1970

American History and Teaching Critical Thinking

James M. Miller

Follow this and additional works at: http://digitalcommons.usu.edu/etd

Part of the Educational Administration and Supervision Commons

Recommended Citation
AMERICAN HISTORY AND TEACHING CRITICAL THINKING

by

James M. Miller

A thesis submitted in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

in

Educational Administration

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1970
ACKNOWLEDGMENTS

The possibility of writing a continuous progress packet to teach the skills of critical thinking and American history and the resulting research study to assess the validity of the packet became a reality because of the interest shown by many people.

First, was the interest shown by Mr. Pratt Bethers of Cedar City High School which made the financing of the packet possible. The identification of the problem and the encouragement to research its limits came from Dr. J. Clair Morris. The intense personal interest shown by Dr. James P. Shaver made possible the degree of success that was attained in researching and reporting the findings of the study. The personal encouragement and advice given by Dr. Terrance E. Hatch and Dr. James A. Jacobsen made it possible to "keep going" when problems made the research seem difficult. To all of these men go a sincere and personal "thank you."

To my wife, Jackie, whose suggestions and encouragement were deeply appreciated and whose typing was indispensable, my deepest gratitude.

James M. Miller
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>ii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>v</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>vi</td>
</tr>
<tr>
<td>THE PROBLEM</td>
<td>1</td>
</tr>
<tr>
<td>REVIEW OF LITERATURE</td>
<td>8</td>
</tr>
<tr>
<td>Definitions of Critical Thinking</td>
<td>8</td>
</tr>
<tr>
<td>General Areas of Research in Critical Thinking</td>
<td>13</td>
</tr>
<tr>
<td>Teaching Critical Thinking</td>
<td>15</td>
</tr>
<tr>
<td>Critical Thinking and Non-Social Studies Areas</td>
<td>16</td>
</tr>
<tr>
<td>in the Curriculum</td>
<td>18</td>
</tr>
<tr>
<td>Social Studies Research and Critical Thinking Skills</td>
<td>24</td>
</tr>
<tr>
<td>OBJECTIVES</td>
<td>26</td>
</tr>
<tr>
<td>PROCEDURES</td>
<td>26</td>
</tr>
<tr>
<td>Population and Sample</td>
<td>26</td>
</tr>
<tr>
<td>Design</td>
<td>28</td>
</tr>
<tr>
<td>Curriculum design</td>
<td>28</td>
</tr>
<tr>
<td>Design of classroom presentation</td>
<td>41</td>
</tr>
<tr>
<td>Data and Instrumentation</td>
<td>47</td>
</tr>
<tr>
<td>Test procedures</td>
<td>47</td>
</tr>
<tr>
<td>Description of the tests used in the study</td>
<td>50</td>
</tr>
<tr>
<td>Analysis</td>
<td>55</td>
</tr>
<tr>
<td>Findings</td>
<td>55</td>
</tr>
<tr>
<td>Conclusions</td>
<td>60</td>
</tr>
<tr>
<td>Summary and recommendations</td>
<td>62</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>64</td>
</tr>
</tbody>
</table>
# TABLE OF CONTENTS (Continued)

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPENDIXES</td>
<td>68</td>
</tr>
<tr>
<td>Appendix A: Four Experimental Group Units</td>
<td>69</td>
</tr>
<tr>
<td>Appendix B: Four Control Group Units</td>
<td>82</td>
</tr>
<tr>
<td>VITA</td>
<td>91</td>
</tr>
</tbody>
</table>
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Newman-Keuls analysis on differences in mean average scores for the Watson-Glaser critical thinking test administered to twelfth grade students in Cedar High School during a five-year period</td>
<td>7</td>
</tr>
<tr>
<td>2.</td>
<td>Number of students, by age and sex, completing critical thinking study</td>
<td>28</td>
</tr>
<tr>
<td>3.</td>
<td>Comparison of means for the School and College Ability Test</td>
<td>57</td>
</tr>
<tr>
<td>4.</td>
<td>Comparison of means for the Sequential Test of Educational Progress, Social Studies portion</td>
<td>57</td>
</tr>
<tr>
<td>5.</td>
<td>Comparison of means for the Watson-Glaser Critical Thinking Appraisal</td>
<td>58</td>
</tr>
<tr>
<td>6.</td>
<td>Difference in mean gain-loss changes in the ability to identify values for the skills portion of the STEP</td>
<td>59</td>
</tr>
</tbody>
</table>
ABSTRACT

American History and Teaching Critical Thinking

by

James M. Miller, Master of Science

Major Professor: Dr. James P. Shaver
Department: Educational Administration

The effect of teaching critical thinking as part of a continuous progress packet in American history was studied at Cedar High School during the 1969-70 school year. An experimental group using the critical thinking packet was compared with a control group that used a continuous progress packet that taught only American history.

The dependent variables for the study were the STEP (Sequential Test of Educational Progress), Social Studies portion, and the Watson-Glaser Critical Thinking Appraisal. No statistically significant differences were found between the groups in either American history or critical thinking.

Differences in critical thinking ability, though not significant statistically, seemed to indicate the desirability of further research in this area. It was also recommended, as a result of this study, that further research be conducted to develop and evaluate new methods of assessing student competence in seminar situations.

(97 pages)
THE PROBLEM

In a world that is rocking with change we need more than anything else a high capacity for adjustment to circumstances, a capacity for innovation. The solutions we hit on today will be outmoded tomorrow. Only high ability and sound education equip a man for the continuous seeking of new solutions. We don't even know what skills may be needed in the years ahead. That is why we must train our ablest young men and women in the fundamental fields of knowledge and equip them to understand and cope with change. That is why we must give them the critical qualities of mind and the durable qualities of character which will serve them in circumstances we cannot now even predict. (Gardner, 1967, p. 35)

This quotation from John W. Gardner's (1967) book, Excellence, identifies goals to be met by successful schools of today as educators attempt to prepare young men and women for a challenging future. Thoughtful educators, and educators in social studies in particular, are realizing that having their students commit to memory great reams of factual data does not constitute adequate preparation for life in a pluralistic modern world. It is evident that many social studies instructors, and those who teach history in particular, have required rote memorization of facts and have ignored critical issues and value conflict in their classroom presentations. By the same token, many teachers have failed to have their students engage in the critical analysis of historical issues that might develop the "critical qualities of mind" called for earlier by Gardner.

In recent years, some people in social studies education have begun to recognize the possibility of using history as a vehicle to teach "critical qualities"
or critical thinking skills to students. Feder (1967) stated that the goals of the history teacher should be first of all to help the student "develop a sense of historical continuity;" second, that students should come to "recognize the inevitability of change;" and, finally, that the student "should come to appreciate that the study of the past is subject to the same rules of critical analysis that guide the search for truth in all areas."

Hopefully, then, if the history teacher is successful, he will develop, according to Feder (1967), students who are "intelligently skeptical," who can "question critically," who carefully "weigh evidence" and, when the situation so dictates, "suspend judgement." Feder (1967) concluded:

Above all, the "good citizens" must learn that these rules of analysis are equally applicable to a study of contemporary affairs. It is the responsibility of teachers of history in a democratic society to provide students with opportunities to practice these essential intellectual skills. (Feder, 1967, p. G-1)

How are these "intellectual skills" to be developed by the history teacher? Feder (1967) made the suggestion that using the problems approach in the study of American history will provide the opportunity not only to study history but to master critical thinking skills as well. The teacher who believes that it is possible to teach the skills of critical analysis along with the pertinent facts of American history should give some consideration to the ideas of Feder (1967). He stated:

that a healthy skepticism is a desirable social and intellectual trait; that the development of critical intelligence is the basic goal of social education; that the ability to question intelligently is more important than the accumulation of information; that decisions arrived at on the basis of analysis of evidence and logical inference are preferable to attitudes imposed through indoctrination; and that unless education is
frankly centered on the development of these traits, they will not be developed. As Kilpatrick phrased it, "We learn what we live." (Feder, 1967, p. G-7)

Those of us who teach have, then, according to Feder, the opportunity to make the study of history an exciting chance for our students to learn the functional thinking skills used by the critical thinker and historian. The student using these critical thinking skills will hopefully learn to view today's social problems as an extension of continuing problems out of his country's past and will see current problems in historical perspective. The person that makes use of his heightened skills of critical thinking will then be better equipped to meet the challenges outlined earlier by Gardner.

The decision on the part of the history teacher to do something about the frequent lack of effort by schools to develop "critical qualities of the mind" is only the first of many necessary steps which must be taken. School administrators and planners must re-evaluate all areas of the school curriculum and identify and develop those areas that can be made a part of an overall attempt to teach "critical qualities of the mind." This attempt to reorganize educational programs is an extremely difficult task and will not be done quickly or easily. Before educational reorganization can take place, however, there must first exist on the part of educators a commitment to progress and a willingness to accept new ideas. When these qualities are present in a school superintendent, the school board necessary to back such a person is not always available to make use of his talents. Fortunately for education, such boards and superintendents do exist, and do provide the opportunities and backing
necessary to attempt the changes required for curriculum development.

One school which has had this leadership and has engaged in educational research, is Cedar High School in Cedar City, Utah. This school is an innovative comprehensive high school of approximately 600 students. The school is housed in a new 3.5 million dollar facility and is a Kettering Foundation demonstration school.

As a means of evaluating the various innovative programs at Cedar High School, Dr. J. Clair Morris, then the school's principal and subsequently superintendent of the Iron County School District, conducted a study, extending over the period 1962 to 1968, which evaluated the broad scope of innovative programs being tried at Cedar High School. These programs included ideas and educational prescriptions set forth by teachers, parents, and students from Cedar City, with additional help from personnel of the School Plant Planning Laboratory at Stanford University. The innovations included team teaching, independent study, small groups study, phasing, non-graded classes, continuous progress programs, vocational programs, and rotating and modular schedules.

The study by Morris (1968) was aimed at assessing achievement (mathematics, science, social studies, reading, listening, and writing), attitudes, library skills, educational aspirations, sociometric status, and school dropout rate with the innovative program as compared to a conventional one. The conventional method, as defined in this study, is a teaching learning process in which an instructor teaches approximately thirty-five students in a group.
In this method, all students are expected to proceed through a prescribed content at the same speed and depth. This is usually accomplished with a set of identical textbooks. Tests were administered in April of each of the five test years, with the school year 1962-63 used as the base year for evaluating student progress, as it was the last year Cedar High used the conventional method of instruction.

The study showed that over the five year period there were no significant differences between the means of the groups on the mathematics, science, social studies, or writing achievement tests. Likewise, there were no significant differences between mean test scores in reading achievement or on "achievement in listening." In "attitudes toward education," there were again no significant differences between the conventional year, 1962-63, and each of the years from 1963-1968. "Education aspirations" and "sociometric standing" showed no change during the test years, but the number of school dropouts were significantly less each year of the innovative program.

