colonies rebelled from the mother country and set off on a new mission of national assertion did education and society in New England recapture the drive and purpose that had founded them" (288).

The effect of the Revolution was profound. The sense of cohesion and nationality that had been developing in Americans prior to the war was deepened and enlarged. The Revolution, Cremin observes, proved a pivotal occasion in the history of American education. In severing the political ties to England it hastened the need for rethinking and recasting the purpose of American education (569).

Even though the war was over, the Revolution had just begun. Benjamin Rush of Philadelphia stated, "We have only finished the first act of a great drama. It remains yet to effect a revolution on our principles, opinions and manners so as to accommodate them to the forms of government we have adopted" (qtd. in Kaestle 5). Rush and others wrote and spoke about the importance of a truly American education, which they saw as the means of rendering the American Revolution a blessing to mankind (Cremin 2).

In the last quarter of the 18th century writers were apt to speak spoke with

the sometimes heady optimism of a world that believed in the inevitability of progress (Rudolph viii). Rush, Timothy Dwight, Benjamin Franklin, Henry Adams, Richard Price and others shared the view of the French philosopher Montesquieu that the laws of education needed to be relative to the forms of government. They recognized that the American Revolution opened up a great opportunity for human development and placed extraordinary demands on ordinary men. Republics needed an educational system that would motivate men to choose public over private interest. The success of the American experiment, they believed, rested on the agencies of education that Americans developed. They argued for a truly American education, dedicated to the creation of a cohesive and independent citizenry.

This education had to be exemplary. Through it America would become a beacon for the world, displaying the glories of liberty and learning. The goal of education was to create a new republican individual, of virtuous character, abiding patriotism, and prudent wisdom. This citizen would be fashioned by education into an independent yet loyal individual. Without such individuals, the experiment in liberty would be a short-lived failure. The republican government was fragile --it depended on the morality of its people, who had to be willing to sacrifice for the common good and subordinate themselves to virtuous leaders. Cremin concludes that 18th century educational philosophers deeply believed that their republican experiment would excite emulation through the kingdoms of the earth, and meliorate the condition of the human race (II: 4). Americans saw themselves as a new Israel living under a special covenant with God and

dedicated to carrying the benefits of the arts and sciences in their highest form to all mankind. They believed in the power of knowledge to affect the day-to-day lives of ordinary people, and conceived of education as a means for reconciling differences both within and among the nations of the world, not the least of which was America herself (II: 561).

Noah Webster shared these dreams and hopes. He said, "A fundamental mistake of the Americans has been that they considered the revolution as completed, when it was just begun. Having raised the pillars of the building, they ceased to exert themselves, and seemed to forget that the whole superstructure was then to be erected" (qtd in Scudder 163). He believed that the Revolution had altered American society in fundamental ways by removing the constraints to national development and thereby unleashing vast reservoirs of untapped energy. He saw the political structure as the framework of the new nation. What the nation now needed was to develop a culture appropriate to the requirements of the new democratic form of government. Post-Revolutionary America could become the cultural as well as the political capitol of the world.

In the introduction to Webster's "blue-backed speller," written in 1783,

Webster said:

The author wished to promote the honour and prosperity of the confederated republics of America and chearfully (sic) throws his mite into the common treasure of patriotic exertions. This country must in some future time, be as distinguished by the superiority of her literary improvements, as she is already by the liberality of her civil and ecclesiastical constitutions. ... American glory begins to dawn at a favourable period and under flattering circumstances ... it is the business of Americans to select the wisdom of all nations ... to add superior dignity to this infant Empire and to human nature (15).

In 1790 he wrote:

Our constitutions of civil government are not yet firmly established: our national character is not yet formed; and it is an object of vast magnitude that systems of education should be adopted and pursued which may not only diffuse a knowledge of the sciences but may implant in the minds of the American youth the principles of virtue and of liberty and inspire them with just and liberal ideas of government and with an inviolable attachment to their own country (qtd. from "Education" as reprinted in Rudolph 45).

Education was, for Webster, not only the means to build a responsible citizenry capable of functioning under a democratic regime, but also the means to reform mankind. Education could raise the poor, "the miserable victims of ignorance and vice," to the rank of intelligent, industrious, and useful members of society. A good education could prevent crimes by forming the minds of youth to habits of moral order and industry." He continued, "It is no less obvious from experience than from the declaration of inspired truth that the training of children in the path of integrity and virtue is the best method of securing their future rectitude of conduct, their reputation, their influence, and their usefulness" (Letters 396).

According to Webster, moral character and good citizenship go hand in hand. He wrote, "The great art of correcting mankind consists in prepossessing the mind with good principles. For this reason societies require that the education of youth should be watched with the most scrupulous attention. Education forms the moral characters of men, and morals are the basis of government" (qtd. in Babbage 83).

Although Webster was later to undergo a radical change in his philosophy, as a young man he was intensely optimistic. He saw schools as capable of

molding a generation of independent and virtuous republicans devoted to their country. The great vice of free governments, he wrote in 1796, was to permit the public to be misled by designing men trying to obtain their votes. To correct it, "knowledge must be diffused among all classes of citizens, and when they understand public affairs, they will not do wrong" (Letters, 140).

Webster expressed his opinions on education in many articles and publications, most specifically in an article written in 1790 "On the Education of Youth in America" (reprinted in Rudolph 44-77). Central to Webster's view of education was America's need to form a national character. In it, he wrote, It is an object of vast magnitude that systems of education should be adopted and pursued which may not only diffuse a knowledge of the sciences but may implant in the minds of the American youth the principles of virtue and of liberty and inspire them with just and liberal ideas of government and with an inviolable attachment to their own country.

In order to accomplish this goal, Webster set forth several requirements. The first was that the system of elementary education be universal. It should be available to all economic levels and to girls as well as boys. Secondly, it should be uniform throughout the country. Thirdly, it should be American. He deplored the practice of sending boys to Europe for an education or of sending to Europe for teachers. He feared that if children were subjected to foreign influences in their impressionable years, they would be wanting in an attachment to their own country. Lastly, education should be strictly useful. Citizens needed to know how to read and write and how to perform elementary operations in arithmetic; they needed to know about the principles of their government and the history and geography of their country. Above all else, they needed a grounding in

moral and religious truths. But beyond this, there was little else that needed to be taught in the schools. Webster wrote extensively on the uselessness of teaching Latin and Greek to students who would have no practical use for them.

Webster shared the prevailing view that children were not possessed of inherent evil dispositions, but he did believe that they lacked reason and judgment. It was important, therefore, that students' education be closely supervised. "It is better for youth," he wrote, "to have no education than to have a bad one, for it is more difficult to eradicate habits than to impress new ideas" (57). Discipline must be strict and the master should be absolute in command. The rod was often necessary.

An effective system required strict subordination of the pupils to the teacher, but Webster believed that students would not be subordinate to a master whom they did not esteem and respect. He deplored the fact that Americans entrusted their children to "low and vicious characters". Above all else, young people needed teachers of pure morals. They should be masters of their subjects, well-bred, and enjoy the confidence of the parents of their students.

Webster deplored the lack of adequate textbooks. He found that the books in use consisted of essays that respected foreign and ancient nations. The examples of declamations of Demosthenes and Cicero, or the debates on political questions in British parliament were of no interest to children, and not useful in any practical way. Instead, he said, "Every child in American should be acquainted with his own country. . . . As soon as he opens his lips, he should rehearse the history of his own country; he should lisp the praise of liberty and of

those illustrious heroes and statements who have wrought a revolution in her favor" (qtd. in Babbage 84). To this end, Webster set himself to "favor the independence of my country, by compiling books for the instruction of youth; and with the express purpose of lessening the dependence of this country of foreign supplies" (qtd. in Coll 24). He set out to write new textbooks that would emphasize not only changes in education, but internal social change as well. Cultural independence from England, necessary for the establishment of a truly utopian form of society in America, would be strongly emphasized.

The way that this independence could best be achieved, according to Webster, was by the creation of a national language. Webster believed that a national language could unite the people, transcending social, political, and economic differences. Far from being a cultural liability, the American's lack of linguistic sophistication was one of its greatest assets. In the nation's language lay the strength of its national culture. A national language could, Webster believed, unite the people by transcending social, political and economic divisions. It was the key to the development and preservation of good customs, habits and governments. In the structure of language, Webster found an "internal gyroscope" that would automatically guide Americans to virtuous behavior (qtd. in Bynark 25). He issued a clarion call: "Now is the time and this the country in which we may expect success in attempting changes favorable to language, science, and government....Let us then seize the present moment and establish a national language as well as a national government!" (qtd. in Babbage 108). His new American form of education would be an end in itself and

a means to greater ends as well.

Webster's Blue-Backed Speller

Webster noted that in the year 1782 he kept a classical school in Goshen, New York. There he compiled two small elementary books for teaching the English language. "The country was then impoverished; intercourse with Great Britain was interrupted; school books were scarce and hardly obtainable, and there was no certain prospect of peace" (Meyer).

The first "small elementary book" that Webster wrote was called Part one of the Grammatical Institute of the English Language, comprising an easy, concise and systematic method of education designed for the use of English Schools in America. It appeared on October 7, 1783. This little book, which came to be known as the "blue-backed speller," revolutionized American education and determined the course of Webster's life from that time forward.

The organization of the blue-backed speller was based on the assumption that children could only learn by rote, through memorization and repetition. It presupposed that reading involved pronouncing and that reading was therefore oral, not silent. As mentioned before, the purpose of a speller was to teach children how to pronounce hundreds of words. Basic to this was the conviction that to teach children to read was in some sense to teach them to speak.

Spelling books had a set format, one that was used by Dilworth and copied closely by Webster. The child was introduced to all the letters of the alphabet. Then the child learned the "syllabarium" — ab, eb, ib, ob, ub, (short vowels), ba,

be, bi bo bu (long vowels) continuing throughout the entire alphabet. Having committed these syllables to memory, students advanced to tables of words of one syllable, tables of words of two syllables, etc. These tables were followed by "lessons," samples of connected prose which used the words which had appeared in the preceding table. Children were expected to learn to spell aloud all the words in a table before preceding to the lesson. In his first edition Webster began the book with all the tables, so that the students apparently were to master all the words before beginning to actually read sentences.

Although Webster closely copied the Dilworth speller in both form and content, his speller contained a number of improvements over Dilworth's book. Webster changed the syllabic division of words by dividing them as they are pronounced rather than according to the placement of nouns and verbs. Thus, Dilworth's "ha-bit" and "clu-ster" became in Webster "hab-it" and "clus-ter."

Webster's second improvement over Dilworth was to alter the syllabic division of words ending with -sion or -tion. The conventional treatment had been to divide these suffixes into two syllables (si-on and ti-on) but Webster treated them as one sound and therefore one syllable.

Webster reduced the number of references to "God" in his speller. (This seems like a surprising idea because of his strong religious convictions. In 1808 he had a conversion experience and subsequently printed a revised edition of the Bible, which he considered his most important work.) As justification, he explained, "Nothing has a greater tendency to lessen the reverence which mankind ought to have for the Supreme Being than a careless repetition of his

name on every trifling occasion." For example, Dilworth's first lesson read:

No man may put off the law of God.
The Way of God is no ill Way.
My joy is in God all the Day.
A bad man is a Foe to God.

and Webster's read

No man may put off the law of God:
My joy is in his law all the day.
O may I not go in the way of sin.
Let me not go in the way of ill men.

One of Webster's most notable innovations was a description of the sounds represented by different letters of the English language. He pridefully stated, "Never before in a spelling book printed in America had there been so full and accurate an attempt to describe, categorize and compare the phonemic values that different letters indicated." To achieve this, Webster used tables of words, with numerals over the vowels to indicate pronunciation:

1	9	8
be	fun	now
pea	gun	cow
sea	run	how
tea	son	bow

Lastly, Webster dropped the long lists of English towns given in Dilworth's book and replaced them with American place names --especially Connecticut names.

Webster's speller incorporated many of the changes he proposed in the simplification and unification of spelling. Webster and Benjamin Franklin, who also advocated spelling reforms, discussed their mutual concerns when they met in Philadelphia in 1786 and exchanged subsequent correspondence on the topic.

Although Webster did not adopt Franklin's extreme reforms, he persisted in using several modifications which continue to differentiate American spelling from English (such as "honor," "theater" and "ax" instead of "honour," "theatre," and "axe").

Webster believed that there were many advantages to modifications of the spelling. In the first place, he said the simplicity of the orthography facilitates the learning of the language. Foreigners, for example, would be able to acquire the pronunciation of English much more easily and, by implication, become Americanized more quickly. Secondly, a correct orthography would render the pronunciation of the language as uniform as the spelling in books. This would have an equalizing effect on society --all persons of every rank would speak with some degree of precision and uniformity. A third advantage was that the use of fewer letters would save printing space, and a fourth was that it would underline the distinctiveness of the American language as opposed to the English. "A national language," he stated, "is a band of national union" (qtd. in Warfel 141).

Webster spelled out precisely how his speller should be used. "A child should never," Webster declared in 1783, "be put to a second lesson before he has perfectly learnt the first." The students were to master combinations of two letters and learn their pronunciations perfectly before proceeding to combinations of three letters. "The opinion that a pupil should never pronounce a word which he does not understand is a great error, as it makes it necessary that a knowledge of spelling should proceed no faster than that of definition. A

more absurd opinion . . . was never broached." The pupils were to be taught in groups, and "every one in the group should be directed to spell every word in the lesson and then to pronounce every word. This repetition should be continued until every child can spell and pronounce correctly every word in the lesson" (qtd in Monaghan 33). Although Webster saw the endless review in such a procedure as a valuable learning tool for everyone, one can imagine the discomfort of those who had succeeded in mastering the lessons quickly.

The blue-backed speller was an immediate success. During Webster's lifetime, it appeared in hundreds of editions, most incorporating very minor changes. However, the book went through four major revisions. In 1787 Webster changed the cumbersome title to The American Spelling Book. He moved the reading lessons to the beginning of the book, along with the word tables, rather than placing them at the end. It was in this edition that he also added the famous eight fables, with woodcuts to illustrate them, that are so well remembered by subsequent readers.

The copyright law of 1790 (which Webster had helped to create) gave an author fourteen years of protection. Consequently, in 1804, Webster came out with a new edition. By this time he was the father of six children and their names --Emily, Julia, Harriet, Mary, William and Eliza-- figure prominently in the readings. With his copyright expiring in 1818, Webster came out with still another new edition. At this time, however, he was deeply engrossed with the writing of his dictionary so that this edition has virtually no alterations.