In three areas there were significant differences that indicated a downward trend in student achievement following the introduction of the innovative program. These areas were: study habits and attitudes; library skills; and, critical thinking skills. To educators like Gardner (1967), concerned with educating students to handle the problems of the future, the last is particularly disturbing.

Critical thinking skills have been defined by Watson and Glaser (1952) as:
a. An attitude of wanting to have supporting evidence for opinions or conclusions before assuming them to be true.

b. Knowledge of the methods of logical inquiry which help determine the weight of different kinds of evidence which help one to reach warranted conclusions.

c. Skill in employing the above attitude and knowledge. (Watson and Glaser, 1952, p. 8)

Table XXV of Morris' (1968) dissertation shows the findings for critical thinking skills using the Watson-Glaser Critical Thinking Appraisal as the testing device. As Morris (1968) noted:

Critical Thinking Skills. Students scored significantly higher in critical thinking skills in the conventional year of 1962-63 than they did in the years of 1965-66 and 1967-68, during which the individualized method was in operation. The 1962-63 group did not score significantly higher than did the 1966-67 and 1964-65 groups; however, the conventional group did, in each case, have higher mean average scores than did any of the individualized groups. The null hypothesis was rejected in favor of the conventional group. Relative to critical thinking, the conventional approach was superior to the individualized approach. It is recommended that Cedar High make a concerted effort to determine specific causes for the significant decrease in critical thinking skills and take steps to eliminate such causes. (Morris, 1968, pp. 127-128)

The decrease in critical thinking skills identified by Morris (1968) and his challenge to find a solution for this decline were the basis for the present study. Rather than trying to determine specific causes, it was assumed as the basis for this study that the absence of a course of study that had been designed to teach critical thinking skills to high school students as a formal part of a continuous progress program of American history was the cause of the decline. The research problem, then, was the lack of assessment of the effect of such a course. The objectives of this study, therefore, were to design such a course of study for Cedar High School and to assess its impact on students.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1962-63</td>
<td>61.13</td>
<td>4.68**</td>
<td>3.94</td>
<td>1.27</td>
<td>.65</td>
</tr>
<tr>
<td>1964-65</td>
<td>60.48</td>
<td>4.03*</td>
<td>3.29</td>
<td>.62</td>
<td></td>
</tr>
<tr>
<td>1966-67</td>
<td>59.36</td>
<td>3.42</td>
<td>2.67*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1965-66</td>
<td>57.19</td>
<td>.74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1967-68</td>
<td>56.44</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

**Significant at the .01 level.

REVIEW OF LITERATURE

Definitions of Critical Thinking

The term "critical thinking" has been widely used to describe a set of intellectual operations that apparently have different meanings to each person who studies them. Traditionally, such terms as "clear thinking," or "straight thinking" were taken to mean thinking operations that were part of being "quick" or "smart."

A pioneer research effort to clarify and teach these "intellectual operations" was made by Glaser in the early 1940's. For the purposes of his research, Glaser identified these intellectual operations as the ability to "think critically," and further stated that the specific skills involved:

(1) an attitude of being disposed to consider in a thoughtful way the problems and subjects that come within the range of one's experiences, (2) knowledge of the methods of logical inquiry and reasoning, and (3) some skill in applying those methods. (Glaser, 1941, p. 6)

As will be noted, Glaser omitted the mention of any specific set of skills needed for "logical inquiry and reasoning," but other researchers have been more helpful. One of these is Ennis who defined critical thinking in the following way:

A critical thinker is characterized by proficiency in judging whether:
1. A statement follows from the premise.
2. Something is an assumption.
3. An observation statement is reliable.
4. A simple generalization is warranted.
5. A hypothesis is warranted.
6. A theory is warranted.
7. An argument depends on an ambiguity.
8. A statement is overvague or overspecific.
9. An alleged authority is reliable. (Ennis, 1964, pp. 599-600)

Other definitions cited by those engaged in research are more brief than was Ennis'. Gotesky (1966, p. 180) stated that a critical thinker must be able to "(1) draw proper conclusions . . . (2) find relevant evidence for a conclusion, . . . (3) isolate the issue or issues involved." Rust, Jones and Kaiser (1962, p. 253) identified critical thinking skills as being made up of two parts, "the process of evaluating arguments and assessing the way in which conclusions are reached."

In a critique by O'Neill (1966, p. 386) in which he reviewed two studies of the ability of Catholic students to think critically, he stated that critical thinking "roughly" is the "ability to use and analyze logically statements and arguments." Yoesting and Renner (1969, p. 199), in reporting a study of the teaching of critical thinking as part of a general physical science course in college, referred to critical thinking as the "ability to exercise a reasoned opinion involving careful judgement and to make correct assessment of statements." Davidson (1969, p. 702) stated that the term critical thinking "refers to thinking processes that go beyond recognition or recall of factual data." Frank (1969, p. 298) chose to use as his total definition of critical thinking a partial quote from Ennis, and referred to critical thinking skills as "the correct assessing of statements."

Kemp, in reporting on a study of critical thinking and its relationship to
"Open-Closed Belief Systems" used a rather lengthy listing of critical thinking skills which included

1. The ability to define a problem.
2. The ability to select pertinent information for the solution of a problem.
3. The ability to recognize stated and unstated assumptions.
4. The ability to formulate and select relevant and promising hypothesis.
5. The ability to draw conclusions validly and to judge the validity of inference. (Kemp, 1963, p. 321)

In a study reported in the Journal of Experimental Education, Hyram (1957, p. 126) referred to critical thinking skills as "mental activities which:

1. seek to infer valid implications; 2. attempt to demonstrate; or 3. try to systematize knowledge . . . ." Henderson (1958, p. 280) although declining to develop his own definition of critical thinking, quoted Freedman and Jelinek who identified critical thinking as "the ability to judge the merit or quality of something," and as the skills needed when "interpreting facts, applying generalizations, and recognizing errors in logic."

Anderson, Marcham and Dunn conducted a study in which they attempted to teach the skills of critical thinking which they identified as:

(1) identifying specific facts; (2) selecting relevant facts; (3) organizing facts in terms of meaningful sub-topics; (4) arranging sub-topics in logical order; (5) making inferences from specific facts and from trends; (6) distinguishing between fact and opinion; (7) recognizing situations in which insufficient evidence makes it difficult or impossible to draw a clear cut conclusion (Anderson, Marcham and Dunn, 1944, p. 242)

In a relevant study, Rothstein (1960) discussed skills which he thought were needed for combining the teaching of American history and critical thinking. His list of thinking skills was similar to some of those previously mentioned and
included such skills as interpreting and identifying as well as drawing conclusions.

In a study by Creutz and Gezi (1965, p. 366) the following skills were stressed: "evaluation, interpretation, identification of causal relationships, awareness of trends, and effective use of informational resources."

A summary of these definitions, because of their diversity, would require a list nearly as long as the original review. However, the majority of these definitions do refer more often to some skills than to others. The ability to identify fact and opinion is mentioned frequently as is the ability to draw a conclusion. Recognition of assumptions and formulating hypotheses are also mentioned. An attempt, however, to draw a concise, complete definition of critical thinking from this review of definitions may well leave the reader in a frame of mind to agree with Goldmark (1966, p. 329) who observed that "There is little agreement as to what a person should do to qualify as a 'critical thinker' and therefore little agreement as to how to teach children to think 'critically'." The reader may also be ready to agree with Taba (1965, p. 534) that "the problem of defining thinking is still before us."

It may be that the problem is not, as Taba (1965) suggested, a lack of a definition for critical thinking, but rather one of too many general definitions. This possibility was alluded to by Berlak (1965). Berlak (1965, p. 5) examined some of the current lists of critical thinking skills and then stated that "if the schools attempted to equip persons to cope with all these domains, they would
have an entirely unmanageable task." He went on to suggest a possible remedy:

The use of general steps assumes a knowledge about the thinking process that is simply not available . . . . We do not, at the present, have the general theories, principals, or models from which we can make precise predictions, shape pedagogical strategies, write the textbooks that would aid us in teaching thinking effectively . . . . What I am suggesting is that educators rely less on the inadequate general models and focus on studying intellectual processes in a given area in order to develop output criteria and models that appear to characterize successful output for that area. From these context specific models and criteria, educators may develop pedagogical strategies and teaching material that are appropriate for that area. (Berlak, 1965, pp. 7-8)

Of the research studies cited in the current literature, the one that seemed closest to Berlak's suggestion for teaching critical thinking "in a given area" was the Harvard Social Studies Project. This study, as reported by Oliver and Shaver (1966, p. 246), attempted to establish a "model" for critical thinking in the social studies area based on the needs of citizenship education, especially the analysis of public issues. The Harvard Project was aimed at the "legal-ethical dimension of reflective thinking," or "a 'legal ethical' or 'jurisprudential' framework."

In a collection of articles edited by Shaver and Berlak (1968) in which they quote Oliver and Shaver, the "jurisprudential framework" is discussed. Under the expanded heading of "Operational Objectives of a Jurisprudential Social Studies Curriculum" it is stated that:

A student should be able to:
1. Deal with political controversy at a general analytic level and relate his analysis to specific issues and concrete cases . . . .
2. Identify inconsistencies and conflicts between two or more values, empirical statements, or definitions.
3. Deal with inconsistencies and conflicts between values by identifying an array of situations in which the inconsistent or conflicting values are presented in varying degrees of favorableness or unfavorableness in order to delineate at what point he should support one value as against the other.

4. Deal with inconsistencies and conflicts between empirical statements by seeking and evaluating specific evidence to support the statements.

5. Deal with the inconsistent or ambiguous use of words by seeking evidence concerning how the words are most commonly used, or how the concepts which the words label may be most accurately described.

6. Distinguish between those factual claims which are relevant to the central value issues in a controversy and those claims which bear little or no relationship to the value.

The level of specificity with which these operations are stated above, we think, makes the problem of assessing a student's ability to perform any of them less difficult than assessing whether or not a student has learned to use some general process called "critical thinking" or "problem solving." (Oliver and Shaver, 1968, p. 431)

These suggestions by Oliver and Shaver (1968) for the "Jurisprudential Social Studies Curriculum" are excellent examples of "operations" useful to students in a particular curriculum area.

It can be seen, then, from this review that of all the problems facing the researcher in the field of critical thinking, the lack of a definition of the term is not one of them. The lack of an appropriate definition, however, especially for the researcher's "specific area," may well be a serious problem.

General Areas of Research in Critical Thinking

While it is obvious that there is much disagreement over specific definitions of "critical thinking," there is just as obviously very little disagreement over the necessity for continued research in this exciting area. Ennis best summarized the importance of continued research in critical thinking when he stated:
Although critical thinking is generally recognized as one of the most important goals of the schools, very little research has been done on the topic. On the average, less than two studies a year are published, just barely scratching the surface. Much needs to be done. (Ennis, 1963, p. 17)

Cogswell (1969), Gotesky (1966), Glatt (1963), and Hyram (1957) in articles written during a twelve-year period of time agreed with Ennis that most Americans think the skills of the critical thinker are of primary importance in a society that espouses democratic ideals. They also agree with Ennis that much research remains to be done. Research has been attempted, however, and the results of these attempts are of great interest to those engaged in curriculum development and the teaching of critical thinking. The studies reported seemed to fall into three very general categories. The first includes studies of attempts to teach critical thinking in special classes designed to teach only critical thinking skills to students. The second area of study centered around various attempts to teach critical thinking skills as a part of a subject already in the curriculum, such as science, English or social studies. Third were studies concerning the relationship of social conditions, such as education, religion, family background, etc., and the ability to think critically. This final area of "socio-cultural conditions and critical thinking" is mentioned only to identify an area of interest to critical thinking research. Since this area was not directly concerned with this study, it will not be discussed in this review. The other areas mentioned, however, are reviewed. They are critical thinking as a special curriculum area and critical thinking as part of a subject already in the curriculum. The research relating to social studies, however, is reviewed separately because of its special interest to this study.
Teaching Critical Thinking

A classic experiment in the area of teaching critical thinking skills was that conducted by Glaser (1941). In this study Glaser was able to conclude that students who were given instruction in the skills of critical thinking made greater gains on the Watson-Glaser Tests of Critical Thinking than did students who followed the regular school curriculum.

Hyram (1957) conducted studies using upper grade elementary students in which he attempted to teach critical thinking skills through the use of a procedure which he called "The Socratic Method." His method was tested using a device which was intended to measure the students' ability to use logic. Although parts of his procedure were not identical to those used by Glaser, his study indicated that students do respond to specific instruction in critical thinking.

In a study by Eisele (1966) aimed at constructing and using "resource guides" as aids in teaching critical thinking, it was found that students who used such guides made significant gains on the Watson-Glaser Critical Thinking Appraisal when compared with students who used no such guides.

In a study by Larson and Gratz (1970) which compared "T Group Training," with "Discussion Training" as aids in "Problem Solving," it was discovered that both of these methods as compared to a control group, produced significant gains in critical thinking ability as measured by the Watson-Glaser Appraisal.

In two studies, one conducted by Constantinides (1965) and the other by Davidson (1969, p. 702), evidence was produced which indicated that proper
teacher training and development of a positive teacher attitude toward critical thinking offered "genuine hope for improved instruction in critical thinking."

All of the studies so far cited, even though conducted in a variety of ways and locations, seem to indicate the basic validity of Glaser's original finding, that students do respond in a positive way to attempts to teach critical thinking skills directly.

Critical Thinking and Non-Social Studies Areas

in the Curriculum

The second general area of interest to those involved in critical thinking research, that of teaching critical thinking skills in conjunction with non-social studies classes that are a regular part of the school curriculum, is the next area of interest in this review. The studies reviewed in this section fell under two headings: those studies conducted in the science areas and those conducted in the language arts area. A study by Yoesting and Renner (1969) assessed the effect of a college general physical science course designed to contribute to the improvement of the students' ability to think critically. Using the Watson-Glaser Appraisal as the dependent variable, this study did achieve positive results.

The other area used most often by those hoping to teach critical thinking skills has been the language arts. In the research reviewed, it appeared that there was more research concerning language arts and critical thinking than any other area. Of these studies, a recent attempt to combine the teaching of speech
and critical thinking was of significance. In reporting his findings, Frank stated that:

The experimental group scored significantly higher than the control group on immediate and delayed critical-thinking post-tests across five different teachers . . . . This means that the experimental course was effective with five different teachers and that the improvement achieved under each teacher persisted for three months (Frank, 1969, p. 301)

Frank (1969) did note, however, that in discussions with students involved in the study, they indicated some resentment toward the additional study requirements of the critical thinking portion of the study.

In other studies by Morton (1964), Grottenthaler (1967) and Ness (1967), all of whom used speech classes to teach critical thinking skills, it was found that critical thinking skills, formally taught, produced significant gains in critical thinking skills as measured by the Watson-Glaser Critical Thinking Appraisal.

A study that involved teaching critical thinking in the areas of English, geometry, science and social studies to 1500 students was reported by Henderson (1958). The results of this study were contradictory in that students showed significant gains in critical thinking skills as measured by the Watson-Glaser appraisal, but failed to register such gains on the A.C.E. Test of Critical Thinking, Form G.

The difficulty of evaluating these various studies, some of which produced conflicting results, was best summarized by Shaver. After completing a review of many of the studies cited here he said:
The conclusion that follows, then, from a review of available research is that while there is some evidence to support the proposition that teachers should specifically teach critical thinking skills, research does not give any firm indication as to the relative effectiveness of various methods of teaching those skills. (Shaver, 1962, p. 15)

This observation made by Shaver in 1962 would still appear to be valid based on studies reported since that time. In the studies cited in this review there appeared to be no indication that a certain method had been confirmed as "the best" way to teach critical thinking. The conclusion, then, must be that there is still no "firm indication" of the "established effectiveness" of any one particular method to teach critical thinking.

Social Studies Research and Critical Thinking Skills

The third general area of research reviewed covered investigations conducted in the social studies. As a social studies educator, it was disquieting, to say the least, to be made aware of the lack of research in this important area. A quote from Shaver describes a serious situation that has not drastically changed from the time the statement was made.

What does published research directly concerned with the teaching of secondary school social studies tell the teacher about the appropriateness of techniques and procedures for teaching critical thinking. Unfortunately, not much. In the first place, such research is scarce. An extensive review covering known sources of such research turned up seven relevant experimental studies—only three of which were directly concerned with the teaching of social studies. Moreover, the findings were not conclusive. (Shaver, 1962, p. 13)

Since this statement was made, there have been worthwhile studies reported, but one cannot help but be surprised by educational researchers'
neglect of such a vital area of concern to a democratic society. How this long-time neglect in the research field has carried over into the classroom was aptly demonstrated by Shaver (1965). After reviewing ninety-three social studies textbooks, and taking note of the lack of concern with critical thinking and social studies instruction, Shaver wrote that:

The results of a review such as reported in this article must be sorely disappointing to social studies educators committed to the idea that the citizenship education function of the social studies should include as an essential ingredient teaching students to think reflectively about important societal issues. The disappointment in textbooks will be especially great for educators who believe that an adequately comprehensive framework of reflective thinking must embody consideration of the value conflicts inherent in our pluralistic society. (Shaver, 1965, p. 250)

These comments on the lack of concern by social studies curriculum designers toward teaching critical thinking skills to students is indicative of the fact that more research is sorely needed in this important area.

Any discussion of research in the social studies-critical thinking area would have to begin with a review of the Harvard Social Studies Project mentioned earlier in this review. This study was based, in many ways, on the "model" approach defined earlier by Berlak (1965), and attempted to develop a social studies curriculum designed to teach students the skills needed in the analysis of public controversy. The course was taught to seventh and eighth grade students and was taught within the context of a two-year geography-U.S. history sequence. The main objective of the course, according to Shaver and Oliver (1964, p. 192) was to "teach a scheme for handling public controversy focused on three kinds of problems: (1) Settling factual issues; (2) Handling
problems of word usage and meaning; (3) Dealing with value conflicts." The research question then became one of deciding "Could curricular materials and instructional methods be developed to teach this framework of critical thinking...?"

After assessing the results of their study, Shaver and Oliver were able to conclude:

The project's research findings indicate that students learned to apply a complex framework of analysis to the discussion of public issues, and that their gains in knowledge of traditional social studies content and in interest in societal issues compared favorably with those of control students exposed to more conventional curricula. The results might well warrant the substitution of the experimental curriculum--set in the context of the U.S. history course as it is--for more conventional curricula in schools where this is possible. (Shaver and Oliver, 1964, p. 248)

Other research in the social studies area was reported by Rothstein (1960) who used an American history course to teach critical thinking skills with positive results. Rothstein (1960) first identified a list of thinking skills mentioned earlier that he hoped to teach in a thirty-five week course in American history. These skills were then presented to students using American history as a vehicle to teach critical thinking. Rothstein (1960) was able to conclude, based on test results from the Watson-Glaser Critical Thinking Appraisal, that American history presented to students in conjunction with the teaching of critical thinking skills developed significant differences in students' ability to think critically. The experimental group was compared with a control group that had not received the special instruction.

Creutz and Gezi (1965) reported a study which taught critical thinking in a current events class, also with positive results. Cousins (1962) conducted
a study using eighth grade social studies students and found that these students registered significant gains on the Watson-Glaser Critical Thinking Appraisal when taught critical thinking skills as a formal part of their class work.

Another study in this area was reported by Shaver and Larkins (1969). This study was of interest because of several factors. First, it was conducted in a Utah setting, in high schools similar in many respects to Cedar High School. Second, it made use of some of the research completed during the Harvard Project as did the study at Cedar High School. Thirdly, it used similar, but in most cases more sophisticated, techniques than those used in the Cedar City study.

This study was designed to identify and present to students an "Outline of Concepts for the Analysis of Public Issues." (Shaver and Larkins, 1969, p. 78) The identification of concepts was followed by development of "Suggestions for Teaching the Concepts" (p. 91) and finally, the concepts were presented for student use in thirty-one "teaching bundles." Each bundle began with a "Note on Purpose," a statement of "Objectives" and a "Note on Procedure." These items were followed by "Teaching Suggestions," and finally, the presentation of an issue or situation which gave students the opportunity to analyze a "public issue."

This study also used modifications of the "recitation" and "socratic" styles of teaching used in the Harvard Project, along with a "seminar" teaching style. Again, in a general way, a degree of similarity exists with the "seminar sessions" used in the Cedar City study.
Some of the evaluation instruments for this study were the SIAT No. 1, and SIAT No. 2, which were developed during the Harvard Project and the Headlines Test and the Wagmis Test.