As early as 1826 (Webster's dictionary was published in 1828) Webster

announced that he intended to completely revise the spelling book so that it "will be adjusted to a uniformity with the dictionary in pronunciation." He entitled this edition The Elementary Spelling Book. Webster entirely revised his system of pronunciation, making a numerical system virtually obsolete and introducing the marking system still in use today.

The physical appearance of the Elementary Spelling Book was very different from that of the old American Spelling Book. It was wider and the type was larger. The reading matter was sacrificed to sentences whose sole purpose was to illustrate how words were used in context. Texts were reduced to strings of sentences with no connecting meaning. The basic organization of the book was changed. The familiar lessons were dropped along with the pictures and fables. The number of tables of words increased from 54 to 129 to include words of seven and eight syllables. In addition, the proportion of religious material dropped to about 10%, as opposed to the nearly 50% in the American Spelling Book. The new book competed in sales with the original version, which was still being printed throughout the country.

Throughout his life Webster wrote many other educational books for children. The speller was the first part of a three-part-series. Part II, appearing in 1784, was a grammar, and Part III, published in 1785, was a reader. The reader was the most revealing of Webster's nationalism. One-third of the pieces were patriotic. Others stressed morals and manners. There was a section entitled "Rules for Behavior."

In 1802 he began the publication of a four-part series entitled The Elements

of Useful Knowledge. Volumes one and two contained a historical and geographical account of the United States, beginning with the solar system, continuing through such diverse chapters as Commerce, Arts, Customs, Diseases and Remarkable Events, Controversies and their Effect, before concluding with the present condition of the several states. Volume three was a historical and geographical account of the empires and states in Europe, Asia, and Africa. Volume four was a history of animals. He revised the New England Primer and published The Little Readers Assistant, which some textbook historians view as the first set of consecutive readers in the history of American reading instruction. Other books dealt with geography, history, and manners. None of these books attained anything approaching the success of the blue-backed speller.

The speller's popular success was phenomenal. Nearly 15 million copies were sold during Webster's lifetime. To date, estimates indicate that almost 100 million copies have been sold. The book is still in print, currently being published by the Noah Webster House.

An evaluation of Webster's contributions:

Webster's spelling reforms were lasting. He chose the ending "or" over "our" in words like "honor" and "color"; he changed the "re" to "er" in words like "theater" and "center," he got rid of a great many doubled consonants in words like "traveler" and "wagon"; he established "s" rather than "c" in words like "defense," and he made current many spelling that are today characteristically American, such as "jail", "plow," "mold," and "ax."

Other contributions are more difficult to assess. Although critics today disparage his arbitrary methods of reading instruction as a rote exercise rather than a means of understanding, historian Joseph Ellis gives Webster credit for recognition of the fact that children acquire knowledge most readily when complex problems are broken into component parts and that each part must be mastered before proceeding further. Ellis likens Webster's insights to those of Piaget, who also realized that it was useless to begin to teach children something before they were developmentally capable of mastering it (174).

Webster's methodology was considered out-of-date as early as the mid-19th century, although his texts continued to be used widely for another 50 years. By the 20th century, the whole word method of learning to read was firmly in place. An article in the May 5, 1986 issue of Time magazine, however, cites a study by the University of Texas which suggests that one in five Americans cannot read well enough to perform the simplest tasks. Officials in the Department of Education attribute the blame, in part, to the "look and say" method, which requires the recognition of whole words rather than the more flexible and effective technique of phonics, or sounding out words phoneme by phoneme, as Webster advocated.

One of Webster's earliest biographers, William Shoemaker, points out that Webster was not a great original thinker (302). He supplied the material to be taught by adapting what was at hand rather than stressing how to teach it. The material that Webster believed needed to be taught grew out of his perception of the purposes of education. Webster believed that Americans really needed only a

few disciplines. They were the ability to read, write and speak correctly, elementary mathematics, the history and geography of America, politics, morals and general religious principles. Teaching the child to read correctly was central, because reading was the key to knowledge. In the course of learning to read the child would be taught the essential religious, moral, and political principles. Mathematics was needed for reasons of personal economy. The history and geography of America, and politics were needed largely for intelligent citizenship. Through a study of history, students would imbibe a loyalty to the republic and its principles. A study of geography would help to eliminate local prejudices and install a love for the union as a whole. Morals and religion were needed for good relationships with others, as well as for well-being and success in this world and the next.

Twentieth century educators see the purposes of education differently, and consequently are highly critical of the philosophy which motivated Webster as an educator. For Webster, education was largely a matter of memorization and imitation, with nothing done to cultivate the powers of reason or imagination. Moral instruction was largely focused on duties toward others and did not involve learning how to cope with moral ambiguities or conflicts. Rush points out that students were taught to feel and possess truths, but not to hold them at a distance and critically assess them (450). One can imagine what Webster would have to say about the current stress on the development of critical thinking skills.

Moss astutely observes that, for Webster, education was always an instrument to accomplish some social or political purpose —learning was never

an endeavor with intrinsic worth. Webster's view of education was to make people intelligent and useful in the spheres they were to occupy rather than assisting them in moving up the social and economic ladder. One of Webster's most important achievements, he believes, was to help establish basic school texts as the defenders of the old values (43).

Biographer Harry Warfel gives Webster credit for the establishment of a national language. He eulogizes: "To Webster's Spelling Book belongs much of the credit that a basic pattern of written and spoken language prevails everywhere. From Maine to California and from Oregon to Florida, each American uses the same words in the same way and pronounces them, slight dialect variations excepted, similarly. National speech unity in a great nation never before had been achieved, and exists nowhere else" (78). Monaghan, among others, questions the ability of one textbook to have such a profound influence.

If Webster was not an innovative educator; if his texts, apart from introducing some spelling words to our culture, did not produce major changes; if his motivations are suspect; and if we cannot credit him with the creation of a uniform pattern of speech -- what then are his contributions?

Monaghan says, "In his introduction to his first edition, he linked his little book to the great experiment in American independence. Surely this was more of a factor than perhaps even his readers were aware of at the time. He spoke of a national language at a critical moment in American history when the public was predisposed to hear him" (201). Cremin points out that Webster was one of the

most articulate proponents of the fact that the health and safety of the Republic was entirely dependent upon the ability of its citizens, and that education was the crucial force in creating the sense of community that a democracy required (269) Commanger believes that "Webster was perhaps the first to realize the limitless potentialities of education for the encouragement of nationalism, and of the schoolbook as the vehicle" (67). Meyer points out the importance of Webster's recognition that America had to break away not only politically but culturally from the old world. Webster assigned himself the task of beginning the process of achieving cultural independence (6). Ellis concludes:

Webster is justifiably famous as the most articulate and consistent advocate of what we would call 'cultural nationalism.' His celebration of things American grew out of a truly modern understanding of what American culture was. It was an expression of indigenous American customs that should, indeed must, be judged on their own terms. He never abandoned his contention that the folkways, patterns of speech, and day-to-day habits of ordinary Americans were the undeniable sources and final arbiters of republican culture (210).

Noah Webster's speller marked the beginning of his role as "Schoolmaster To America," writer of its textbooks, and forerunner of the great American educational reformers of the 19th century. In providing his fellow citizens with American textbooks, Webster imbued them with a sense of cultural pride which was very much in tune with the national spirit of the first decades of independence.

CHAPTER IV

DESIGN OF THE STUDY

Research questions

My initial hypothesis was that a follow-up experience to a museum visit utilizing aspects of peer teaching will lead to better mastery of certain historical concepts, selected thinking skills, and a more positive attitude about visits to historic houses than a one-time visit will do. Based on that hypothesis, the research questions to be investigated were the following:

- a. Does participation as a peer teacher in a guided follow-up program to a museum visit facilitate the learning of specific historical concepts?
- b. Does participation in follow-up activities after a museum visit enhance the peer teacher's ability to utilize the thinking skill of making comparisons?
- c. Does participation in a peer teaching experience as part of a guided follow-up to a museum visit affect the peer teacher's attitude toward historic houses?

Test Population

The 20 sixth grade students who participated in the program came from a school in West Hartford, Connecticut, the town in which the Noah Webster House is located. As a quasi-pilot group, I selected a class of 31 sixth grade students

from Middletown who had participated in the same school lesson, taught by the same museum teacher, the day before the West Hartford students came on their field trip to the Noah Webster House.

The two towns have some basic differences, which must be taken into consideration when examining the results of this program. Middletown's population is 40,000 and West Hartford's is 60,000. West Hartford is a wealthier community than Middletown. The average family income for Middletown families was \$25,500 in 1985, and in West Hartford it was \$36,500. This difference in median income is reflected in the age distribution of residents in the towns. Although people ages 1 to 19 make up 23% of the population of both towns, the proportion of residents ages 20 -34 in Middletown is 34%, and in West Hartford it is only 19%. Less than 29% of Middletown residents are ages 35-64, and whereas 35% of West Hartford's residents fall into this category. Only 10% of Middletown residents are over 65; however 20% of West Hartford's residents have reached this age. The number of children in different age groups was not available. The statistics of parental ages would seem to indicate that there are proportionately fewer young children in West Hartford.

West Hartford residents are more educated than their Middletown counterparts. Seventeen percent of Middletown residents hold advanced degrees, whereas over 25% of West Hartford's residents do.

Both towns are predominantly white. Ten percent of Middletown's population is black and 2.6% is Hispanic (1985 figures). The 1980 census of West Hartford showed that 1% of the population was black and 1% was Hispanic.

West Hartford, however, takes part in "Project Concern," so that each school has approximately 30 black students from the city of Hartford.

Despite the fact that West Hartford has a wealthier, older, more educated population than Middletown, the two schools are more comparable than might appear at first glance. The West Hartford teacher who participated in the study characterized her school as not typical of the other West Hartford schools, because of the heterogeneous nature of its students. It is located on the edge of the industrial, less wealthy section of town and thus draws its students from housing projects as well as suburban homes. She described the class which participated in the program as very mixed in terms of ethnic background, ability, achievement, and experience. The class had several students who were older and had repeated grades. As a result, there were many who were more mature socially than their peers. She was particularly fond of the students in the class, although she described them as, in some ways, one of the most difficult classes with whom she had ever worked. In part this was because several of the students had personal problems. As a whole, she characterized the class as being academically average and very independent.

The Middletown teacher spoke of her students with the same fondness. The Middletown school, although located in a less wealthy town than West Hartford, is near the Connecticut Wesleyan University campus and draws some students from professors' families. The teacher was proud of the diversity of backgrounds and abilities in the class, which she believed added to the particular challenges that the class presented to her. She, too, characterized her students as very mixed

in terms of ethnic background, ability and experience. She described them as academically average. Neither school would release figures as to ethnic mix nor average SAT scores.

Procedure

The initial phase of the program took place at the Noah Webster House, which was the birthplace and childhood home of Noah Webster. The house is located near the center of West Hartford. The 90 acres once belonging to the Webster family have been reduced to one suburban plot, 1/4 acre in size. The farm has been reduced to a small garden outside the front door. Inside the house, however, we have replicated, with as much accuracy as present research permits, a seven room middle-class family dwelling as it would have been in the last quarter of the 18th century when Noah Webster was a boy. We present our colonial school lessons in a large one-room gallery which is attached to the historic house. This multi-purpose room serves as the showcase for changing exhibitions, as well as for the classroom for school programs. It is a large, high-ceilinged room, very contemporary in feeling. The students are seated in rows of blue plastic chairs. The only element giving an air of 18th-century authenticity is the costumed teacher. In an attempt to make the setting more appropriate for the program, we begin the school lesson with an introductory slide tape based on the information that is available on the schooling in Noah Webster's day. A copy of the script is included in appendix A.

Implementation of the program began in the fall of 1986. The first step was

to do a pilot study to develop the questionnaire which would attempt to measure attitude changes, changes in selected thinking skills and retention of the factual material which had been presented. I tried out a sample questionnaire with eleven sixth graders from Cedarville, Massachusetts, and eleven fifth grade students from Avon, Connecticut who completed it after they had had a colonial school lesson. Based on the results of their responses, I made several changes in the wording and the order of the questions. The resulting document contained ten questions (see appendix B). The first three questions assessed the students' attitudes toward museums and historic houses. Questions four and five asked what the students liked best and least about the colonial school lesson. The next two questions were designed to assess the thinking skill of finding similarities and differences. The final three questions were concerned with the students' retention of the content of the school lesson.

In January 1987, the twenty sixth grade students from West Hartford visited the museum for a colonial school lesson. The students were seated in rows, with boys on one side and girls on the other. The students were shown the introductory slide tape program. The tape asked the students to imagine themselves back in the time period of 200 years ago. Words and images painted a picture of the small, dark, cold classroom with its uncomfortable benches and paucity of material. Noah Webster and his blue-backed speller were introduced and the students were told they will be using materials he would have studied as a child, as well as some of the books he wrote when he grew up.

Following the showing of the introductory tape the museum teacher, in the

role of Master Webster, led a school lesson. He began with a prayer and an admonishment to the students to mind their manners. The students practiced bowing or curtsying and saying "sir" when addressed. The teacher then explained that, as Mr. Webster, he had written a new textbook for reading which the children would be using that day and talked a bit about why he wrote it.

The schoolwork began. Each row of students was given a different topic to study. Some started memorizing the alphabet, forward and backwards. Others were given slates and asked to do multiplication tables. "Older" students were assigned the project of learning the capitols of all the states, while others were told to carefully read several pages about animals. One group read a fable with a moral.

During the time that the groups were working on their assignments, students took turns going up to the front to practice writing their names with a quill pen. The master instructed the students to do their work out loud and periodically said that he couldn't hear them. After ten minutes of study, the first group was called forward. They "toed the line," facing the class. They were asked individually to recite the alphabet forwards and backwards. Although the rest of the pupils were admonished to keep up with their studies, the students quieted down as they watched their classmates perform. Each group came forward to recite. The teacher asked individual students to explain texts, as well as to recite the information they had studied from memory. As one can imagine, there was much embarrassed tittering going on as the students awaited their turns. The teacher isolated some of the students to be punished for their disruptive

behavior. One student was told to kneel with his nose in a knothole, while another was required to hold a small wooden log extended out in front of him. The students, most of whom had failed to perform adequately for the teacher, were sent back to their seats for more work. The noise level became intense once again, and the second recitals showed that the children had applied themselves more diligently. As a concluding activity the class held a spelling bee. The boys competed against the girls, and the words were chosen from the 18th century textbooks which the children had used.