The Wagmis Test is made up of subtests one, two, and four from the Watson-Glaser Critical Thinking Appraisal, Form Am and parts six and seven of the Michigan State Test of Problem Solving, Form A. (Shaver and Larkins, 1969, p. 230)

In drawing "implications" from their study, Shaver and Larkins stated that:

It should be kept clearly in mind that the research of the U.S. U. Project was aimed at the assessing of the relative impact of teaching style, not at the assessment of the effectiveness of our curriculum in teaching analytic skills, as compared to some other curriculum. (Shaver and Larkins, 1969, p. 268)

This, of course, is a major difference compared with the Cedar High School Project which attempted to teach "analytic skills," through the use of the curriculum. As to the final results of their study, Shaver and Larkins stated that:

Looking at both the Harvard and the U.S. U. Projects, we can conclude that teaching style seems to have little differential effect on the learning of analytic concepts: at least in the case of the styles and concepts of interest in these two projects. (Shaver and Larkins, 1969, p. 269)

A summary of the research reviewed here then, can probably best be made by this statement from Shaver:

Probably the most conclusive suggestion supported by the research reviewed here is that we should not expect that our students will learn to think critically as a by-product of the study of the usual social studies content. Instead, each teacher should determine what concepts are essential--e.g., that of relevance--if his students are to perform the intellectual operations deemed necessary to critical thinking--such as, for example, the formulation and evaluation of hypotheses. Each of these should then be taught explicitly to the
students . . . . Situations as similar as possible to those in which the students are to use their competencies should also be set up in the classroom, and the students guided in application of the concepts in this context. (Shaver, 1962, p. 16)
OBJECTIVES

The identification of a decrease in critical thinking skills among students at Cedar High School (Morris, 1968) led to the expressing of concern by responsible people in the school district. This concern was heightened by the fact that the decrease in critical thinking skills had taken place during a period when the staff at Cedar High School was engaged in a total school effort to develop a new and innovative program, especially designed to meet the needs of each student. The size of the decrease in critical thinking skills made it apparent that special attention should be given to developing a remedy.

In discussion by Dr. Morris, after he was appointed superintendent of the Iron County Schools, and staff members at Cedar High School, it was decided that the problem was worth pursuing. In addition, it began to appear that the improvement of critical thinking was of enough interest to others in secondary education to warrant a formal study of any attempt to teach critical thinking at Cedar High School. It was decided by Dr. Morris and the writer to attempt to teach critical thinking skills through the use of continuous progress packets and to study formally the effectiveness of the packets. This decision was based on the previous use of continuous progress packets in the social studies and language arts areas at Cedar High. The decision to have instruction in the teaching of critical thinking take place in a history course was based on the desire of the writer, whose speciality is American history, to conduct the research study.
Preliminary reading about teaching for critical thinking has indicated that history might be an effective vehicle for the proposed study. Permission was granted by the school administration and support for the study was promised by the faculty of Cedar High School.

The objective of the curriculum phase of this study, then, was to develop a continuous progress packet based on the three ingredients identified by Shaver (1962) as being necessary to teach critical thinking to students: first, identification of thinking operations; second, a formal period of instruction in their use; and third, opportunities to use these skills in meaningful situations.

The research objective of the study was to investigate the effect, in terms of both critical thinking and knowledge of American history, of combining the teaching of critical thinking with American history. The hypotheses were:

1. Students in the experimental American history program would show a greater mean gain in skills in critical thinking as measured by the Watson-Glaser Critical Thinking Appraisal instrument than would students in a control American history course.

2. Students in the experimental American history program would not have different mean scores on the history portion of the STEP test than would students in a control American history course.
PROCEDURES

Population and Sample

The procedures involved in meeting these objectives and the evaluation of these procedures involved an experimental group and a control group, both composed of Phase III students. At Cedar High School, Phase III students comprise the middle phase for general instructional purposes and are generally college oriented students. Phase IV, or advanced placement students, are those who take American history for college credit, with Phase II students being able but less interested students in a college preparatory curriculum. Phase I students are those with severe reading or emotional problems, with each class limited to 15 students. Phase III, therefore, provided an average, or slightly above average, group of students for this study.

Students were free to phase themselves and to move through different phases during the year as is the case with all classes at Cedar High School. Course descriptions were also published describing classes and their relation to phase level, so that no student was compelled either to enter to to leave the Phase III level.

Past experience at Cedar High School indicated that about 50 or 60 students would sign up for Phase III history, and it was originally anticipated that two groups of approximately 30 students would be formed to establish the control and test groups.
The classes involved in the study were taught at 8:40 a.m. and 9:20 a.m. and were filled as students worked out their class schedules. Neither class was scheduled in opposition to any class not taught at other times during the day, and no mention was made of the research to be done with Phase III students. A teacher not involved in the study handed out class cards for both classes as students asked for them. There is no evidence to indicate that students were influenced either to join or leave either Phase III section.

During registration it became obvious that more students were interested in the class taught at 8:40 a.m. than in the one taught at 9:20 a.m. Rather than force students to change sections, the registration was allowed to proceed normally, with the 8:40 a.m. class achieving an enrollment of 28 students and the 9:20 a.m. class an enrollment of 21 students. At the conclusion of registration, the teacher who conducted the class registrations designated the groups number one and number two and then flipped a coin to determine which group would be the experimental group. The flip of the coin determined that the 8:40 a.m. class would be the control group and the 9:20 a.m. class would be the experimental group.

The control group, which consisted originally of 28 students, was made up of 14 girls and 14 boys, ranging in age from 15 to 17 (see Table 2). Cedar High School is an ungraded high school, and students who traditionally would be classified as sophomores, juniors, and seniors were in this class.

The experimental group consisted originally of 21 students and was made up of 16 girls and 5 boys, again ranging in age from 15 to 17. During the
Table 2. Number of students, by age and sex, completing critical thinking study

<table>
<thead>
<tr>
<th>Group</th>
<th>Age</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>15</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>11</td>
<td>9</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>13</td>
<td>14</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Experimental</td>
<td>15</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>2</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>16</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

course of the study, each group lost one member due to their parents leaving the Cedar City area. In both instances, the person leaving was a 16-year-old boy.

**Design**

**Curriculum design**

The model for the curriculum development phase of this study was based on the earlier cited statement of Shaver (1962). After a review of the then available studies relating to teaching critical thinking, Shaver identified three general steps to be followed by those attempting to teach critical thinking
skills to students. His suggestions were:

each teacher should determine what concepts are essential—e.g., that of relevance—, if his students are to perform the intellectual operations deemed necessary to critical thinking. . . . Each of these should be taught explicitly to the students . . . . a further step can be suggested: Situations as similar as possible to those in which students are to use their competencies should also be set up in the classroom, and the students guided in the application of the concepts in this context. (Shaver, 1962, p. 16)

This model places upon the curriculum developed (the teacher) the responsibility to identify "what concepts are essential" (Shaver, 1962, p. 16) as objectives for an instructional program in critical thinking. It is obvious from the wide choice of thinking skills identified in the Review of Literature section of this thesis, that the selection of the critical thinking skills as objectives is a difficult one. The skills selected for use in this study included those identified by Raths et al. as:

- comparing, summarizing, observing, classifying, interpreting, criticizing, looking for assumptions, imagining, collecting and organizing data, hypothesizing, decision making, applying facts and principles in new situations, and designing projects or investigations. . . . (Raths et al., 1967, pp. 5-19)

The selection of this particular list was made only after many other lists and suggestions for teaching critical thinking were examined. This list seemed to cover those thinking skills necessary for success in the social studies curriculum, and they seemed to be indicative of skills necessary for meeting the challenges facing citizens in today's modern, pluralistic society.

One other approach to critical thinking, a concern with "those skills necessary to deal with public controversy" (Shaver and Oliver, 1964, p. 192)
was also deemed necessary for this study. Students using the experimental approach were shown that focusing on public controversy lead to the consideration of value conflicts. Critical thinking skills for the Cedar City Study were, then, selected for their relevance to "public controversy" and "value conflict" and can be summarized as the ability to identify:

1. the values held by the historical figures being studied,
2. which values were in conflict,
3. the moral-legal-ethical causes of the value conflict being studied,
4. how the value conflict was resolved, or how it might have been resolved.

The combining, then, of the list of critical thinking skills identified by Raths et al. (1967) with the ability to use the operations necessary to resolve value conflict made up the definitions of "critical thinking" as called for in step one of the curriculum development model used for this study.

After the identification of the thinking skills to be taught as a part of this study, the writing of the American history packet designed to teach these skills and to provide for their use in "meaningful situations" was begun. As was evident from the Review of Literature given earlier, American history has not been widely used to teach critical thinking and models for this type of research were scare.

Portions of the Harvard Project (Oliver and Shaver, 1966) and the study by Rothstein (1960) are the best examples of studies that taught critical thinking skills as part of an American history course. Neither of these studies,
however, used individualized continuous progress packets as the basic source to teach critical thinking. For the construction of the experimental packet, therefore, the writer relied on a combination of the research cited previously and on prior use of continuous progress packets at Cedar High School. The packet was organized with an introductory section which indicated to the student how the packet was to be used in a continuous progress situation. This section included three types of guidance for students. First were procedures for completing each area in the continuous progress packet; second were directions for conducting a seminar; and third was a diagram or a flow chart graphically portraying the steps to be followed by students using the packet.

The next section in the packet was "Unit One: Introduction to Critical Thinking." This unit was designed to "specifically teach" critical thinking skills to students, this being the second requirement of the research model.

This unit was divided into four sub-sections, each designed to teach some aspect of critical thinking. These sections will be described in the order that they were presented in the packet.

Area One of this first unit was titled, "Critical Thinking and American History." This section reviewed the requirement to think about problems of survival that men have always faced. It further stated that man's continued existence requires a continued effort to reach thoughtful solutions for current problems.

This section also introduced the students to a publication which discussed and gave examples of critical thinking skills. This booklet, titled Critical
Thinking was published for general use in Utah by the Utah State Board of Education, but was actually based on the work of the Harvard Social Studies Project. The study of this booklet by students in the experimental group was the initial step in the attempt to teach critical thinking to students involved in the study. Each student was given a copy of the booklet and, using student discussion and comment whenever possible, the material presented was studied by those in the experimental group.

The table of contents gives a general idea of the areas covered by the Critical Thinking booklet:

I. Describing the World Around Us
   A. Definitions
   B. Classes
      1. Danger of classifying an object on the Basis of Limited Information
      2. The Danger of Using Classes Which Refer to Averages
   C. Definitions and Terms with Value Loadings
   D. Summary

II. Testable Statements
   A. Statements that Describe Events in the World Around Us
      1. Specific Claims
      2. Summarizing Statements
      3. Explanations
   B. Telling How Sure We Are
      1. True Beyond Reasonable Doubt
      2. Probably True
      3. False Beyond Reasonable Doubt
      4. Probably False
      5. Doubtful
      6. Controversial
   C. Summary

III. Proof Process
   A. Framing Hypothesis
   B. Assumptions or Hidden Claims Implied by a Hypothesis
   C. Sampling: Stating How Much Evidence Supports a Claim
The second area that was discussed in Unit One was titled "Thinking Skills Useful in Studying American History." This section of the packet was an extension and explanation of the skills of critical thinking identified earlier by Raths et al. (1967). This section was designed to be used as a teaching-learning device studied by the teacher and students in discussion sessions. This discussion of critical thinking skills was further designed to serve as a reference of students throughout the study when asked to identify examples of critical thinking used by historical figures or to exhibit these skills themselves.

The next two sub-areas in Unit One were directed toward the skills necessary to identify areas of public controversy and to resolve "value conflict." Area Three, the first of the two remaining sub-areas, was titled, "Analysis of Public Issues in American Society." This section introduced and attempted to identify some of the steps that are necessary in the resolution of value conflict.
Area Three was also designed to develop in students the willingness as well as the thinking skills that appear to be necessary for thoughtful citizens to resolve value conflicts. Students were also introduced in Area Three to the concepts of "individual freedom" and "human dignity,"--the two concepts which formed the basis for the concept of a "national ethical standard" which citizens of America might use as the starting point for the "rational" resolution of value conflict.

Area Four, the final sub-area of the introductory unit on critical thinking, then examined a technique that has enormous potential for the teaching of critical thinking. This area was titled "The Socratic Method of Inquiry." This section quoted portions of a discussion (Jordon, 1963) of the attitude toward inquiry that was exhibited by Socrates. The reading emphasized that the "socratic approach" will not work when proper answers to questions are already known. It is rather, a technique which supposes that each man has a spark of rationality that leads him toward truth if he is given that opportunity. The method is best used when the teacher and the students are looking for a way of "weeding out bad answers" and moving toward good ones.

In this study, the introduction to seminar sessions provided oral discussion as an important opportunity for students to use their skills of critical thinking. The opportunity to use these skills in the resolution of value conflicts was made available to students throughout the year in the history portion of the curriculum. Students were asked to identify areas of value conflict in American history, and then to trace the historical resolution of the conflict or to suggest and defend in a "seminar session" other ways the
conflict could have been resolved.

The issues and conflicts identified in the history portion of the critical thinking packet presented many situations selected to allow students to use their critical thinking skills in seminar sessions that were intended to provide experience in the analysis of public issues. The identifying of instances suitable for use in analyzing public controversy and value conflict was done in a manner somewhat similar to the "teaching bundles" used on the U.S.U. Project. In the Cedar City Study, however, the student was asked to identify an area of conflict, recorded in a historical source rather than a "teaching bundle," and then to use critical thinking skills to resolve the conflict. Many of these problems had no "right" answer, and so the "socratic method" of simply moving from "bad answers" toward "good answers" and then defending these "good" answers was the challenge for students in the "seminar session" portion of this study.

Units Two through Eight of the packet were designed to present American history in such a way that the opportunity to use the critical thinking skills taught in Unit One of the packet could be strengthened in the "meaningful situations" required by the curriculum model. Some suggestions for getting students engaged in critical thinking in an historical, political context, were given by Oliver and Shaver.

At least six pedagogical approaches are commonly used to organize materials for the teaching of contemporary issues. These might be briefly stated as follows: (1) the injection of contemporary issues into regular history and government courses whenever they appear relevant; (2) the treatment of the "daily news" as the main substance of the course, often through programs provided by daily or weekly
newspapers or newsmagazines; (3) the treatment of "current events" periodically (usually once a week) as a regularly scheduled activity; (4) the thematic approach to history wherein a topic such as "Church and State" or "The Democratization of American Society" is injected into the regular historical content; (5) the historical crises approach, in which particularly critical historical episodes or eras are identified and analyzed in the search for useful generalizations which might help one analyze or explain contemporary problems; (6) the problem-topic approach, which gives priority to particular topics, and then seeks to develop them from some point in the past to the contemporary definition of the problem. (Oliver and Shaver, 1966, p. 138)

Numbers five and six were of special interest to this study. Number five, "the historical crises approach" was the basis for the design that was followed in the American history portion of this study. It was the writer's hypothesis that the identification of particularly critical "historical episodes" could be accomplished by any skillful history teacher. It was also hypothesized that each historical "era" contains episodes that can be "analyzed in the search for useful generalizations which might help one analyze or explain contemporary problems." (Oliver and Shaver, 1966, p. 138)

Samples of individual units which presented these "episodes" are provided in the Appendix of this thesis. The table of contents outlining the topics of the experimental packet is listed below.

**Unit I. Introduction To Critical Thinking**
- Critical Thinking and American History
- Thinking Skills Useful in Studying American History
- Analysis of Public Issues in American Society
- The Socratic Method of Inquiry

**Unit II. Establishment of the American Nation**
- What Factors in World History Led to the Discovery of America?
- What Factors Caused the Exploration of America?
- Why Did Europeans Settle in America?
How Did England Gain Control of North America?
What Were the Causes of the Revolutionary War?
How Did We Win Our Independence?

Unit III. Uniting The New Nation
How Shall the Nation Be Governed?
What Are the Basic Principles and Organization of Government Established by Our Constitution?

Unit IV. The Challenge of Sectionalism
The Age of Andrew Jackson
The West Manifest Destiny
Sectional Differences Split the North and South

Unit V. Testing the Union
The United States Divided
The War Between Sections
Reconstruction

Unit IV. Creating Industrial Strength
Subduing the Last West
Consolidating the Factory System
Labor and Agriculture Want a Share in the "Stakes of Power"
Partisanship and Statesmanship.

Unit VII. Reaching Into the World
Carrying the Flag Overseas
The Time of the Progressive
New International Responsibilities

Unit VIII. The Quest for Security
Involvement in Europe
Prosperity's Promise
Crash, Crises and the New Deal
The End to Isolationism
The Global War
Life in an Uneasy World

Student Guide for Analysis of Current Events, History and Critical Thinking Skills as Aids in the Search for the Solution of Current Problems

The final section in the packet was patterned after the "problem-topic approach" identified earlier by Oliver and Shaver (1966). This portion of the
study attempted to give "priority to particular topics" and then attempted to "develop them from some point in the past to the contemporary definition of the problem." This attempt was made through a unit titled "Student Guide for Analysis of Current Events: History and Critical Thinking Skills as Aids in the Search For the Solution of Current Problems."

This unit was the culmination of the year's work, and was designed to have students "use in a meaningful way" the critical thinking skills they had been building throughout the study. The outline for this unit contained the following items:

Specific skills you will be engaged in during this study are:
1. Reading
2. Writing
3. Research skills
   a. Library research
   b. Bibliography construction
   c. Organization of materials
   d. Evaluating and sifting materials
4. Making judgments
5. Drawing conclusions
6. Stating conclusions
7. Predicting results
8. Recommending solutions
9. Defending and explaining solutions and conclusions
10. Critical Thinking Skills
    a. Recognition of assumptions
    b. Interpreting data
    c. Evaluation of arguments
    d. Identification of value conflicts
    e. Establishing the validity of information
    f. Identification of testable statements
    g. Use of the proof process
    h. Handling of value judgments, statements of preference, dilemmas and loaded statements
    i. Observing
    j. Imagining
    k. Analysis of public issues
Step 1

Choose for your current events study a problem area in American life. A list of suggested topics you may wish to choose from includes:

1. Municipal politics
2. Religious freedom
3. Rights of the accused
4. Status in America
5. Science and public policy
6. Communist China
7. 20th Century Russia
8. The Immigrants experience
9. The lawsuit
10. Bitterness from the Civil War
11. Nazi Germany--A resurgence
12. New Deal legislation
13. Organized labor
14. Railroads and other transportation
15. Community change
16. Negro views of America
17. Race and education
18. The "Hippie" movement
19. Crime
20. Viet Nam
21. Isolationism and nationalism
22. Drugs
23. Urban decay. The Ghetto
24. Education
25. Inflation
26. Political corruption
27. Agriculture
28. The economy
29. Conflict
   a. Racial and ethnic conflict
   b. Religious and ideological conflict
   c. Threats to the security of the individual
   d. Conflict among economic groups
   e. How to pay for health, education and welfare
   f. Political conflict

Step 2

Write a statement concerning the problems you have decided to research. (Suggested format)

1. Describe the problem.
2. Where is it located?
3. Who is involved?
4. Why are you interested in it?
Step 3
Prepare a bibliography to direct you in the research of the problem you have chosen. Make sure you can find sufficient sources to complete the study. Begin your research by checking some of these sources available to you.
1. Library (school, city, college)
2. Teacher
3. Parents
4. Other students
5. Films and tapes
6. Interviews
7. Periodicals
8. Newspapers

Step 4
Answer these questions as a guide to your research.
1. What are the apparent causes of the problem?
2. How far back in history did this problem begin?
3. What solutions have been tried in an attempt to end the problem?
4. What similar problems have existed in America's past?
5. What solutions have been used to solve these previous problems?
6. Have these solutions been successful? Why or why not?

Step 5
Statement of conclusions based on research.
1. What solutions or options are presently available to end this problem?
2. Has there been a historical solution offered as a cure for this problem? How does it compare with your solution?
3. What might prevent the acceptance of your solution?
4. Submit your findings to the teacher for evaluation.

Step 6
Evaluating your ideas and putting them to work.
1. How was history an aid in helping you arrive at your conclusion?
2. How did the concepts discussed in the booklet "Learning to Think Critically" help you to arrive at your conclusion?
3. Based on your understanding of this problem, write a letter to your senator or representative offering your ideas to him as a contribution by an interested citizen.
4. Be prepared to discuss your findings in a seminar period, and also be prepared to present your findings as part of a total group discussion.

Many of the topics listed in Step 1 were topics that were used in the Harvard Project and have since been put in booklet form for general school use. The booklets, prepared by Oliver and Newmann (1969) and published by AEP under the title, *Public Issues Series/Harvard Social Studies Project*, were available for use by the students in the experimental and control group.

The curriculum design for this study was actually put into use, then, through the continuous progress packet which, hopefully, met the three requirements of the curriculum development model. The packet identified the critical thinking skills to be taught, presented them to students, and then attempted to provide meaningful situations in which students might use their critical thinking skills.

**Design of classroom presentation**

The experimental study actually began when the two classes participating in the study completed their registration and administration functions on August 28 and 29, and met formally for the first time on September 2, 1969. Both classes spent from September 2 through September 5 on a teacher-directed review of world conditions prior to the discovery of America. From September 8 to September 17, both classes were involved in the testing procedures described in the "Data and Instrumentation" section of this thesis.

On Monday, September 22, the two groups both taught by the writer, began the formal study of American history. The experimental group used the
packet described earlier, and the control group used a continuous progress packet previously used at Cedar High School. The packet used by the control group followed a format identical to that used by the experimental group with one major exception. The control group's packet used as the final activity for each unit a series of questions oriented to the recall of memorized factual data, while the experimental group's packet used an approach designed to elicit critical thinking responses. Examples of units used by the control group as with the experimental group are given in the Appendix.