When the lesson was over, the museum teacher stepped out of his 18th century role and discussed the experience with the children. After enumerating some of the similarities and differences between 18th century schooling and experience and their classrooms today, the students talked about what they enjoyed the most and least about the lessons.

I joined the discussion and asked the group for ideas on ways that they could share the experience with other students in their school. After some discussion, they settled on four possible projects. The students chose to present a dramatized school lesson in front of another class, to role play as teachers with pupils from another class acting as students, to teach about 18th century toys and games, and to prepare an exhibition of old schoolbooks. The following morning the students completed the questionnaire for the first time.

That week the museum teacher and I met with the classroom teacher to set up the schedule for classroom visits and to refine plans for the proposed activities. The classroom teacher had the students sign up for the project on which they

wished to work. Three weekly sessions followed, in which the museum teacher and I went to the classroom and worked with the students in the different groups for half-hour periods. The students presented their projects to each other during the fourth and final session. The following day they completed the questionnaire for the second time. Two months after their initial museum visit, which was a month after the completion of the in-school program, they filled out the questionnaire for the third time.

As a quasi-control group, 31 sixth graders from Middletown, Connecticut were given the same colonial school lesson with the same museum teacher one day before the visit of the West Hartford children. They completed the questionnaire the day after their visit and again two months later.

Activities

I worked with the students who had indicated an interest in doing an exhibition on books. For our initial meeting I brought in a basket of early textbooks for the students to look through. They appeared to find them fascinating and spent most of the first session reading selections out loud to each other. They were particularly amused by a small volume on good manners. It quickly became apparent to them that the texts were not written for particular grade levels and that some of the material would be extremely difficult for them. They did not seem to be deterred by the small type, lack of pictures, and poor condition of the books. At the conclusion of the first session, each student selected a subject on which to concentrate. One took reading, another math, another

history, another geography, and another spelling. During the intervening week they talked with their parents and grandparents about books they had used as children and gathered samples of contemporary texts from the library.

We spent our second session together sharing the information they had gathered. During the third session the students planned their presentations. We decided that this would be a "mobile" exhibition, with the books displayed on a large cart. It would be wheeled into the classroom and left there after the presentation. The cart would contain an old text and a new one side by side so that the viewers could make comparisons for themselves. We collectively listed the most obvious similarities and differences between 18th and 20th century texts and the students made a large label with this information. The students practiced their presentations in front of each other. For the presentation each student compared an old book to a modern one. One of the students, for example, read a list of the states which existed in 1813, and compared it to listings from 1850 and 1987.

The other group with whom I worked were the students interested in 18th century amusements. For our first session I brought in examples of some 18th century toys and board games. The students tried several and selected those which they thought they could most easily create and teach. We talked about the things that they liked to do with their leisure time, and what children younger than themselves seemed to enjoy playing with. I asked them to find out the kinds of games and toys their parents played with as children, and we discussed that during the next session while they practiced making some simple toys. The

students had the most difficulty with rounder's balls, a soft stuffed ball which requires a lot of sewing, but quickly put together button buzzers (made of buttons and string) which, when twirled around, make a humming sound. They drew Morrice boards (a game similar to tic-tac-toe) and practiced playing the game. We talked about how to teach a simple skill. As the students experimented telling each other how to do something, they discovered it was not so simple after all.

They carefully prepared their presentations for the final session. One student showed the rounder's ball and explained how he made it, and another passed out buttons and string to a few students and had them make button buzzers under his direction. Two students explained the game of Morrice after distributing some game boards which they had made, and another presented the conclusions the group had come to about 18th century amusements. She drew a contrast between the simple 18th century materials and some of the more complicated toys of today.

The museum teacher worked with the aspiring dramatists. He found that creating an impromptu playlet was a quick and easy task for the youngsters, who all wanted to be either the teacher or the bad boy. They selected their roles and decided on a scenario during their first session. They spent the next two sessions rehearsing. The museum teacher found that the students were very enthusiastic about this project, and it was difficult not to let their plans get too ambitious. The other students in the class who watched this group's presentation appeared to enjoy it very much.

Those students who chose to lead a simulated school lesson gathered the

material they would use and practiced with each other in their first three sessions. The museum teacher found that they were not particularly concerned with the mechanics of how to work with a group of students who did not know what was expected of them. As a result, the presentation of this group was the least polished. Although the enthusiasm was very high, they found that their program ran into difficulties with such details as getting their "students" properly seated, handing out materials, etc.

Each group made a 15 minute presentation during our last session together and critiqued each other's projects. As the next step, the students designed a brochure outlining the programs they were prepared to present to other classes (see appendix C), and distributed copies to all the teachers. The fifth grade teachers at the West Hartford school decided to have the students come to their classes to make a presentation which included all the programs the students had prepared. I was not notified about the presentation, so did not observe this portion of the activity. It took place several weeks after we had finished the museum's involvement with the program.

CHAPTER V

RESULTS OF THE STUDY

Quantitative Evaluation

Eight of the ten questions on the questionnaires filled out by the West Hartford and Middletown students were scored by a third grade teacher and an English teacher. (The exceptions were questions 4 and 5, which asked what the students liked best and least about the colonial school lesson.) One of the teachers works in another of the elementary schools in West Hartford, and the other teaches in Manchester. Neither of the two teachers who did the quantitative scoring knew or met with any of the participants in the program other than myself. They knew nothing more about the project than the information which they needed to score the tests. A doctoral candidate in psychology at the University of Hartford was responsible for computerizing the results and providing a statistical analysis. At the beginning of the scoring process, she met with the two scorers and myself to establish a numerical scoring scale for each question. The graphs which follow show the results. Questionnaire 1 was given the day after the museum visit to both West Hartford and Middletown students; questionnaire 2 was given the day after the last in-school program to West Hartford students only; and questionnaire 3 was given 2 months after the museum visit to both West Hartford and Middletown students.

The first question asked which type of museum students preferred.

1. Put a number 1 by your first choice to visit if someone said "Let's go to a museum." Put number 2 by your second choice and number 3 by your third choice.

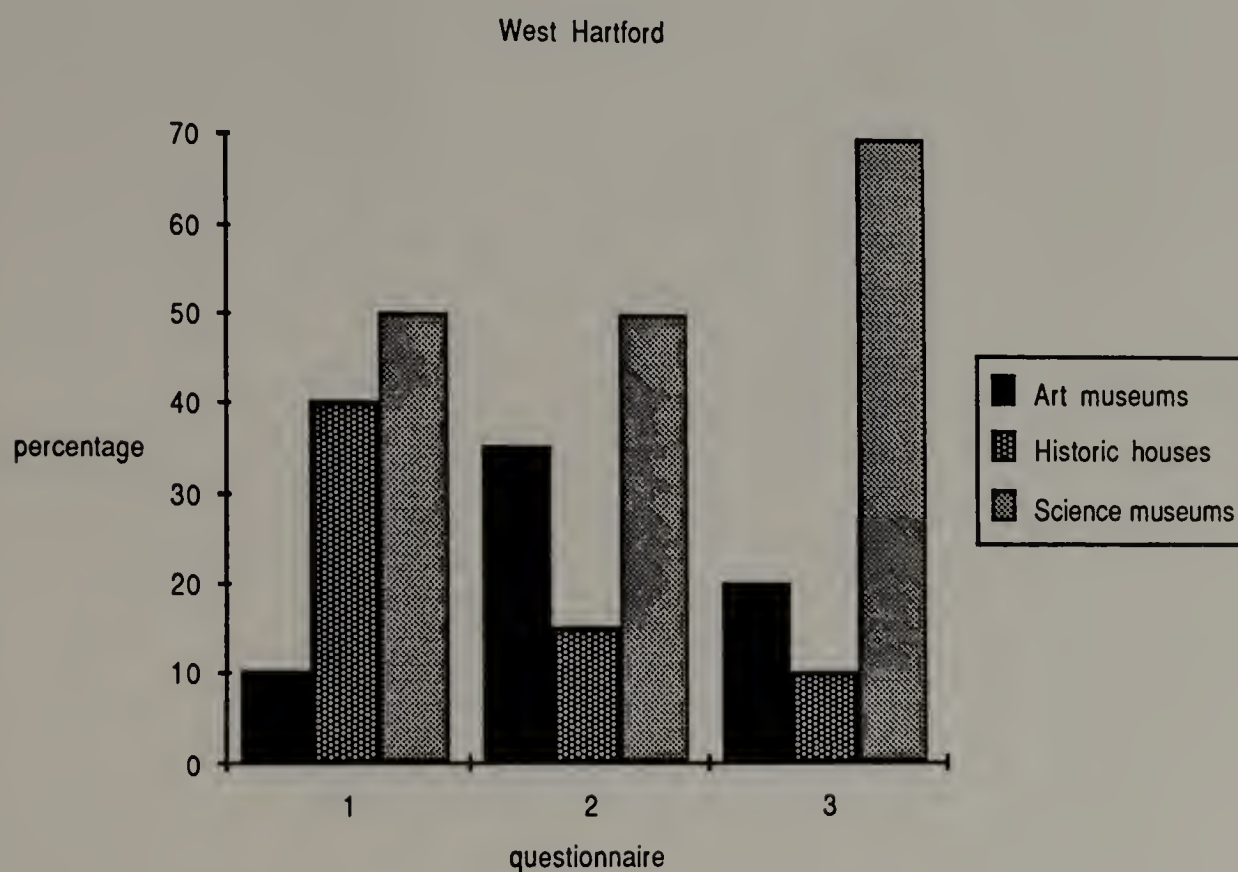
_____ an art museum

_____ a history museum or a historic house

_____ a science museum

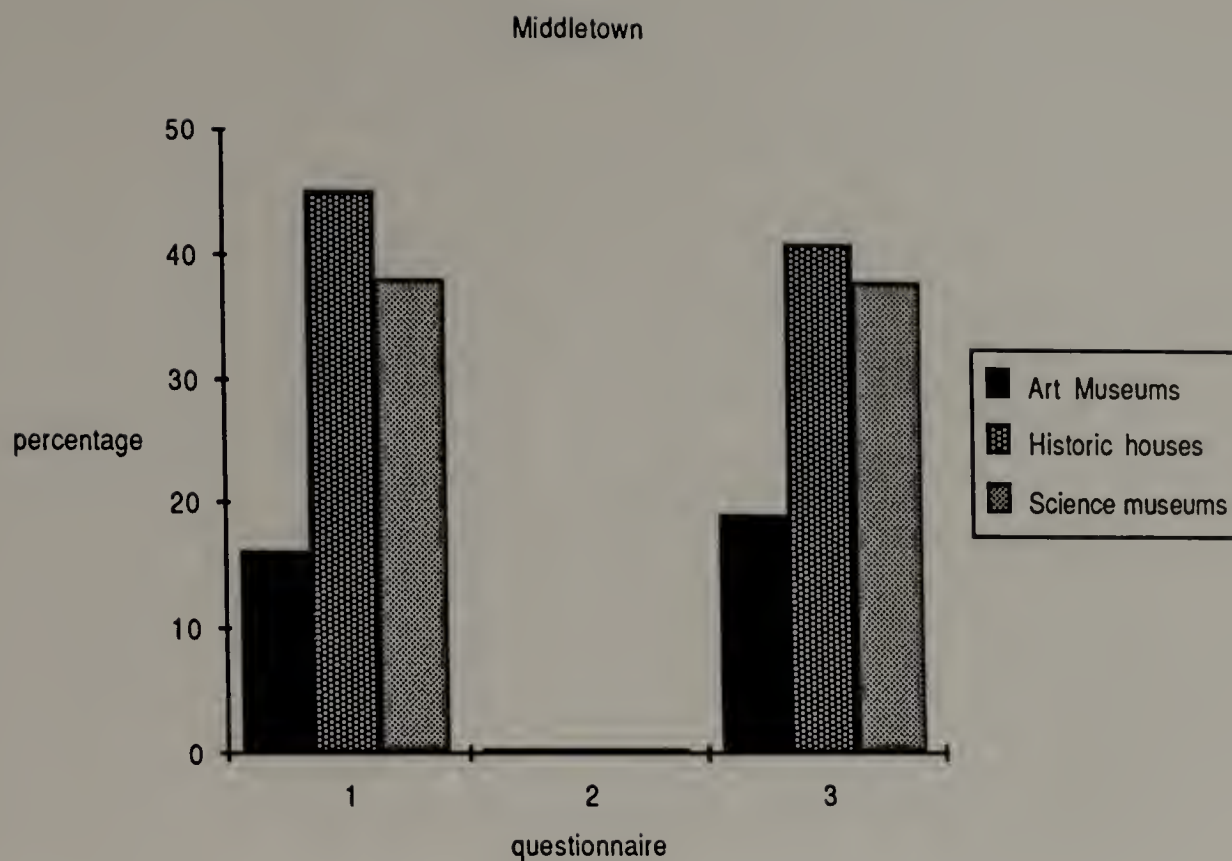
The responses were graded on the basis of the first choice only.

The differences in the responses of the two groups were not statistically significant. However, the distribution of scores (Tables 1 and 2) reveals an interesting pattern.



n=20

Table 1: West Hartford students' choices of preferred museums



n=31

Table 2: Middletown students' choices of preferred museums

Immediately after the visit 40% of the West Hartford students chose historic houses as their first choice of a museum to visit, which seems to indicate a positive initial reaction to their visit. At the end of the total program, however, only 10% of the students named historic houses as their first choice. In contrast, 45% of the Middletown students chose historic houses as their first choice, both right after the visit and 2 months later.

As an overall average, based on the 3 opportunities to complete the questionnaire, 21% of West Hartford's responses selected historic houses as their first choice to visit, whereas 43% of the Middletown students chose historic houses. 56% of the West Hartford students chose science museums as their first choice, as opposed to 38% of the Middletown students. These results may reflect two factors: The first is that Middletown students do not have much funding for field trips and museum visits. There are more historic houses available to them than science museums, so it is more likely that a historic house, not necessarily ours, would be the choice for a museum field trip if they were able to take one.

In contrast, West Hartford students take many field trips. West Hartford is the site of the Science Museum of Connecticut. The town's Education Department contributes funds directly to the Science Museum so that each fifth grade class is entitled to a free visit. In the fall of 1985, just a little over a year prior to this program, the Science Museum held an exhibition with moving dinosaurs which generated state-wide publicity and broke all attendance records. Local students probably visited the museum to see this exhibition with their parents or on their own. Middletown students, on the other hand, might have heard about the exhibition at the science museum but would not have had an easy way to get there.