The control group proceeded through its packet in the traditional manner completing the packet on Friday, May 8. The experimental group began a formal study to identify and learn critical thinking skills on Monday, September 22. This portion of their study followed Unit One of the experimental packet described earlier, and was completed on Friday, October 3. After the completion of Unit One, the experimental group began their study of American history using Units Two through Eight of the experimental packet. These units were designed to teach critical thinking and American history using the "historical crises" approach. The history portion of the experimental group's study, as with the control group terminated on Friday, May 8. From Monday, May 11 to Friday, May 17, both classes completed the final series of standardized tests following the procedures described in the "data and instrumentation" section. Giving these tests prior to the last week of school was done in the attempt to avoid the constant interruptions of the final "awards and assemblies week" activities.
From Monday, May 18 until Friday, May 22, both classes studied a current events area. The experimental group used the final unit in their packet titled "Student Guide for Analysis of Current Events," described earlier while each student in the control group was allowed to simply "choose" an area of interest to research. It had originally been planned that the analysis of current issues portion of the study would take at least three weeks to complete, but due to a delay in test arrival and the time consumed by the "historical crises" portion of the study, the "problem topic" approach was limited to one week, and followed the completion of the testing procedures.

The requirements of time and the necessity of testing students in each group led to the restricting of some aspects of the continuous progress approach that was used. Although students are usually free to complete the requirements set forth in a continuous progress study as rapidly as they can successfully do so, for the purposes of this study it was necessary to limit, at least partially, the speed at which students might proceed. Rather than allowing accelerated students to move to the next unit upon completion of the previous unit, these students were required to go into a "quest" or "in-depth" study of some interest area identified in the unit they had completed. Allowing accelerated students to move into a quest area after completing the requirements of the "basic" unit was built into both packets by means of a flow chart that directed students through the packet and to a quest area. With this exception, which allowed for the administrative aspects of the project to be handled more conveniently, the packets were used as designed.
With both classes, the general weekly format began with an introduction and discussion by the teacher of the unit to be studied. This discussion involved an opening statement usually taken from the written introductions to the units in each packet, and was followed by a brief summary of the items in the "topic" outline for each packet.

The students in the control group then were asked to choose a varying number of questions from the "Self Test" portion of the control packet. They were then either to answer questions about the area being studied or to prepare notes for a group discussion of the area.

The introduction of the unit of study for the experimental group was similar in every respect to the introduction given the control group except they were referred to the "Critical Thinking Guide" of the unit for assignments. Students were then given "open" or "study" time for one or two days at which time they were expected to read from a variety of texts and resource books or go to the social studies resource center. The resource center is located in the social studies area of the high school, and the various types of media listed in the packets are catalogued and available for student use.

At the conclusions of these study periods, the students were directed to meet in seminar or discussion groups which were organized by the students themselves on a "social" rather than an "academic" basis. In other words, the students met with their "friends" for a seminar period.

The format for the seminar periods was set up in the student guide section of the packets for the control and experimental groups. Each group
was to choose a leader for the day's discussion, and to meet in the "seminar rooms" that surround the "large group" area in the social studies department at Cedar High School. The group leader would use either the "Self Test" guide in the control group sessions or the "Critical Thinking Guide" in the experimental group sessions as his guide for asking questions necessary to get the discussion started.

While the administrative format for each group was similar, the internal workings of the seminar sessions of the two groups were quite different. The two groups used differing styles of dialogue in their seminar sessions--these two styles described by Shaver and Oliver (1968) as the "socratic" and the "recitation" types of discussion. The experimental group, as has been previously explained, had special instruction in the so-called "socratic technique" of discussion. This was a probing, challenging approach, which questioned the value judgments, hypotheses, and generalizations that were put forth by students in response to the questions in the "Critical Thinking Guide."

The "socratic" style was considerably different from the "recitation" style of discussion used in the control group. The control group sessions were aimed primarily at re-evaluating and summarizing the factual data introduced in the "Self Test" portion of their packet. The teacher, as with the experimental group, was involved occasionally as a discussion leader, but special emphasis was placed on not using the "socratic" method of discussion.

It was interesting that issues and conflicts readily identified and analyzed in the "socratic" sessions of the experimental group were often totally
ignored by the control group, especially toward the end of the study. Their only "violent" discussions seemed to center around questions of fact, and only rarely around issues and value conflicts. The area of value conflict was the usual discussion topic for the experimental group throughout the study. The experimental group also seemed much more able to identify and resolve questions about definitions using the techniques taught to them from the Critical Thinking booklet. This ability made it possible for them to settle "definitional problems" quickly and move onto issues relating to fact or to value conflict. This ability was never mastered by the control group, who continually "bogged down" over definitional problems. Again, the rather simple skill of writing down a criterial definition of the object in question was never learned by the control group. The frequent use of this skill by the experimental group gives supporting evidence to Shaver's (1962) statement that the assumption that these skills are learned as a by product of a regular classroom study is a faulty assumption.

On the day following the seminar sessions, the classes were both given a rather formal lecture presentation by the teacher covering in a "traditional" way the factual historical data contained in the unit being studied.

The final step in the classroom procedure was a test given to each group at the end of each unit. The control group was given a traditional essay test which asked for the recall and sequencing of factual data. The experimental group was given an essay test which was based on an issue
identified in the "Critical Thinking Guide." The experimental group's test questions were often about an issue or value conflict which has never really been resolved and, therefore, had no historically "right" answer. The students were asked to identify the values in conflict, to take a position relative to the resolution of the conflict, and to defend rationally the position they had taken.

Data and Instrumentation

Test procedures

The procedures that were designed to test the validity of the experimental packet and its ability to aid students to learn critical thinking skills began on the first day of class work following registration. The schedule to be followed during the year was explained to each class in the following manner.

First, each class would be using a continuous progress packet to study American history. Second, it would be necessary to evaluate these packets through the use of a series of tests. The tests to be used were explained as being of three types, and that the tests would be given at the beginning and end of the year long study.

The tests to be given were: First, the School and College Ability Test (SCAT) which would be administered first and was designed to evaluate the mental ability of the groups to make sure the evaluation of the packets would be based on results from similar groups. Second the Sequential Test
of Educational Progress (STEP) Social Studies Portion, would be used to measure progress in the social studies area. Third, the Watson-Glaser Critical Thinking Appraisal would be used to evaluate development of a number of abilities identified as critical thinking skills. Students in both groups were told that the standardized tests they were to take would not be added to their history test scores for grading purposes. They were asked to do their "very best" on the standardized tests, however. It was felt that not counting these standardized tests for "grade" purposes had an overall beneficial effect on the study. The students in both groups seemed to respond honestly to the questions asked in the tests. With the "threat" of grades removed there was no reason to "cheat" or to copy from anyone else.

It was the original plan of the study to begin giving the standardized tests on Tuesday, September 2. Because of the late arrival of the test materials, however, the tests were administered from Monday, September 8, to Wednesday, September 17. Since the class periods at Cedar High School are built around a "modular" schedule, most "study" classes last only 40 minutes or two 20 minute "modules." This allowed about 35 to 38 minutes of class time and necessitated giving the standardized tests over several class periods. The tests used were all suitable for administration in sub-test form so this time limitation was not a problem for either group. Following the time recommendations of the test publishers, there was no instance in either class where students did not have adequate time to complete their tests.

The students in the control and experimental groups took American history in the same classroom at 8:40 a.m. and 9:20 a.m., respectively. The
test used in the control group at 8:40 was also the one given to the experimental group at 9:20. The two classes "passed" each other entering and leaving the history classroom on test days, but there was no evidence that the students had any opportunity to discuss the tests with each other.

Students who were absent for any reason were allowed to make up at a later time, that portion of the test they had missed. Three students from each group followed this procedure. There was, however, no evidence to indicate that these students received or did not receive any additional outside help on the sub-test they made up.

In the introduction that was given to students involved in the study, no mention was made of an "experimental" or "control" group being used for the study of the two packets. The students in the two groups involved in the study were told that each group would be using a history packet that would be evaluated during the year by the use of the tests already described. The packet used by the control group, however, had been in use at Cedar High School for 5 years and was well known to all students. The "experimental" packet was new to Cedar High School and though no mention was made of a "control" and "experimental" group, it soon became obvious to both groups that the 9:20 class was using a different approach from the 8:40 class. The extent to which this "different treatment" produced a "Hawthorne" effect is difficult to assess. The experimental group seemed pleased with the approach used in the experimental packet and responded very well to it. Whether this response was more than could have been normally expected is impossible to measure.
The standardized tests were administered at the beginning of the study by the writer with the assistance of the school counselor. The directions in the "teacher's manual" for each test were followed explicitly and no problems of test administration were experienced. This procedure was also followed at the conclusion of the study, except that the SCAT was not readministered, the original test having provided all the data that were needed for the comparing of the two groups' mean scholastic aptitude scores. The STEP and the Watson-Glaser Critical Thinking Appraisal were administered at the conclusion of the study, and were taken by the two groups beginning Monday, May 11, and concluding on Friday, May 15. These tests were again given by the writer, with the assistance of the school counselor.

Description of the tests used in the study

The major concern of the study was the assessment of the effectiveness of the experimental packet in teaching critical thinking. Since the decline in critical thinking skills at Cedar High School was detected (Morris, 1968) using the Watson-Glaser Critical Thinking Appraisal, the same test was used for the present study. This was based on the assumption that an attempt to remedy this decrease in thinking skills should assess learning using the same test that had originally been used to identify the decline.

The Watson-Glaser Critical Thinking Appraisal was developed by Goodwin Watson and Edward Maynard Glaser and is published by Harcourt, Brace and World Incorporated, New York. The test measures five areas of critical thinking: (1) Inference or the ability to discriminate among degrees of truth or
falsity; (2) Recognition of assumptions; (3) Deduction, or the ability to reason deductively; (4) Interpretation and the ability to weigh evidence; (5) Evaluation of arguments as to strength and relevancy.

Since their original test was published in 1952, Watson and Glaser have updated their device, keeping in it what they considered to be the most valid questions from their previous test and adding new questions to bring each of the two forms now available, YM and ZM, up to 100 responses. The test was copyrighted in 1964 and has been standardized by the authors using 10,312 high school students in grades 9-12 at 14 school systems in 13 states (Watson and Glaser, 1964).

The reliability of the Watson-Glaser Critical Thinking Appraisal was established using odd-even split half reliability coefficients corrected by the Spearman-Brown formula. The reliability of the separate forms for seniors has been established as: Form YM, .87, and Form ZM, .83 (Watson-Glaser Critical Thinking Appraisal Manual, 1964, p. 13).

The reliability coefficients for this study, however, were considerably below those reported by the test publishers. The reliability coefficient using the "rational equivalence" formula (Juder-Richardson No. 21) for Form YM was .58 and for Form ZM .74.

As for the test's ability to measure all areas of critical thinking, the authors of the test, after reviewing a list of thinking operations put forth by Dressel and Mayhew which they subscribed to, made this statement:

It is the authors' belief that there would be sufficient overlapping among the different lists of component abilities to warrant the
expectation that the total score derived from a test based on one
list would correlate high with the total score based on an equally
good test covering an alternative set of similar abilities. (Dressel
and Mayhew, 1954, p. 10)

Watson and Glaser finally concluded that:

The Critical Thinking Appraisal may be used as a research tool to
provide objective evidence concerning the development of critical
thinking skills as a consequence of a given course of study or teach­
ing method. (Watson and Glaser, 1964, p. 12)

It was realized that the terminology used by Raths et al. (1967) and by
Oliver et al. (1963) to describe the thinking operations used in this study does
not match exactly with those terms used by Watson and Glaser in their Critical
Thinking Appraisal. The areas of assessment in the Watson-Glaser instrument,
however, do cover general areas in critical thinking whose measurement provided
suitable data for this study.

Because of the concern over the validity of the Watson-Glaser Critical
Thinking Appraisal, there have been numerous reviews and critiques concerning
the use of this instrument when conducting critical thinking research. Of all
the reviews available concerning the Watson-Glaser, the extensive examination
conducted by Crites (1965) seems to be the best. Crites concerned himself
primarily with the norms, reliability and validity of the test. He did, however,
review the criticisms leveled against the test by a number of critics and
reviewers over a number of years and then concluded:

The Watson-Glaser represents an approach to the measurement of
ability which is novel, as far as item content and format are con­
cerned, and it is a laudable approach. It is also one which data on
the test justify as empirically useful. The test appears to measure
not only general intelligence but also certain logical reasoning
abilities. Some questions can be raised about the scoring key and
the applicability of the test at the higher educational levels, but in general it seems to be quite adequate for the appraisal of critical thinking at the secondary school level and possibly the freshmen year at college (Crites, 1965, p. 330)

Some attempts to develop more meaningful measuring devices for critical thinking skills in the social studies area than the Watson-Glaser have been attempted and reported (Oliver and Shaver, 1966; Shaver and Larkins, 1969). The most promising of these probably is the SIAT #4, which is a system for analyzing "free discussion" of students involved in political discussions. While this attempt was a good beginning, the complexity of the test led to this comment:

There is, however, no denying the impracticability of careful, complex content analysis for the day-to-day measurement needs of the average classroom. Teachers in general have neither the research competence nor the time to learn or use such a complex system. (Oliver and Shaver, 1966, p. 225)

It was decided, then, that for this particular research project, the Watson-Glaser Critical Thinking Appraisal was the best available testing device.

The scholastic ability test used to evaluate the mean scholastic aptitude of the two groups used in this study, and the social studies test used to evaluate development in American history were far less controversial than the critical thinking test discussed earlier. The scholastic ability test administered was the School and College Ability Test (SCAT) published and standardized by the Cooperative Test Division of the Education and Testing Service, Princeton, New Jersey. The test measures aptitude in math, science, social studies, reading, listening, and writing with all areas being summarized into an overall
estimate of ability.

The achievement test administered was the social studies portion of the Sequential Tests of Educational Progress (STEP), Social Studies Form 2 A and 2 B. This test is also published and standardized by the cooperative Test Division of the Educational Testing Service, Princeton, New Jersey, and measured four main areas in the social studies field.

Under "Subject Matter," the test examines understandings in American history, geography, social anthropology, economics, and world history. These items provided an acceptable evaluation of the areas covered in the social studies curriculum at Cedar High. In the area of "Skills," the STEP test claims to measure the skills of making generalizations, identifying values, distinguishing fact from opinion, comparing data, and drawing conclusions. The test also claims to measure "Understandings" concerning social change, geographic environment, forces of nature, and the democratic society. In the final area of "Materials," the test covers maps, graphs, cartoons, photographs, drawings, diagrams, tables, and texts.

The reliability of the SCAT and STEP tests has been established using the Kuder-Richardson Formula #20. Reliability coefficients obtained for the SCAT have been estimated as: verbal .92, quantitative .90, and the total .95 (SCAT Technical Report, 1957, p. 10). The social studies portion of the STEP has a reliability coefficient of .84 (STEP Technical Report, 1957, p. 10).

The computation of reliability coefficients for this study for the SCAT and STEP, however, was not possible due to the reporting of test results in
terms of "converted scores" rather than "raw scores." Educational Testing Service, in reporting the means and standard deviations of the SCAT and STEP, used this arbitrary conversion score which eliminated the possibility of computing reliability coefficients by those not having their original conversion formula.

These tests appeared to be acceptable choices for this study because the directions were easily understood by students and the tests were also administered without difficulty. The handbooks accompanying these tests provided adequate direction and guidance to allow a relatively untrained person in test administration to use them successfully in a classroom situation.

Analysis

Findings

The main purpose of this study was to determine if students in the experimental American history program would show a greater mean gain in critical thinking skills, as measured by the Watson-Glaser Critical Thinking Appraisal, than would students in the control American history course. The second purpose of the study was to determine if students in such an experimental program would differ in knowledge in American history as measured by the social studies portion of the STEP test, than would students in a control American history course.

Two groups of students from Cedar High School, each group enrolled in a Phase III American history course, were used to assess the consequences of teaching critical thinking to high school students.
During the first two weeks of the 1969-70 school year, each of these groups was given a series of tests to determine their level of mental achievement, their level of competence in the social studies, and their critical thinking ability. Each group was then taught American history through the use of continuous progress packets. The experimental group used a packet designed to teach American history and critical thinking skills, the control group a packet designed to teach only American history.

At the conclusion of the study, each group was again tested to assess their ability to think critically and to evaluate their comparative level of knowledge in the social studies. It had been anticipated at the beginning of the study, based on the research conducted by Morris (1968), that there would not be significant differences between the two groups' mean scholastic aptitude scores. However, to assess this assumption, the SCAT was administered to the students in the control and experimental groups. If significant differences were present in the scholastic aptitude of the two groups, it was planned to use an analysis of covariance to determine the significance of any differences identified in critical thinking or American history.

An analysis of the results of the School and College Ability Test are summarized in Table 3. The analysis of the means of the control and the experimental group yielded a t-ratio of .87 which is not significant at the .05 level. Based on this finding, it appeared that an analysis of covariance was unnecessary. Instead, the pooled variance formula for the t-ratio was used to test for the significance of differences between the post-test group means on the STEP and the Watson Glaser tests.
Table 3. Comparison of means for the School and College Ability Test

<table>
<thead>
<tr>
<th>Form</th>
<th>Group</th>
<th>Mean</th>
<th>S. D.</th>
<th>df</th>
<th>t-ratio</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-A</td>
<td>Control</td>
<td>290.0</td>
<td>10.9</td>
<td>47</td>
<td>.87</td>
<td>N. S.</td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>287.0</td>
<td>12.8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

Table 4 summarizes the results of the STEP test pre- and post-tests.

An analysis of the means of the control and experimental groups on the pre-test (Form 2-A) yielded a t-ratio of .31 which is not significant at the .05 level. On the STEP test, Form 2-B, given at the conclusion of the study, an analysis of the means yielded a t-ratio of .49, also not significant at the .05 level.

The analysis of the results of the STEP test, Form 2-A and 2-B, would indicate that the null hypothesis cannot be rejected. The hypothesis that students in the control and experimental groups would not differ in knowledge in American history at the conclusion of the experimental study, therefore, was accepted.

Table 4. Comparison of means for the Sequential Test of Educational Progress, Social Studies portion

<table>
<thead>
<tr>
<th>Form (pre-test)</th>
<th>Group</th>
<th>Mean</th>
<th>S. D.</th>
<th>df</th>
<th>t-ratio</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-A</td>
<td>Control</td>
<td>281.0</td>
<td>11.00</td>
<td>47</td>
<td>.31</td>
<td>N. S.</td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>280.0</td>
<td>10.28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-B (post-test)</td>
<td>Control</td>
<td>283.0</td>
<td>15.10</td>
<td>45</td>
<td>.49</td>
<td>N. S.</td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>281.0</td>
<td>11.00</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at .05 level.
Table 5 is a summary of the results of an analysis of the Watson-Glaser Critical Thinking Appraisal pre- and post-tests. Form YM was given at the beginning of the study and Form ZM at the conclusion.

The statistical analysis of the pre-test means yielded a t-ratio of .003, not significant at the .05 level. The t-test on the post-test data (Form ZM) yielded a t-ratio of 1.99, again not significant at the .05 level. This indicates that the differences in critical thinking ability hypothesized at the beginning of the study did not occur.

Table 5. Comparison of means for the Watson-Glaser Critical Thinking Appraisal

<table>
<thead>
<tr>
<th>Form</th>
<th>Group</th>
<th>Mean</th>
<th>S. D.</th>
<th>df</th>
<th>t-ratio</th>
<th>Significance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>YM</td>
<td>Control</td>
<td>64.89</td>
<td>10.10</td>
<td>47</td>
<td>.003</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>64.90</td>
<td>10.28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ZM</td>
<td>Control</td>
<td>60.59</td>
<td>8.89</td>
<td>45</td>
<td>1.990</td>
<td>N.S.</td>
</tr>
<tr>
<td></td>
<td>Exp.</td>
<td>66.20</td>
<td>9.97</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

The need for further research in the critical thinking area is provided by the examination of one of the part scores from the STEP test. As was noted earlier, the description of this test mentioned that one of the areas measured by the STEP was the "area of 'skills'." Listed under this heading were the "skills" of "making generalizations, identifying values, distinguishing fact from opinion, comparing data, and drawing conclusions." Because the model
of critical thinking for this project included value conflict and value resolution, the sub-area of "identifying values" was selected for further analysis. The "identifying values" test items are identified in the STEP Teachers Guide (1959). These data had been compiled by Educational Testing Service who corrected and scored the tests used in this study. The percent of students in each class correctly answering the "identifying values" questions was recorded on a response count sheet. This percent, computed by Educational Testing Service when the tests were corrected, was converted to a number, a mean was computed and an analysis was made of the group means.

As reported in Table 6, the pre-test mean for the control group's ability to "identify values" using Form 2-A was 63.12. The post-test mean, using Form 2-B was 58.89, or a net loss of 4.23. The experimental group, on the other hand, had a beginning mean of 60.93 on Form 2-A and a post-test mean on Form 2-B of 61.05, or a gain of .12. This comparison of means, however, is not statistically significant.