The second question asked the students to fill in the blank with a word about the Noah Webster House.

2. The Noah Webster House is _____ (fill in the blank)

Working from a list of all the responses which the students gave to this question, the scorers divided them as follows:

1. Descriptive

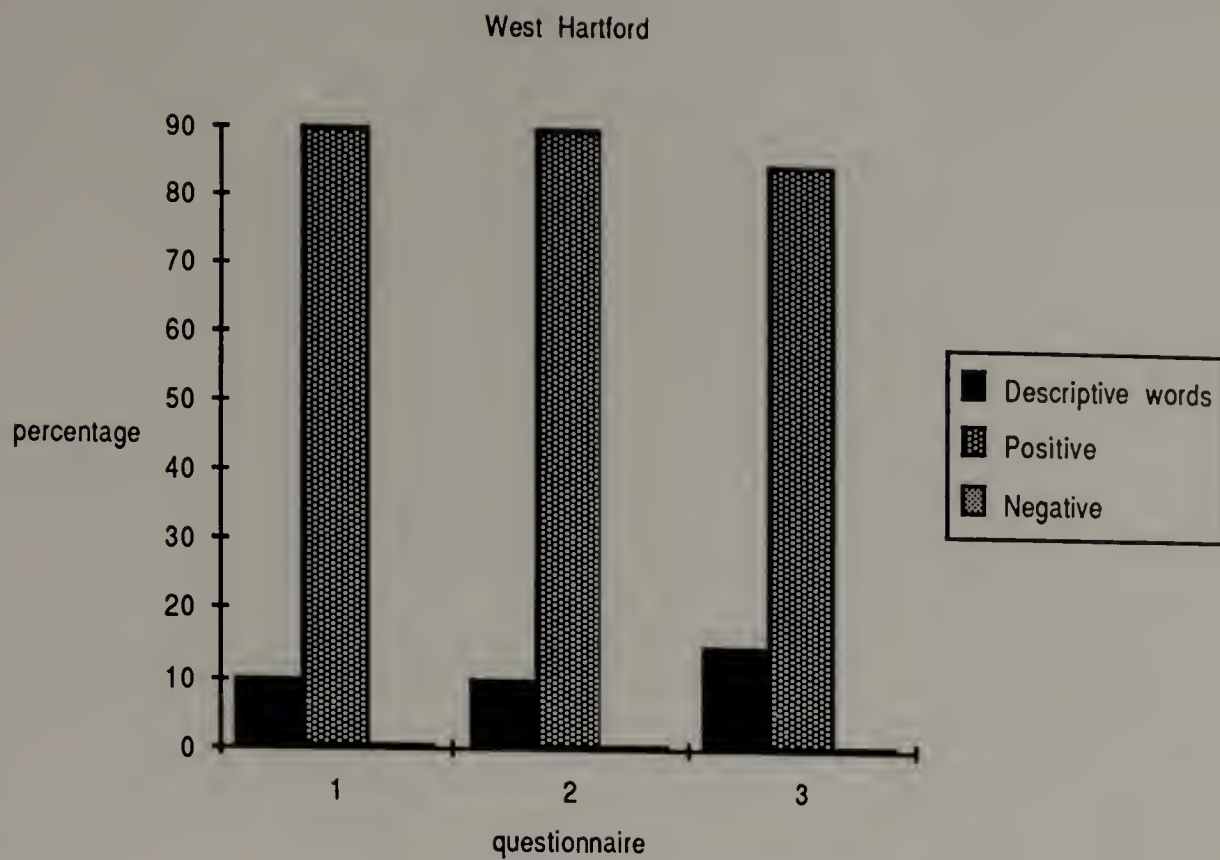
history
history museums
historic house
science museum
historic
very old
museum
informational

2. Positive

super
fun
very good
great
neat
interesting
wonderful
exciting
very fun
o.k.
nice
a good place

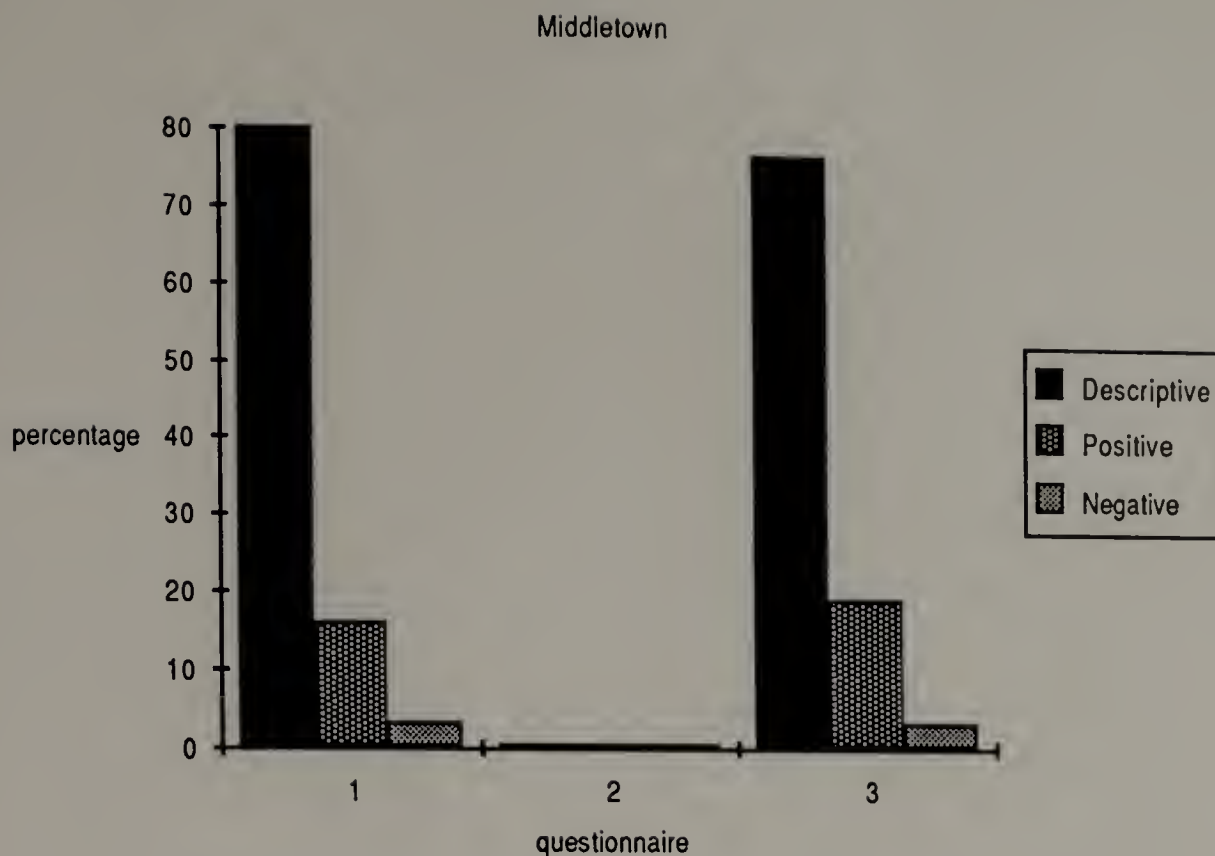
3. Negative

boring



n= 20

Table 3: West Hartford students' choice of words to describe the Noah Webster House.



n= 31

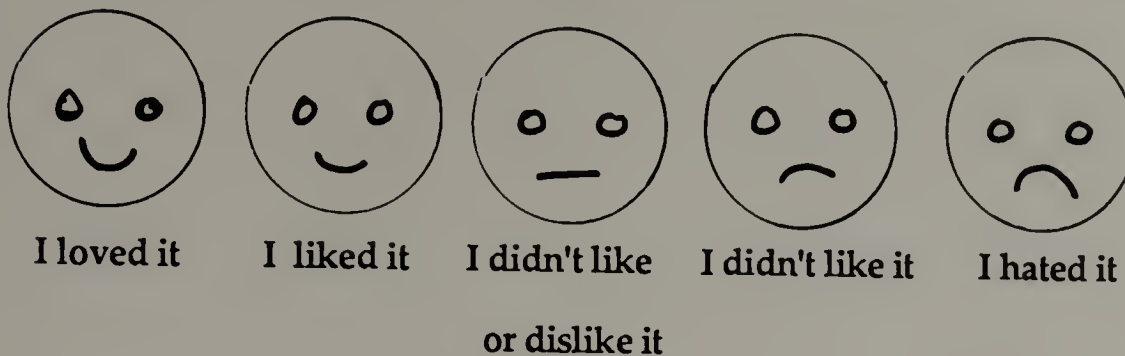
Table 4: Middletown students' choice of words to describe the Noah Webster House.

As can be seen from Table 2, nearly 90% of West Hartford students chose positive word responses to answer this question, whereas 80% of the Middletown students filled in the blank with a descriptive word. These results are significant at the .001 level. It is difficult to interpret these results. The consistency of the type of response may be a result of the testing effect in which students remembered the answer they had given previously. Since the tests were administered in the classroom under uncontrolled situations, it is possible that one of the teachers might have suggested a type of response if a student did not

understand what the meaning of the question was. Unfortunately, this problem did not arise when the pre-test was done.

Question 3 attempted to measure the students' reaction to their visit:

3. Which face shows how you feel about the lesson you had today?



Students circled the face most representative of their feeling about the school lesson for question 3. The scoring was as follows:

1. I loved it
2. I liked it
3. I didn't like or dislike it
4. I didn't like it
5. I hated it

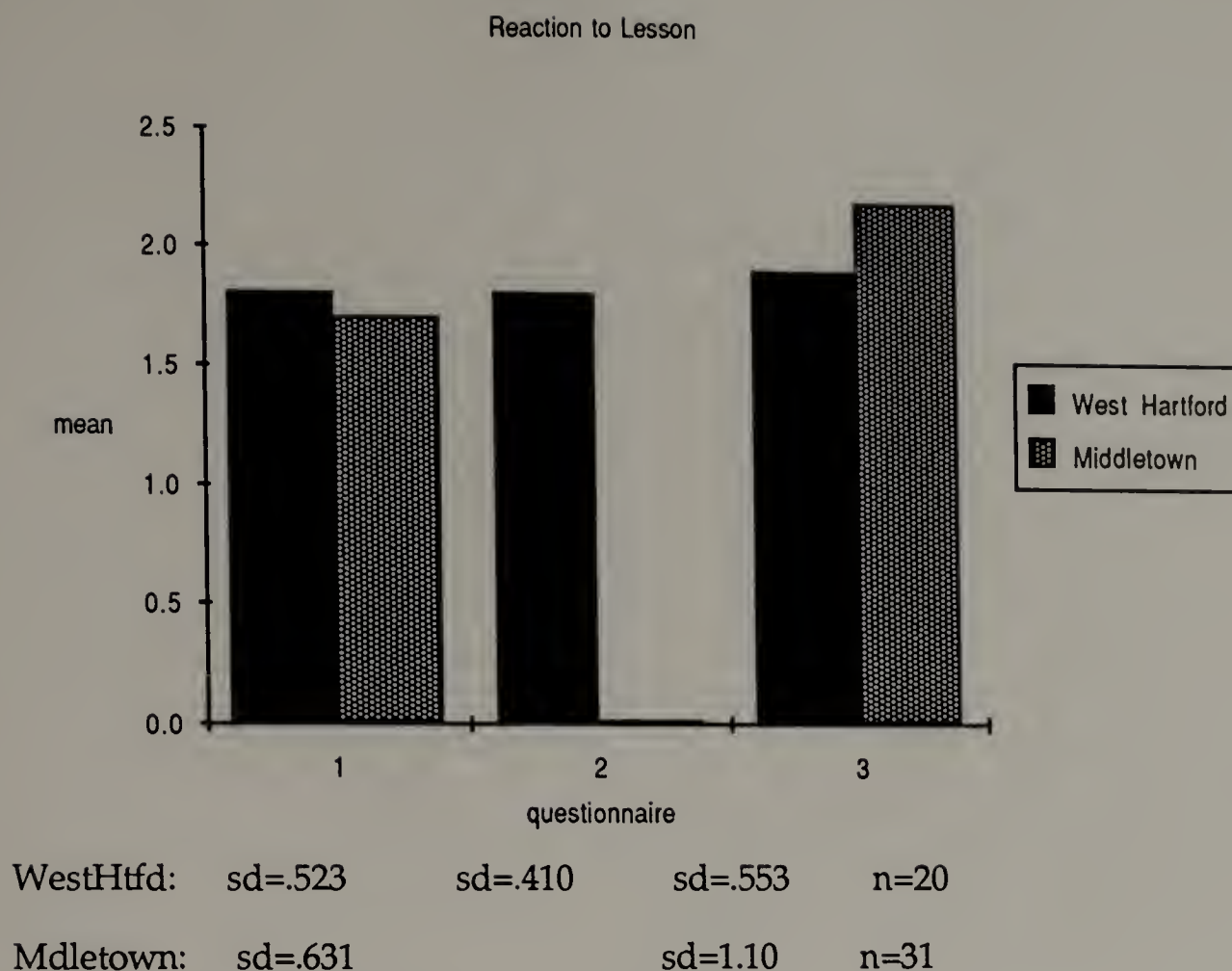


Table 5: Reaction to the school lesson

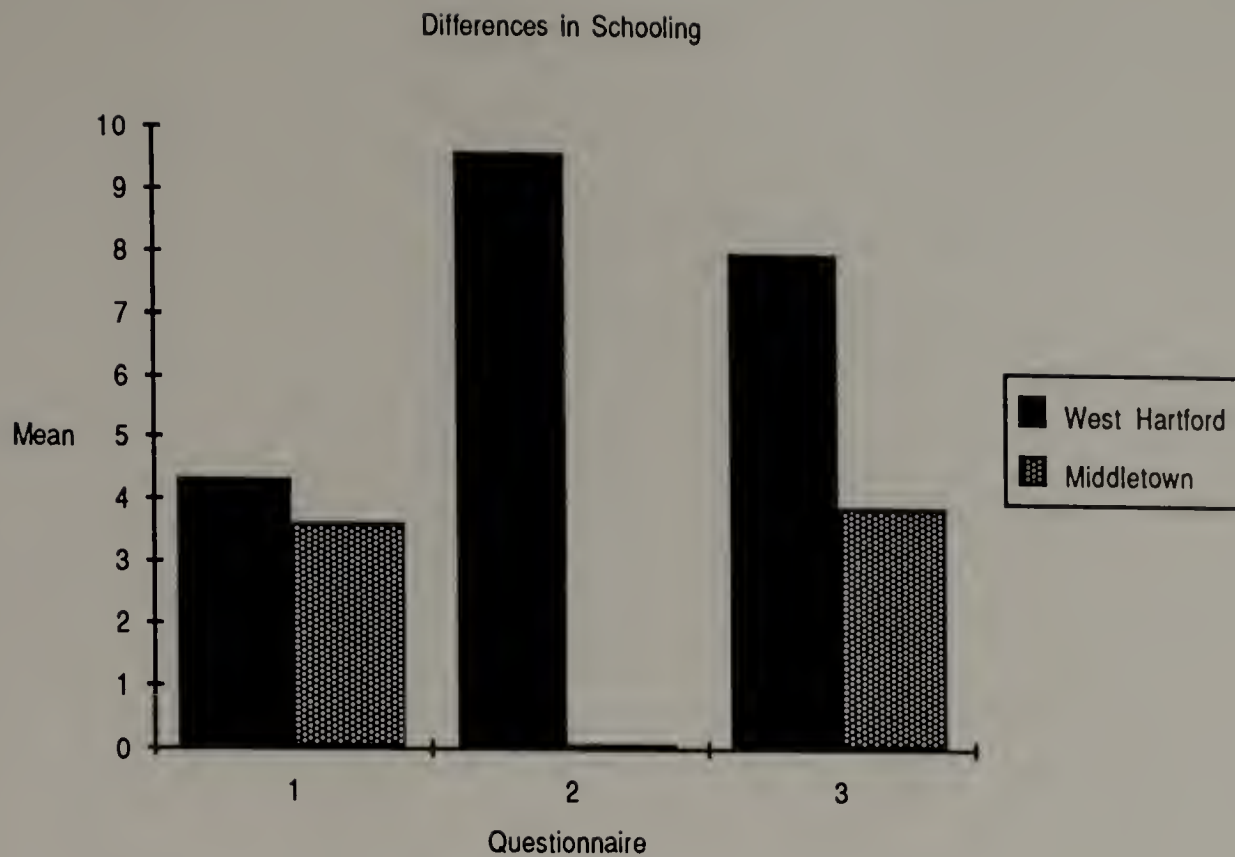
Students from West Hartford chose the face corresponding to "I liked it." consistently throughout the program. (The mean response was 1.8 with 1 representing "I loved it" and 2 representing "I liked it.") The mean for Middletown students, however, went from 1.7 for the questionnaire right after the lesson to 2.2 after two months, reflecting a slight but statistically significant (.01) change toward the negative in their opinion of the experience.

Questions 4 and 5 asked the students to list what they liked best and least about the school lesson. The scorers doing the quantitative analysis did not grade the responses to this question. A discussion of the responses is included under the section on qualitative evaluation.

The next two questions were designed to measure changes in students' ability to identify similarities and differences. The results indicate a statistically significant improvement in West Hartford students' ability to utilize this aspect of thinking skills as a result of the project.

6. List all the differences that you can think of between school in Noah Webster's time and your school today.

This question was scored by awarding 1 point for each difference listed. (Differences are listed in appendix D).



WestHtfd:	sd=2.4	sd=5.3	sd=4.5	n=20
Mdletwn:	sd=1.7		sd=3.1	n=31

Table 6: Identification of differences in schooling

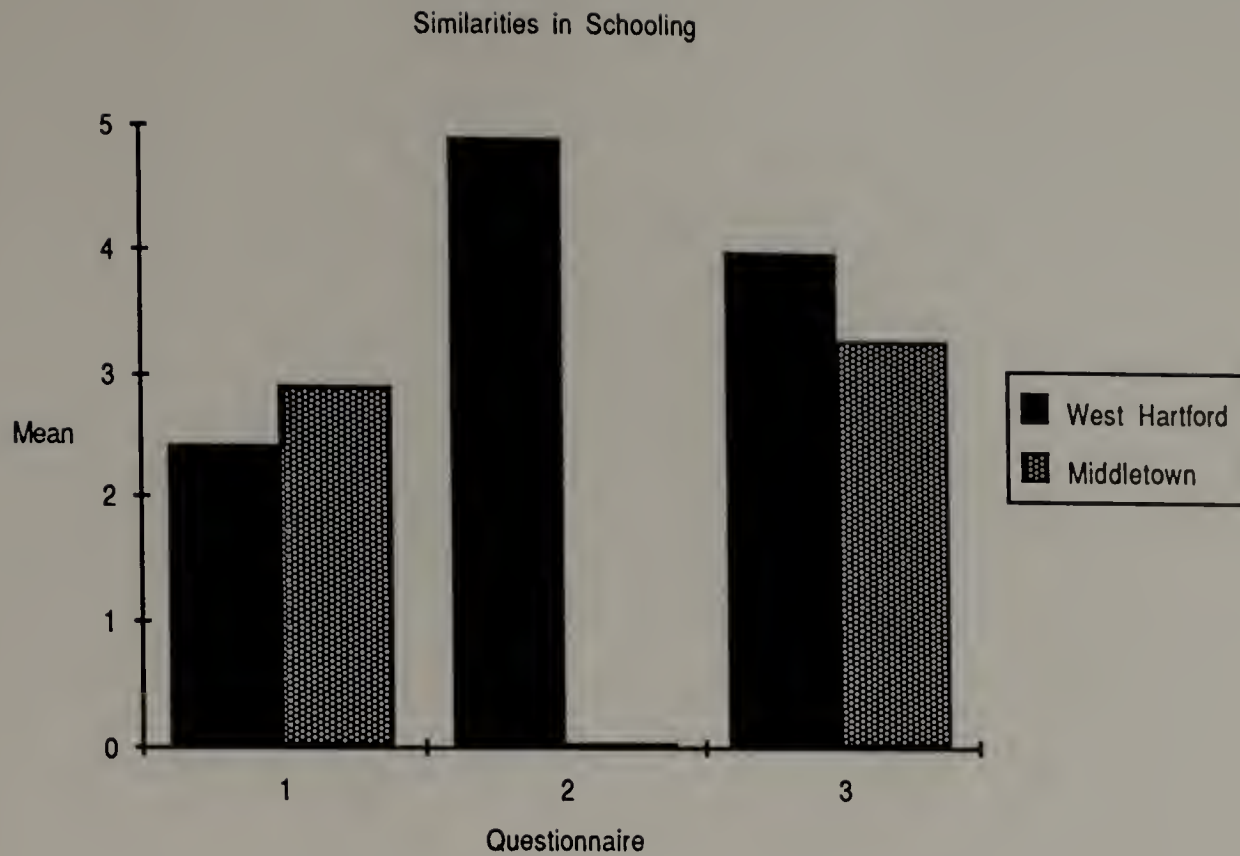
Immediately after the school lesson, West Hartford students listed an average of 4.3 differences. One month later, after the classroom activities, this response jumped to 9.6 differences, a difference statistically significant at the .001 level. On the third questionnaire, given two months after the visit, the average dropped to 8.0, which shows a .01 significance level when compared to the results

of the first questionnaire.

Middletown students listed 3.6 differences right after the lesson, which increased slightly to 3.9 after the two-month period, a change not statistically significant. When the end results of the two groups' questionnaires after a 2 month period are compared, the difference between 8.0 differences listed by West Hartford students and 3.9 differences noted by the Middletown group is significant at the .001 level, indicating that the West Hartford students' skills at comparison through noting differences was significantly improved as a result of the classroom intervention.

7. List all the similarities that you can think of between school in Noah Webster's time and your school today.

This question was scored by awarding 1 point for each similarity listed. The scorers felt familiar enough with the material not to need a list of potential answers.



WestHtfd: sd=1.5 sd=1.5 sd=1.9 n= 20

Mdletwn: sd=1.7 sd=1.8 n= 31

Table 7: Identification of similarities in schooling

Results similar to the identification of differences can be noted by examining the number of similarities between the lesson in Noah Webster's time and the students present-day experiences. West Hartford students noted 2.4 similarities at the end of the visit to the house, which jumped to 4.9 after the classroom intervention, results statistically significant at the .001 level. The number of responses dropped to 4.0 for the final test, which remains significant at the .01

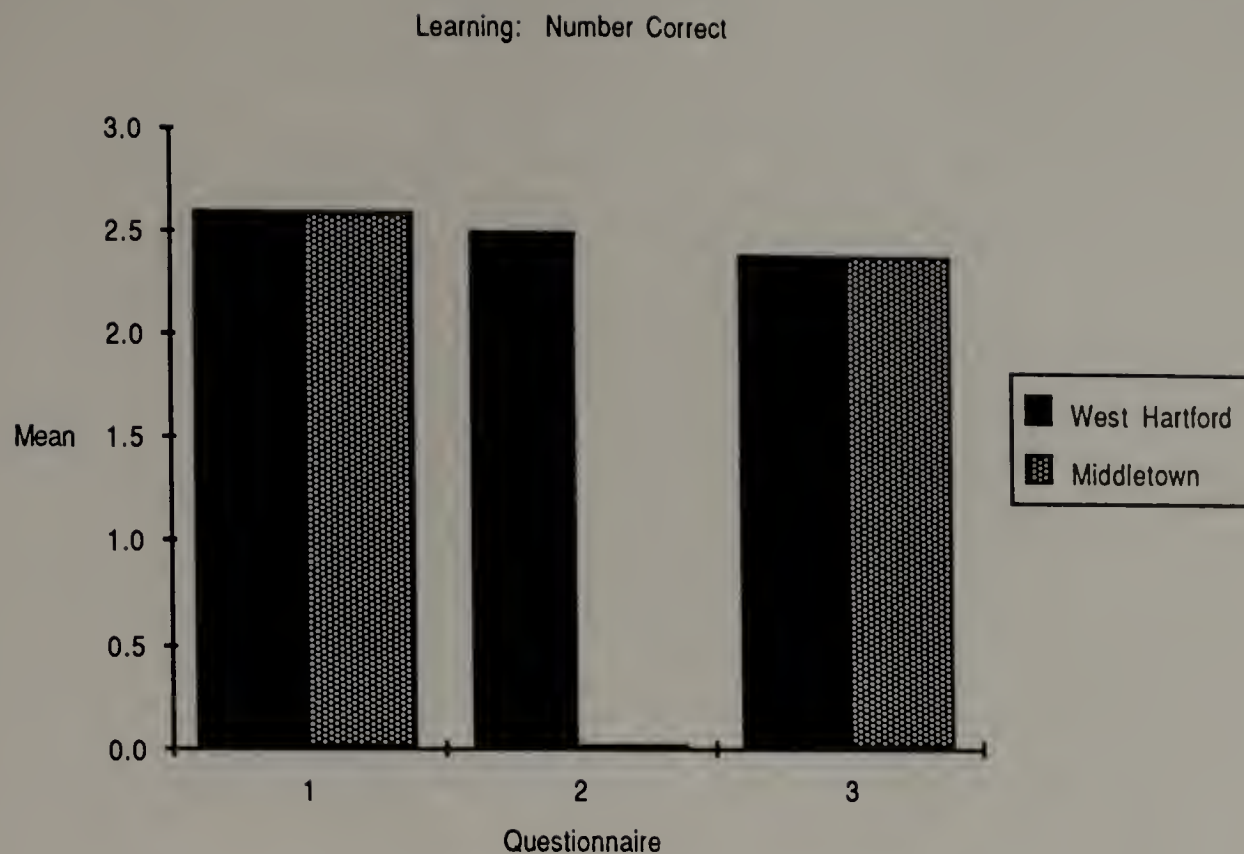
level when compared to the results right after the museum visit. Middletown students listed an average of 2.9 differences after the first visit and 3.3 on the questionnaire given two month after the visit, a change which was not statistically significant. The final results of Middletown students, when compared to the results of the West Hartford students after the classroom intervention, show that West Hartford students listed significantly more similarities than the Middletown students at the .01 level. Once again, the conclusion can be drawn that the classroom experiences enabled the West Hartford students to improve their ability to make comparisons by identifying similarities and differences.

Questions 8 - 10 were designed to measure the amount of factual knowledge gained and retained. The results showed significant differences in the ability of West Hartford students to retain knowledge as a result of the project.

8. Put a check mark beside the ways you would have learned if you were a child in Noah Webster's time.

The three correct answers were

- 1: memorizing
- 2: reciting out loud
- 3: listening to the teacher explain material

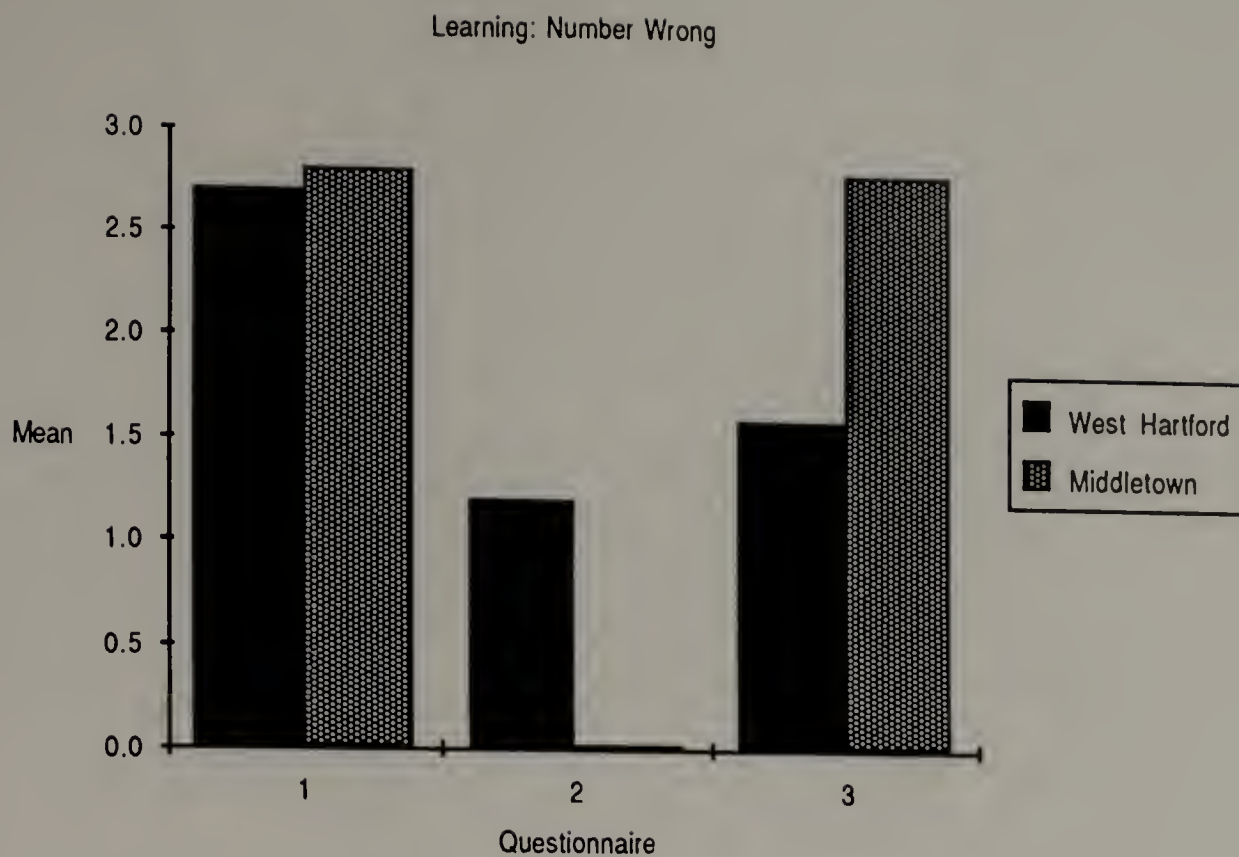


Westhtfd: sd=.598 sd=.761 sd=.759 n=20

Mdletwn: sd=.551 sd=.807 n=31

Table 8. Correct responses to 18th C. ways of learning

As is strikingly evident from table 8, West Hartford and Middletown students were both able to identify the correct answers. However, given the design of the question, it was possible that a student could check several responses and include the correct answers among them. In order to get a better measure of the actual amount of learning that took place, It is necessary to look at the number of wrong responses.



Westhtfd: sd=3.097 sd=1.251 sd=1.429 n=20

Mdletwn: sd=1.400 sd=1.778 n=31

Table 9. Wrong responses to 18th C ways of learning

Immediately after the school lesson, both classes chose approximately the same number of wrong answers (2.7 for West Hartford, and 2.8 for Middletown.) After the classroom activities, however, West Hartford students' mean number of incorrect responses dropped to 1.2, a statistical significance of .06. The number of this groups' incorrect responses rose slightly on the final questionnaire to 1.6.

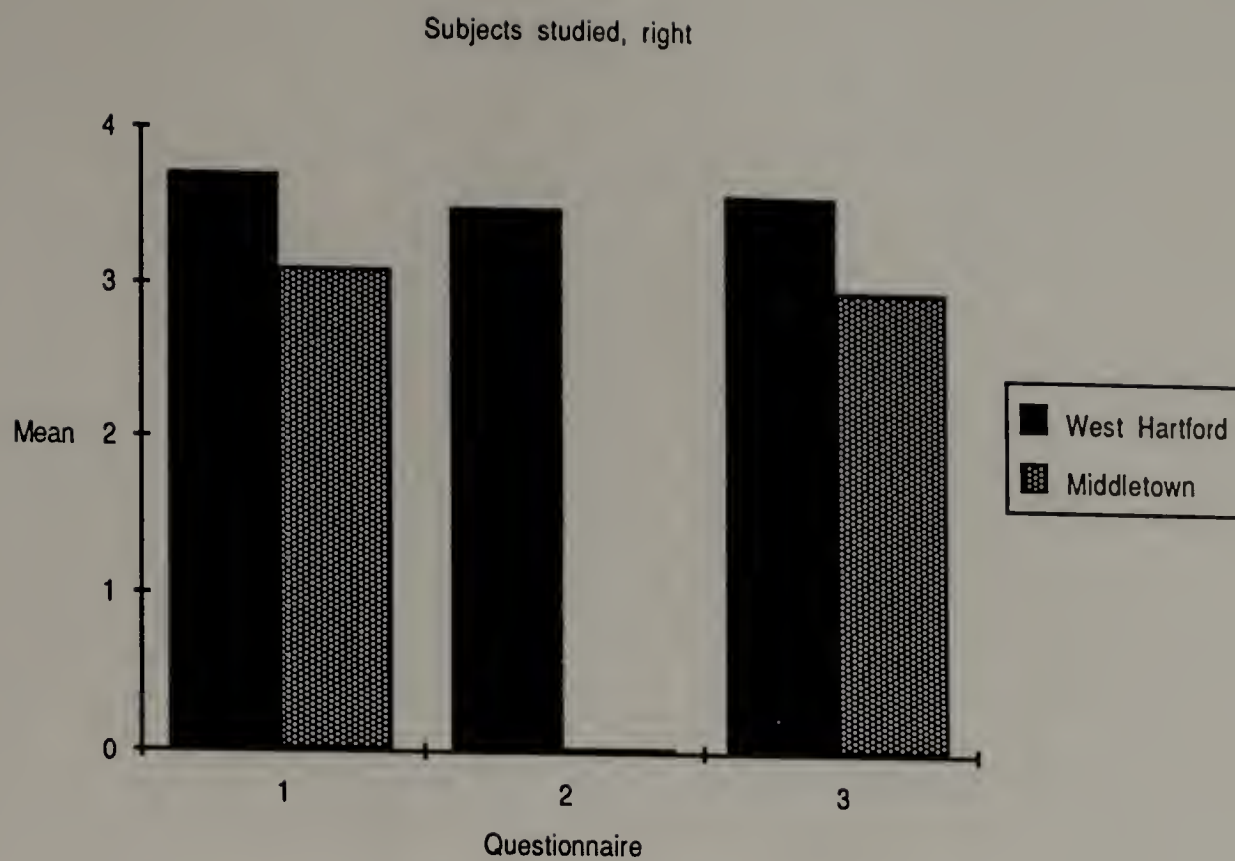
The number of wrong responses of the Middletown students immediately after the museum visit was very close to the average of West Hartford students.

It remained at the same level 2 months later. The comparison of the mean number of incorrect responses (1.6 for West Hartford students and 2.8 for Middletown students, statistically significant at the .01 level) is striking. The West Hartford students made more discriminating choices, choosing significantly fewer wrong responses.

Question 9 asked the students to identify the subjects they would have studied as children in Noah Webster's time.

9. Put a check mark beside the subjects you would have studied if you were a child in Noah Webster's time

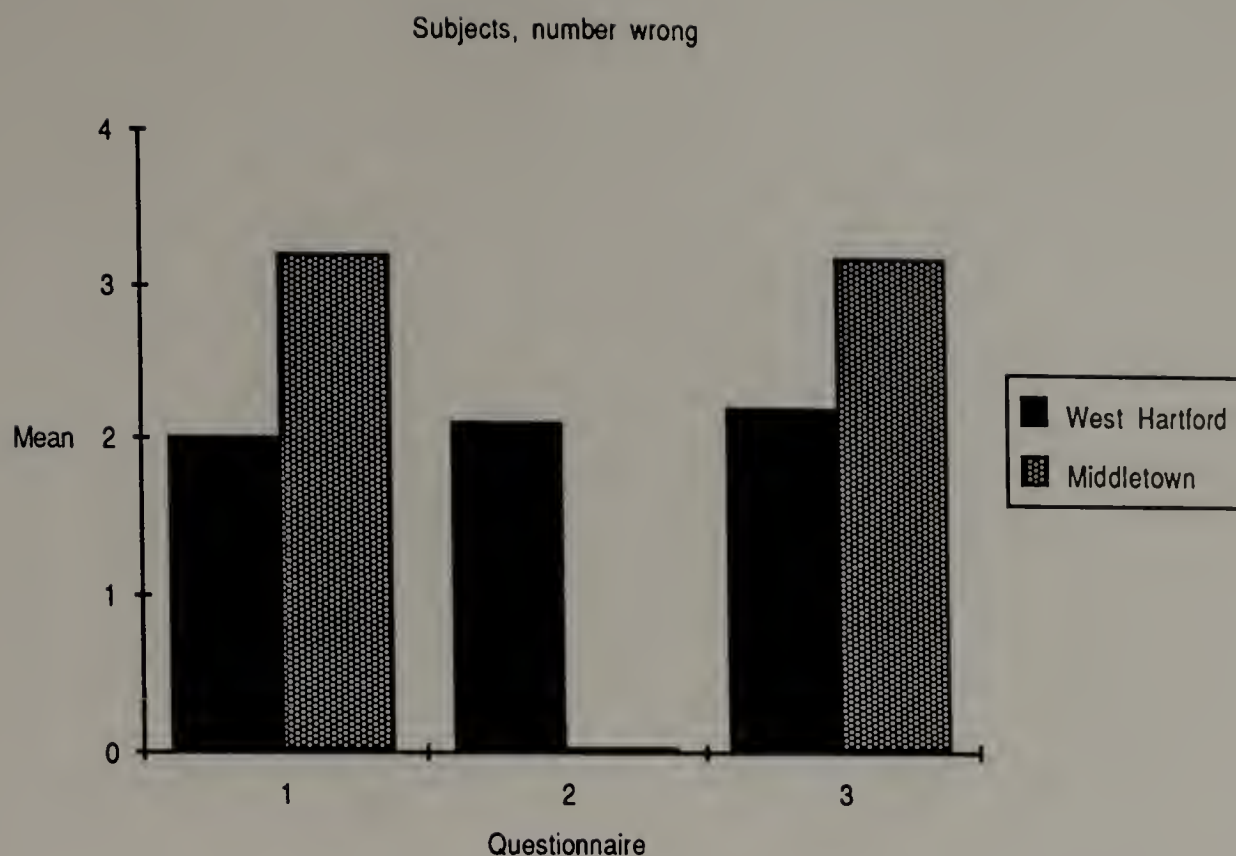
The four possible correct answers (math, history, spelling and reading) were to be chosen from 17 choices.



Westhtfd: sd=.571 sd=.688 sd=.598 n=20

Mdletwn: sd=.806 sd=.983 n=20

Table 10. Correct responses to 18th C subject matter



Westhtfd: sd=2.224 sd=2.183 sd=2.381 n=20

Mdletwn: sd=2.016 sd=2.217 n=31

Table 11. Wrong responses to 18th C subject matter

If we examine the number of right and wrong responses, we note that West Hartford students identified on the average 3.7 correct responses and Middletown students identified 3.1 correct answers. This response differs significantly at the .01 level. West Hartford students gave 2.0 wrong answers immediately after the school lesson and Middletown students chose 3.2 wrong ones. This difference is significant at the .05 level. These results did not change significantly in questionnaires 2 and 3.

The significant differences between the responses of the two groups immediately after the school lesson is of note. Although the same museum teacher gave the same lesson to both groups, the Middletown students did not learn the material which was presented as well as the West Hartford students did. I do not know the reason for this. To my knowledge, neither group had been exposed to a learning experience of this sort before. The two groups had the school lesson at the same time of the day, but the Middletown students had had a longer bus ride, so they may have been fatigued. I suspect, however, that it may be because of a basic difference in ability between the two groups. Because I was unable to get comparative statistics for IQ's or SAT's from the two schools, it is not possible to say definitely that this is the reason for the difference.

On the whole, the high level of correct responses to questions about the ways of studying (both groups averaged more than 2 correct responses out of a possible 3 right answers) and the material studied (both groups averaged more than 3 correct responses out of a possible 4 right answers), as well as the low level of wrong responses, seems to indicate that the Noah Webster House is succeeding in teaching the factual material it sets out to teach. The fact that these results remained consistent over a two month period after the museum visit supports that tentative conclusion. This is a question for further study.

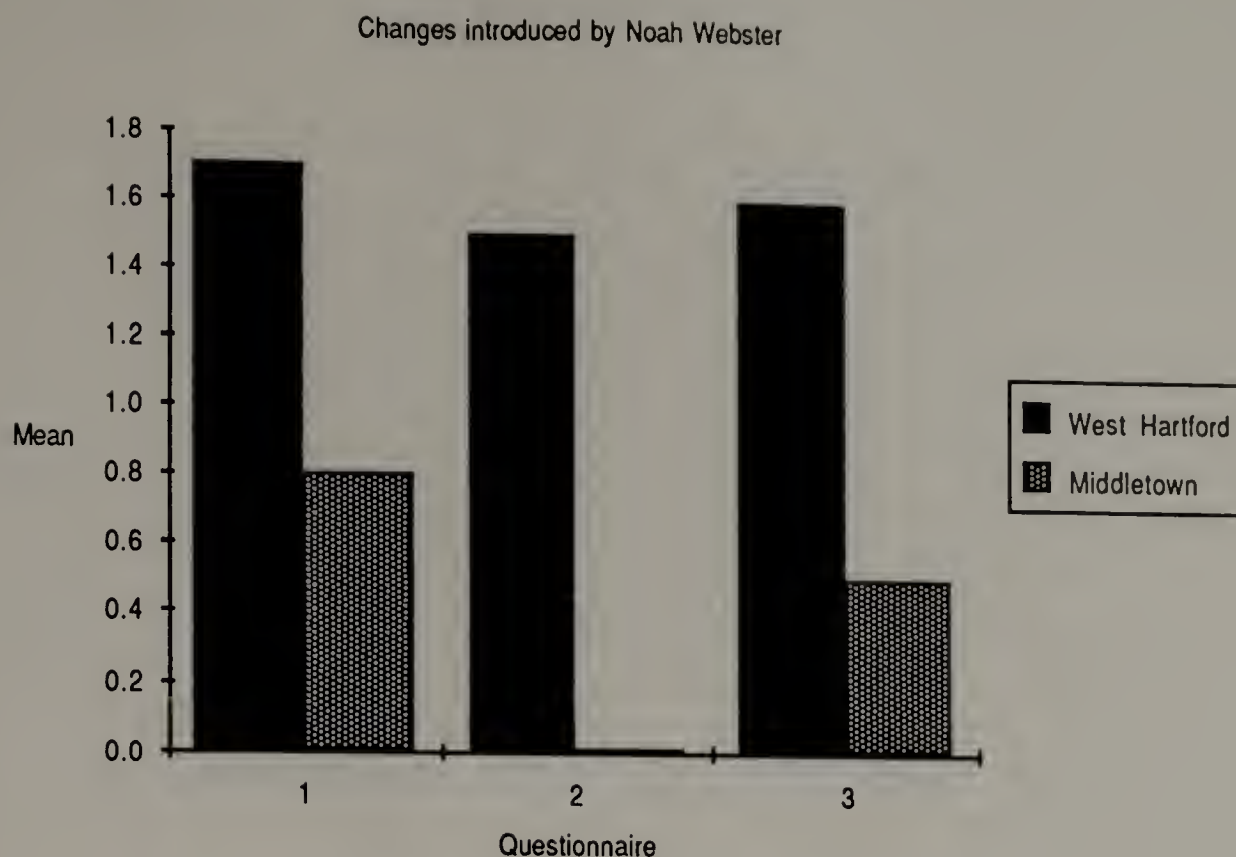
The final question asked students to list the changes over previous spellers that Noah Webster introduced when he wrote the blue-backed speller.

10. List the changes that Noah Webster introduced when he wrote the blue-backed speller.

Scorers looked for six possible differences. The museum teacher made a point to mention each of these changes during the simulated school lesson.

1. Webster simplified the spelling (examples could be listed such as *honour* to *honor*, *colour* to *color*, *soup* to *soop*)
2. Webster divided syllables by the way they were pronounced, not the way they were spelled (*ti-on* becomes *shun*)
3. Webster used American place names instead of English ones.
4. Webster stressed the need to establish an American language and American spelling.
5. Webster dropped some English words and added others that were peculiarly American.
6. Webster did not use the name of God as much as earlier spellers had.

This was a particularly difficult question, in that students had to actively recall the differences rather than identify them from a list.



Westhtfd: sd=1.342 sd=.889 sd=.988 n=20

Mdletwn: sd=.601 sd=.624 n=31

Table 12. Changes introduced by Noah Webster

West Hartford students noted an average of 1.7 differences immediately after their museum visit. Middletown students, however, averaged only .8 correct responses, a difference statistically significant at the less than .01 level. Once again this seems to indicate a basic difference between the two museum visits, reflecting the ever-present, ever-uncontrollable intervening variables which ultimately determine the effectiveness of any teaching experience. The changes in each groups' responses to this question at later periods were not

significantly different from their initial answers.

Qualitative Evaluation

Questions 4 and 5 asked the students about their reactions to the simulated school lesson.

4. What did you like best about the school lesson at the Noah Webster House?

5. What did you like least about the school lesson at the Noah Webster House?

Half of the West Hartford students chose the spelling bee as their favorite activity, and this remained at the top of the list for all three tests. Among the other choices were the punishments, recitation, and watching the teacher recite her lessons. Immediately after the lesson nearly half the students said that they disliked memorization the most. One fourth of the students continued to chose this as their most disliked part of the lesson throughout all three attitude surveys. Other disliked activities were closely related. They included standing in front of the class, reciting in front of everybody, and saying the lessons over and over. One of the students noted that, "The lessons were all mixed up. I thought we should all be doing the same thing."

Half of the Middletown students chose writing with a feather pen as their favorite activity. Two months after the visit, students remembered enjoying writing with the quill pen, doing math, and the spelling bee. Nearly all the

Middletown students chose either memorizing or standing up in front of the class and reciting as their most disliked activities, and these choices were the ones they remembered after two months. One of the students was offended by the discrimination against girls. The event she disliked most was that when making a mistake and having the teacher say, "I don't expect much from girls anyway."

The results of these questions were reviewed by the teachers who did the qualitative evaluation of the project. One of the reviewers noted that memorizing scored at the top of the "least liked" list for both groups of students for all the tests. She observed, "The idea of having a poem, a historical document or something else committed to memory is intriguing but the thought of how to go about memorizing a piece is frankly terrifying to many students. This should say to all educators that we need to teach study skills."

A fifth grade teacher and an elementary school teaching specialist did a qualitative evaluation of the responses to the questions of differences and similarities between schooling in Noah Webster's time and today.

6. List all the differences that you can think of between school in Noah Webster's time and your school today.

7. List all the similarities that you can think of between school in Noah Webster's time and your school today.

They were told nothing about the format, timing, or content of the tests which they examined, nor were they aware that only two groups were involved. The groups of responses to which they refer in their report were designated:

West Hartford I - responses given the day after the visit to the Noah Webster House.

West Hartford II - responses given at the conclusion of the in-class activities.

West Hartford III - responses given two months after the visit to the Noah Webster House.

Middletown I - Responses given the day after the visit to the Noah Webster House.

Middletown II - Responses given two months after the visit to the Noah Webster House.

One teacher chose to do an informal numerical tally of the responses. He identified several responses as "significant" because they seemed to him to indicate thought beyond simple observation. He made the following observations, based on his evaluation of the length of the responses and their originality:

The students from both schools tended to give one-word responses when listing similarities, and the percentages of single word answers increased from the first test to the last. Fifty-five percent of the West Hartford answers were single word responses in Test I and 65% in Test III. Forty-one percent of the Middletown similarities were listed as single words in test I and 64% in test III.

He found that there were no phrases that he considered "significant observations" for any of the similarities cited.

He noted that students at both schools tended to use longer phrases to describe differences between the 18th century and 20th century experiences. Over 80% of the Middletown responses were longer than one word. He noted two responses which he cited as "significant."

West Hartford students seemed much more perceptive in listing differences than the Middletown students. He cited as examples the following notations by the West Hartford students:

"Learning the same things if boy or girl today vs. learning different things than a boy."

"Teaching methods - memorizing, punishments."

"Teachers not much older than students."

"We have student government."

West Hartford students' responses to the question about differences were longer than those given by Middletown students. Only 4% of the answers for test I were one word responses. (The percentage rose to 27% in test II.)

The number of significant responses in the three tests remained about the same, but the content differed slightly.

The evaluator concluded that all the students found it easier to comment at greater length about differences than similarities and that the West Hartford students' observations showed evidence of more profound thought.

The second evaluator noted that West Hartford students' responses to

similarities in test I tended to be very general, one word answers. She said, "The West Hartford I group seems not to have really dug in deeply to answer the questions." She continued, "West Hartford II and III, in my opinion, answered the similarities/ differences questions much more completely. They responded to the differences questions with listing of many types of differences: punishments, physical classroom arrangements, curriculum studied, extra-curricular happenings, etc." She concluded, "I felt that West Hartford II showed the highest level of thinking when evaluating likenesses and differences between schooling then and now. I found their answers to be more in-depth than the other two groups. They zeroed in on many aspects of the similarities and differences in a very complete way." This finding reinforces the significant quantitative difference in West Hartford's response to this question after the follow-up experience.

Parental Evaluation

The parents of the 20 West Hartford students who participated in the project received survey forms (see appendix E). Seventeen parents returned the forms, which were sent to them after the conclusion of the in-school part of the program. Fifteen of the parents were aware of the project that their child took part in, and 2 were not. Two parents found their children to be enthusiastic about the project; seven thought they were mildly interested; and five felt they were neutral. Eleven noticed no interest on the part of their children in revisiting the Noah Webster House or other historic houses. Five children showed an interest,

as noted in the following comments:

"He said it was interesting and wouldn't mind going back, but he hasn't exactly hurried me out the door to take him!"

"Likes to look for old items in books and magazines."

"Interested in visiting other historical sites."

"We have visited the Noah Webster House several times. My child would enjoy other such visits when time allows."

"Living conditions during that time." [I am not sure what this response means.]

Student evaluation

After the in-school portion of the project was completed, the Noah Webster House received a package of thank-you letters from the students, each carefully written and beautifully illustrated. It was obvious that the students had been instructed to take their time in writing the notes and to make them personal and individual. Many of the students reported a greater awareness of aspects of 18th century daily life, as evidenced in the following comments:

"You taught us about what subjects they learned, what they wrote, and the types of clothing they have to wear to school. "

"Doing this made me believe that it was really different before."

"You really taught us a lot about the differences of our books of today and the ones in Noah Webster's time."

"It was such a good idea to have us experience it instead of reading history books to learn about a colonial school day."

"I learned a lot of things about making and using games that Noah Webster used when he was our age."

"I think they had a lot of fun with the games that they could make with simple stuff like thread and an old button."

The students enjoyed the activities:

"I thought it was a lot of fun to act like a person in Noah Webster's time. I hope I can do it for a whole bunch of other classes because I liked it so much."

"I really enjoyed your helping us for our play. I have learned so much from you."

They appeared eager to share their projects:

"I can't wait to be a student in one of the teacher's classes and show them what it was like a long time ago."

"I enjoyed putting on our play for the class and I am sure I will have fun putting it on for other classes."

"After we present the games, the play, teaching subjects and the exhibits I know they will want to go to the Noah Webster House."

Subsequent to the completion of the project, the students presented their programs to all the fifth graders at their school. (See appendix C for a copy of the brochure they distributed.) The teacher of the students who gave the program reported that the presentations were well-received by the fifth graders and their

teachers and encouraged development of this aspect of the program in her report.

Teacher Evaluation

The classroom teacher at the West Hartford school submitted a two page evaluation of the project, with specific suggestions for modification of some of the activities. She recommended that students be discouraged from attempting to present a simulated school lesson to other classes and proposed some alternatives to presenting a lesson so that other children could "live" the experience. She stressed the importance of providing adequate background materials for any teacher embarking on the project.

Her conclusions were:

"This was a very positive experience for everyone at West Hartford who was involved. My children learned so much more through "doing" rather than just reading, and developed a deeper "feel" for history. The fifth grade teachers and students [to whom the class presented their projects] appreciated their opportunity to share, and I have developed a new perspective and different methods of instruction."

Even though the Middletown students participated in no follow-up activities after the visit, their classroom teacher, with whom I spoke after the final questionnaire had been given, underlined the memorable quality of the day for the students. She felt it was particularly meaningful because of the "hands on" activities. It provided an opportunity which the students would not get on their own, since Middletown does not have any other historic houses with educational

activities that can be compared to the Noah Webster House experience.

In summary, the quantitative and qualitative evaluations of the program indicate that positive results took place as a result of the program. My fellow museum teacher and I enjoyed all the aspects of the project, and it seems apparent from the qualitative evaluations that everyone else involved in the project did too. In fact, two of the students, by then seventh graders, called to volunteer their time to help the Noah Webster House with its annual birthday party celebration the following year. It is personally satisfying feeling to have participated in a program that was positively received and accomplished, at least in part, what it set out to do.

CHAPTER VI

DISCUSSION

The initial hypothesis with which I began this project was that a follow-up experience to a museum visit utilizing aspects of peer teaching will lead to better mastery of certain historical concepts, selected thinking skills, and a more positive attitude about visits to historic houses than a one-time visit will do. The scorecard is mixed. The most exciting conclusion, and one that has the most implications for the future development of projects such as this, is that the students ability to identify similarities and differences in two situations was improved as a result of the follow-up experience. The students also showed evidence of retaining more of the information about 18th century educational practices as a result of the program. The third aspect we examined, attitude change, is a very difficult concept to evaluate. Attitude changes require measurement over a period of years, I believe, to get a more meaningful response. However, for the short time that this project covered, the results seem to indicate that, other than an initial expression of enthusiasm right after the visit to the house, there was no basic change on the part of the students as to their preferences for visiting historical houses rather than other kinds of museums.

This project had additional goals. One of the most important was to begin to develop a program by which schools could better utilize the knowledge which students had gained as a result of their field trip. This study proves to me that there is a potential for using students as peer teachers to share their knowledge

with other classes. This idea could make a compelling argument for authorization of a field trip when school travel money is tight. The project, therefore, can benefit the wider school population.

A second goal was to begin to develop a project which the museum could present to teachers as a carefully prepared program which would reinforce the educational benefits of the museum visit. In this project, small groups of students studied selected aspects of the experience and presented their projects to their fellow classmates. The requirement that they act as peer teachers led to a creative "repackaging" of the information to which they were all exposed. It gave the students an opportunity for reinforcement through other modes of learning, such as hands-on experiences or dramatic enactments. The project, therefore, can benefit the students who have taken part in the field trip.

A third underlying purpose of the project was to develop an approach to follow-up activities which could be adopted for use by other museums. The study showed, I believe, that students can generate interesting and creative projects out of material that is presented by any museum. The effectiveness of this project is not limited by its specific focus on 18th century learning at the Noah Webster House. Projects such as this can be developed with a minimum of staff time and, more importantly, a minimum of money. The project can, therefore, be of benefit to any museum.

A fourth objective was for the Noah Webster House to forge a closer link with the schools it serves. It has the good fortune of being located in a community in which enrichment activities for students are encouraged. West

Hartford has a school system peopled by creative and enthusiastic teachers who are encouraged to explore innovative ways for their students to learn. The results of this study are tangible proof of the value of the educational program at the Noah Webster House.

Limitations of the study

Despite the benefits which I have outlined above, several important limitations must be kept in mind when viewing the results of this study. Although comparable in terms of general academic skills and socio-economic background, there seemed to be an inherent difference in the basic ability of the experimental group and the control group. The control group did not come away from their museum visit with the same level of knowledge that the experimental group did, despite their having experienced the same program. This apparent difference must be kept in mind when making any comparison of the two groups.

A second limitation also relates to the nature of the experimental group and its teacher. Despite the fact that the pupils involved do not come from the most wealthy section of West Hartford, nevertheless they are in a position to benefit from a superior school system. One must ask if the program would yield the same results if used in another community. Similarly, the teacher of the students with whom we worked is exceptionally open to innovative ways of teaching, has a level of control over her students such that she can with ease permit them to work on independent group projects, and is particularly interested in the teaching of history. We must therefore recognize that other teachers might not utilize a

program such as this to its fullest advantage.

A third limitation is that the focus of the program was not on the development of peer teaching skills. Peer teaching was simply the vehicle through which the other objectives of the program were met. In looking at the results we must question how much of the positive data could have been generated by another type of program, and how much was due to the peer teaching aspect of the activities.

A major limitation is that the study did not make any attempt to measure the effectiveness of the peer teaching experience on the students who were taught by their peers. Since this aspect of the program was omitted from the design of this study, comments on the effectiveness of the program for students who don't come on the field trip can only be conjectural.

This program was intended to be developed into one which teachers could use on their own in the classroom. I cannot say that the results we have gotten from this program could be predicted from a program in which museum staff persons were not involved. The staff had more expertise in 18th century teaching methods than either the pupils or their classroom teacher had, and were therefore able to correct any wrong information or assumptions. Historical accuracy is at best a nearly impossible goal to attain. There is, unfortunately, much room for perpetuation of misinformation in activities such as this unless the teachers who are running the program have access to verifiable information.

Despite comments that projects such as this have applications for use by a wider museum community, we must recognize that this program was very limited

in nature, drawing on a small population which worked with material restricted to 18th century education in New England. A further caveat is that the program was run under less than carefully-controlled conditions by people motivated more by educational goals than by expertise in running studies.

Implications for Research

The concepts investigated in this project present a panoply of ideas which could be explored with further research. The most intriguing research topics are in the development of peer teaching as a tool for sharing experiences and knowledge gained outside of the classroom. As shown in the literature search, peer teaching is most often thought of on a one-to-one basis, with an emphasis on the conveying of specific facts.

The most obvious follow up research topic, I believe, would be to do a study which would examine the learning effect on students receiving information presented by their peers. Although studies have been done of peer teachers in other situations, as far as I have been able to determine, no investigations have explored the learning possibilities in projects such as this. A study could look at the amount and type of learning involved for both the peer teachers and the pupils they taught. It would be challenging to develop a program in which the peer teachers were charged with preparing different programs for different grade levels. One could investigate the grade level at which peer teachers would be most effective. Would it be with small children, who might be more amenable to being taught by "the big kids" or would it be to other pupils of the same grade

level who could relate more immediately to the material which was being presented?

The projects which the students prepared were group efforts. A study could be done which would compare the effect of cooperative projects versus individual projects which could be shared with other students on a one-to-one basis.

Another basic area of possible research is the effectiveness of peer teaching versus other follow-up programs designed to reinforce the learning experience of a field trip. It is believed that the students' awareness that they would have to teach their peers added a beneficial tension to the projects which the groups prepared. However, there is no factual information to support that belief.

Yet another area for further investigation would be to explore what happens to a program such as this which is run without the active participation of the museum staff. An ideal program would be one in which the teacher would have adequate verifiable material to reinforce the learning that took place on the field trip without introducing errors and misconceptions.

The study gives rise to several research topics of particular interest to the Noah Webster House educational staff. The first one is to find out why one group seemed to learn more than another group after a nearly identical presentation. In order to do this, one would need to know a great deal about the two groups in question including their ability levels, their past experience at the Noah Webster House and other museums, and their familiarity with unusual learning experiences such as this. In order to identify the variables in as much detail as possible, an ideal way to do a study of this sort would be to video-tape

the presentations.

A second topic for museum research would be to do a much more indepth study of exactly what it is that we teach through this particular program. If it were possible to identify that information, it might be possible to apply the same questioning strategies to all the museum education programs that we offer, to find out which ones were the most effective.

An interesting study would be to compare what students at different grade levels learned from their field trips so that we could better target our programs for the particular audiences we serve.

In summary, museum learning is a wide-open topic for educational exploration. The use of the technique of peer teaching offers exciting possibilities for reinforcing and sharing the learning that occurs on a field trip.

Implications for teaching

The results of this investigation suggest that the use of peer teaching is a potentially powerful classroom teaching tool which has not, according to the research I have done, been developed to its full potential. Students have a wealth of experiences which they enjoy sharing with their classmates. This is apparent even at the earliest grade levels, which incorporate "show and tell" projects of various forms into the classroom day. There are many possibilities to develop ways in which students can not only share their experiences, but share the knowledge which they have gained from them in ways which will result in learning on the part of their listeners.

The tension of which I spoke when discussing the requirement of having to teach something to someone else can be used as a tool to intensify the learning situation. I was particularly aware of the demands that teaching something requires as I watched the students work through the steps of explaining a game which they had played in order to teach it to their classmates. The project proved to me the truth of the folk wisdom that if you want to learn something yourself, teach it to somebody else. This technique has major implications for teachers who wish to assure that individual pupils master the material which they have learned. A requirement could be that they teach it to someone else.

The use of peer teaching to reinforce a learning experience is only one aspect of this project that has implications for teaching, because the program incorporates other ways of reinforcement of learning as well. As we have seen through an examination of the writings of Dewey and Bruner, students with opportunities for active involvement with the material under study will have their learning reinforced. Innovative museum programs include a variety of means of presenting information. Through the use of museum-related material these same techniques can come to the classroom.

This project has implications for teaching in the museum as well as in the classroom. A museum, like a school, is a teaching institute. The most immediate implication for the Noah Webster House is that the education staff should proceed to develop a packet of follow-up activities for teachers to use in the classroom, following the lines of this project. The packet must contain adequate background material and suggestions for further resources.

In conclusion, the results of the present investigation suggest that the use of peer teaching in order to enhance the learning aspects of a field trip and to provide a means for sharing that learning experience may be an important, if partial solution to the problem of how to make a museum a truly meaningful educational resource for the classroom teacher.

APPENDIX A

Script for the School Lesson Slide

1 Webster House

Today you will pretend that you are traveling back in time. You will imagine that you are living on a New England farm 200 years ago.

2 barrels

Your father might be a cooper, who makes barrels and pails.

3 shoes

He might be a shoemaker...

4 loom

...or a weaver...

5 bedstead

...or a cabinet maker, who supplies your village with chairs, tables, coffins and bedsteads.

6 farm building

Whatever your father does for a living, he probably also runs a farm...

7 farm view

...and everyone in your family must work very hard to keep food on the table and to make products to trade, or barter, with your neighbors. Imagine going to school 200 years ago.

8 cabbage patch

Of course, you can only go when your parents feel that they can spare you from your chores at home.

9 school house

The school that you and your friends go to has only one room and it is only one story high. It is dark inside, especially on rainy days, because the room is lit only by light from the small windows, and a candle, when necessary.

10 diorama

The only heat in your school comes from the fireplace. You want to sit near the fireplace,

because that's the only way you'll stay warm on a cold day.

- 11 boy chopping
The older boys in your class have chopped the wood for the fire.
- 12 diorama You sit on a bench, and use the bench in front of you as a desk. When you have memorized your lessons, you will go to the benches in the front of the room to recite them aloud for the school master or mistress.
- 13 dipping a pen
The school master sits near the fireplace, and near his desk is a smaller desk with an inkwell and quill pen where scholars...
- 14 writing ...can come to practice their penmanship.
- 15 diorama There are no blackboards. You will write on small slates. There are no globes or bulletin boards. The walls are made of plain plaster or wooden boards.
- 16 writing The only books you have are those you've brought from home. Since paper is very expensive, you made a book out of blank paper at home. You will write all of your memorized lessons in this copy book, and it will serve as your report card. The rest of your lessons will be written on a slate.
- 17 diorama You can smell wood smoke from the fire. You can hear slate pencils scratching on slates and the voices of your schoolmates reading and reciting their lessons out loud.
- 18 diorama Your classmates are all different ages. Some are only four years old and one is 20! The older scholars sit in the back of the room. The younger ones sit in front. The teacher, either a man or a woman, is not much older than the oldest student in your class. To become your teacher, he only had

to show the school committee that he could read a chapter from the Bible, teach a short catechism, and keep discipline. Your teacher has also shown good and moral character. Your teacher can be as strict or as lenient as he wants to be.

19 school house

Today your parents have decided that you are not needed to work all day on the farm: you are allowed to go to school. You get to the school house at about 9 in the morning. You have finished your morning chores, and you can stay at school until it is time to do your evening chores: you will go home at about 4:00.

20 Dilworth page

In the morning, you will read from the Bible and from primers. Then you will have a spelling bee.

21 students in yard

You will break for lunch. This morning you have brought a piece of bread and a sausage for lunch. During recess, you will probably play in the street. In fact, your school is located in the middle of the street. You have no playground.

22 spelling book

In the afternoon you will read, spell and cypher. All of your lessons will be read outloud, and you will have to memorize and recite many of them. The classroom will be very noisy, very stuffy and...

23 bench ...the benches will be hard.

24 woman at table

But you know that school is important, even though you can't go very often. When you grow up, you will need to know how to cypher if you want to keep your farm and business accounts in order.

25 document

You will need to know how to read land deeds and

you will have to be able to write, or at least sign your name to important papers when necessary. When the boys in your class leave school, they might become blacksmiths or cabinet makers like their fathers...

26 Amherst ...or they may go to college to become lawyers or ministers.

27 woman working

The girls will need to know how to read and write and cypher so that they will be able to run a household.

28 Noah Webster

Noah Webster went to a school like yours when he was young. When he grew up, he became a schoolmaster for a short time. He decided that the school that he and his friends had gone to was not very good. So, he worked to improve schools in America.

29 blue back cover

He wrote a book called the blue-backed speller, to teach children how to read and write and spell, and he wrote other books that would help children to learn about the world.

30 reforms kept

Many people liked Noah Webster's books because he used new American spellings and ideas, not the old English ones.

31 Dilworth page

Eventually, Noah Webster's books replaced the books of men like Thomas Dilworth, although sometimes, because books were so expensive and because students could use only what they had at home...

32 blue back page

...teachers used both books in the same classroom...

33 stack of books

...which is what you will be doing today: you will use some of the books that Noah Webster used as child, and you will use some of the books that he wrote when he grew up.

34 students Like these children, you will travel back in time.
You will become a school child of 200 years ago.

APPENDIX B

QUESTIONNAIRE

1. Put number 1 by your first choice to visit if someone said "Let's go to a museum." Put number 2 by your second choice and number 3 by your third choice.

_____ an art museum

_____ a history museum or a historic house

_____ a science museum

2. The Noah Webster House is _____ (fill in the blank)

3. Which face shows how you feel about the school lesson you had at the Noah Webster House?



I loved it



I liked it



I didn't like
or dislike it



I didn't like it



I hated it

4. What did you like best about the school lesson at the Noah Webster House?

5. What did you like least about the school lesson at the Noah Webster House?

6. List all the differences that you can think of between school in Noah Webster's time and your school today:

7. List all the similarities that you can think of between school in Noah Webster's time and your school today:

8. Put a check mark beside the ways you would have learned if you were a child in Noah Webster's time:

- | | |
|---|--|
| <input type="checkbox"/> doing homework | <input type="checkbox"/> reciting out loud |
| <input type="checkbox"/> memorizing | <input type="checkbox"/> class discussion |
| <input type="checkbox"/> writing reports | <input type="checkbox"/> listening to the |
| <input type="checkbox"/> using different books | teacher explain |
| <input type="checkbox"/> for different grades | material |
| <input type="checkbox"/> reading many textbooks | <input type="checkbox"/> using encyclopedias |
| <input type="checkbox"/> taking field trips | <input type="checkbox"/> having outside |
| <input type="checkbox"/> filling in answers | speakers |
| <input type="checkbox"/> using a globe | <input type="checkbox"/> doing independent |
| <input type="checkbox"/> working on team projects | projects |

9. Put a check mark beside the subjects you would have studied in school if you were a child in Noah Webster's time.

- | | |
|--------------------------------------|------------------------------------|
| <input type="checkbox"/> math | <input type="checkbox"/> biology |
| <input type="checkbox"/> history | <input type="checkbox"/> French |
| <input type="checkbox"/> science | <input type="checkbox"/> religion |
| <input type="checkbox"/> woodworking | <input type="checkbox"/> chemistry |
| <input type="checkbox"/> government | <input type="checkbox"/> reading |
| <input type="checkbox"/> Spanish | <input type="checkbox"/> sports |
| <input type="checkbox"/> spelling | <input type="checkbox"/> art |
| <input type="checkbox"/> geography | <input type="checkbox"/> cooking |
| <input type="checkbox"/> citizenship | <input type="checkbox"/> music |

10. List the changes that Noah Webster introduced when he wrote the blue-backed speller:

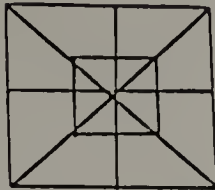
APPENDIX C

STUDENT BROCHURE

Would you like to see some old books from Noah Webster's time? We have an exhibit of those books and will compare them with modern books we use today. We will discuss math, spelling, reading, geography, and history.



3 BOOK EXHIBIT



How would you like 6 sixth graders to come to your classroom to teach your students about games that Noah Webster would have played and made? We will teach your children a 15 min. lesson about how to play and make the games. Please consider tapping this knowledge we can share about the games of 1818.

4 GAMES of EARLIER TIMES

IN
NOAH'S
TIME



— *Yes, I am interested
in signing up for
one or more of
these offerings.*

— #1 School Lesson

— #2 School Play

— #3 Book Exhibit

— #4 Games

Which day(s) is most
convenient?...times...?

<u>Day</u>	<u>Times</u>
_____	_____
_____	_____
_____	_____
_____	_____

Name _____

Room # _____

Would you like to
have some students
from Room 17 come into
your room and teach
your class for 15 min.
about school life in
1818? We will teach
some basic skills as
they were taught in
Noah Webster's time.



#1 SCHOOL LESSON



How would you like your
class to see a reconsti-
ment of an 1818 school
lesson? Your children
would be able to learn
how children long ago
did spelling bees, math,
and how discipline
was enforced. If you
would like to see our
interesting play, please
fill out the form and
return to Room 17.

#2 SCHOOL PLAY

APPENDIX D

List of Differences in School Lessons

- one-room schoolhouse
- buildings usually in poor condition, cold and dark
- children of all ages together, not divided by grades
- textbooks provided by parents. Everyone could have a different text
- students studied only those subjects for which they had books
- school all year round
- attendance not compulsory. Children attended when they could be spared from chores at home.
- education of girls not stressed. Girls more apt to attend in summer.
- no equipment: no globes, blackboards, AV teaching aids
- no playground equipment
- teachers poorly paid, untrained.
- corporal punishment, also by humiliation and embarrassment
- stress on manners
- subjects studied included math, reading, spelling, geography, grammar, history, penmanship
- little oral instruction on part of teacher; students learned from their books
- rote memorization and recitation major means of learning
- subject matter heavily geared to moral lessons
- little concern about whether children understood what they read
- day began with a prayer
- religion very important component of daily life, including school
- out-loud memorization until early 19th century

APPENDIX E

Parental Evaluation Form

March, 1987

Dear parents,

Your child recently took part on a post-visit program for the Noah Webster House. I would very much appreciate it if you could answer the following brief questions and return the form to school as soon as possible.

Thank you,

Sally Williams
Director

1. Were you aware of the project your youngster took part in?

Yes _____ No _____

2. What was their reaction to the project?

Enthusiastic _____
Mildly interested _____
Neutral _____
Unenthusiastic _____
Very negative _____

3. Have you noticed any evidence of your youngster's interest in re-visiting the Noah Webster House or in visiting other historic houses?

Yes _____ No _____

4. If yes, what form did this interest take?

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