Table 6. Difference in mean gain-loss changes in the ability to identify values for the skills portion of the STEP

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-test mean</th>
<th>Post-test mean</th>
<th>Mean change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>63.12</td>
<td>58.89</td>
<td>-4.23</td>
</tr>
<tr>
<td>N-27</td>
<td>(16 responses)</td>
<td>(19 responses)</td>
<td></td>
</tr>
<tr>
<td>Exp.</td>
<td>60.93</td>
<td>61.05</td>
<td>+ .12</td>
</tr>
<tr>
<td>N-20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conclusions

The results of the "Social Studies portion" of the STEP indicate that the experimental study had no effect on students' knowledge of American history. This information is of value to teachers who may be hesitant to attempt an experimental study because of the fear that it would be detrimental to learning the regular subject. This attempt to teach critical thinking was designed to teach historical generalizations, and then to use these generalizations in meaningful situations. The study was not designed to replace history with critical thinking, but hoped rather to combine these subjects in a way beneficial to both areas. The goal for the experimental group can best be summarized by a quotation from Feder. He stated:

The problem approach to American history differs from other forms of study in its emphasis on the process of investigation and study, rather than the acquisition of predetermined factual information. The facts themselves are a means to an end. They are examined, analyzed and applied in the course of the investigation; they are used in the process of analysis. (Feder, 1967, p. G-2)

It was the objective of the critical thinking packet, then, to use the "process of analysis." The experimental group was expected to know American history as well as it was known by the control group. They were also expected to use this knowledge in a more useful way, i.e., the analysis of public issues. The control group on the other hand, was expected to use the facts of history in the traditional way, i.e., the recall and sequencing of historical data.

Speculation as to why the experimental group did not achieve statistically significant growth in critical thinking skills might take into consideration several factors. First was the concern over the content validity of the Watson-Glaser
Appraisal. Whether it actually measured the critical thinking skills taught at Cedar High School is open to question. Also, the reliability coefficients reported earlier for the two test forms were considerably below those described by the Watson-Glaser test manual. The attenuation of scores due to this low reliability could possibly account for the insignificant statistical results of the critical thinking portion of this study. In another study of this type, it would be helpful to use more than a single test or perhaps a more valid test to measure critical thinking.

The second area of concern was the small number of students involved in the study. The degrees of freedom used in the calculations were quite small and made a significant "t" rather hard to achieve.

Third, it is possible that the extra effort exhibited by students in the control group may have had a "reverse" Hawthorne effect on the results of the study. Some of the students in the control group felt slighted not to be receiving instruction in critical thinking. As a result of this feeling, some of these students worked with students in the experimental group on their "Critical Thinking Guides."

There appeared to be no effective way to prevent this type of exchange among friends in the same school. The results of this exchange of ideas may well have caused growth in critical thinking in the control group that reduced the difference between the two groups. The obvious solution to this problem would be to use two or more separate schools for a future study of this type.
Summary and recommendations

A person who has spent many months of his time in a research effort, especially if it is his first attempt, can seldom accept the bare facts presented in a statistical analysis without commenting on some of the non-statistical aspects of the research.

The teacher evaluation sheets and the "daily log" kept during the "seminar sessions," for example, are replete with statements indicating growth and development in the skills of discussion, particularly the experimental group. These skills were never actually measured, so of course, cannot be reported. It is hoped that a future study at Cedar High School might measure this growth using such devices as the SIAT #4 (Oliver and Shaver, 1966) or the ACOS (Shaver and Larkins, 1969). Both of these devices were developed to measure student responses in a seminar-type situation.

A possible area for further research using devices of the type just mentioned would be the video taping and subsequent self-scoring of seminar sessions by students. Some research of this type has already been done in Cedar City schools concerning the video taping of teachers in their classrooms. This tape is then replayed by the teacher in a self-analysis situation.

The possibility of video taping a "seminar session" and then having each student evaluate his own performance has great potential. Students could possibly use simplified versions of the SIAT #4 (Oliver and Shaver, 1966) or the ACOS (Shaver and Larkins, 1969) to evaluate their own critical thinking skills in seminar situations. Any time a student can see and analyze his own performance the possibility for real personal development exists.
In summary, then, the Cedar High School Study did not produce significant statistical evidence for the hypothesis that teaching critical thinking in an American history course using continuous progress packets would cause significant gains in the ability of students to think critically. On the other hand, there was some evidence produced, though not statistically significant evidence, which indicated the desirability of additional research in this area.

It is also of educational significance that the downward trend in critical thinking identified by Morris (1968, see Table 1 on page 7) seemed to have been stopped, at least for the experimental group students in this study. That the downward trend can be halted for the entire school using critical thinking packets similar to the one developed for this study needs to be substantiated by further assessment over a longer period of time and using more students. Such a study is tentatively planned for Cedar High School in the near future. The initial results of this study, however, are encouraging in that it does appear that the experimental treatment may be an effective antidote to the decrease in critical thinking skills which originally prompted this study.

The results of the STEP test gave evidence that the experimental packet taught historical concepts as well as the more traditional control packet. The results of the "identifying values" sub-test of the STEP also indicated the desirability of additional research in the critical thinking area.
REFERENCES


APPENDIXES
Appendix A

Four Experimental Group Units
A hundred and fifty years of virtual independence from governmental domination from England, a hundred and fifty years of solving one's own problems because of the fact that England was 2,500 miles—six months travel time away—came to an end in 1763 when England, now the dominant power in North America and deeply in debt because of almost continuous war for the past 100 years, attempted to regain control of the colonies she had been too busy to supervise in the past. Yet she is to find that those who have been found that they can stand alone, those that have tasted the heavy power of virtual self-control are not prone to relish the taste of control—no matter what its form or content.

As John Adams stated, "The revolution was in effect before the war commenced. The revolution was in the minds and hearts of the people." Yet the ties of blood and heritage are strong and not all are willing to make the break. Can such an upheaval truly succeed without losing all that is good? This is the question that only actions can answer.

Causes of the Revolutionary War

I. Policies of George III
   
   A. Molasses Act of 1732
   B. Proclamation Line of 1763
   C. Sugar Act of 1764
   D. Quartering Act of 1764
   E. Stamp Act of 1765
   F. Reaction of the colonies
   G. Townshend Acts
   H. Tea Acts
   I. Intolerable Acts
   J. Quebec Act

II. Colonial Defiance
   
   A. Principle colonial leaders
   B. Sons of Liberty
   C. Stamp Act Congress
   D. Liberty incident
   E. Non-importation agreements
   F. Boston Tea Party
   G. Gaspee incident
   H. First Continental Congress
   I. The Association
J. Committees of Correspondence  
K. Watchdog committees  
L. Lexington and Concord  
M. Second Continental Congress  
N. Bunker Hill  
O. Declaration of Independence  
   1. Preamble  
   2. New theory of government  
   3. Reasons for separation  

Media  

Filmstrips  
American Revolution Series  
   1. Causes of the Revolution  
   2. The War from Lexington to Concord  
   3. The Declaration of Independence  

McGraw-Hill, Causes of the Revolution  
E. A. Series, Unit 2, Part 1, 1734-1774  

Tapes  
A-3 #3, The Stamp Act  
A-7 #3, Lexington and Concord  
A-5 #2, Ratification of the Declaration of Independence  
A-30 #1, Causes of the Revolutionary War  
A-13 #1, 1600 to 1776  

Slides  
American History "400", Slides A-55 to A-65  

Critical Thinking Guide: Unit Two, Area Five, Causes of the Revolutionary War  

I. Summarize what the colonists meant when they used the following statements:  

"No taxation without representation"  
"We demand the rights of Englishmen"  
"We want 'actual' not 'virtual' representation"  

How strong was this argument? At what level of argumentation did it take place?
II. A. What values did the colonists have that were in conflict with the values held by the English?
B. Were there definitional problems and misunderstandings involved in the value conflict? What were they?
C. Why did propagandists on both sides use these value conflicts to further their cause? What was their hypothesis concerning the use of propaganda?
D. What were some "controversial or loaded statements" that each side used in the value conflict? Cite examples.
E. Discuss the "dilemmas" both sides faced in the conflict situation.
F. Summarize the sources of evidence that colonists used to prove the need for independence?

III. Interpret the value of the Declaration of Independence to American Revolutionaries and to Americans today. Evaluate its strengths and weaknesses for you as an individual. Discuss the philosophy of government expressed by the Declaration of Independence.

IV. Imagine and discuss the value conflicts that were experienced by the American Tory when independence was declared. Do Americans face such value conflicts today? What are they?

V. Interpret the causes of the American Revolution as political, economic and social experiences. Be prepared to defend your interpretations in a seminar session using the "socratic method of discussion." Be familiar with the specific events listed in Part I and II of the topic outline that help to prove your point.

VI. The word "rebellion" has been a popular word with young people during the past few years. Compare the rebellion represented in the American Revolutionary movement with the so-called 'youth rebellion' of today. Compare values, motives, means, objectives and desired end results. Which is more revolutionary? Why?

VII. Why couldn't this conflict be solved by rational discussion and debate?

VIII. A. Did America and England have similar national ethical standards at this time?
B. What was the common ethical standard that each nation held on the eve of the War for Independence?
C. What ethical standard does America have today? Do you subscribe to this standard?
The debates, the discussions, and the compromises have all come to an end at this time in our countries story. The long years of talk about states rights, nullification and secession have ended and the United States, united no longer, seeks to resolve its long standing differences by the force of arms.

The industrial North finds itself reeling from loss after loss on the battlefield as the agricultural South attacks quickly hoping to end the war before their resources are expended. This is not to be the case however, as we see the North mobilize its forces and by great expenditure of men and resources begin to turn back the Southern effort.

The blood of brother is spilled by brother and father by son as this most difficult of all American wars is fought to decide whether a nation can indeed survive "half slave half free."

This struggle is a forerunner of the warfare nations all around the world were soon to see as total economies and populations are involved in the conflict. The South is especially devastated by the war and the wounds are so deep that some will last for many generations.

The reasoned thoughtfulness of a "critical thinker" is forgotten by both sides, and the loss in blood and treasure is to stand as a grim reminder to any observer, of the penalty that must be paid by those who would be ruled by passion, rather than reason.

The war finally ends with a nation united in name only as the difficult years of "Reconstruction" still lie ahead.

The Civil War

I. The War Begins
   A. The Confederacy is established
   B. Final attempts at compromise
      1. Crittendens Compromise
      2. Virginia Peace Convention
   C. Lincoln is inaugurated
   D. Fort Sumpter

II. Strengths and Weakness of the Sides
   A. The North and its leaders
   B. The South and its leaders
III. The Events of the War
   A. War objectives of each side
   B. Major battles
      1. First Battle of Bull Run
      2. The War at Sea
      3. The War in the West
      4. The Battle of Antietam
      5. The Battle of Gettysburg
      6. The Battle of Vicksburg
      7. Sherman's March to the sea

IV. A. Peace— Surrender
   B. Effects of the war
      1. North
      2. South

V. Political Problems of the War
   A. Foreign problems
   B. Domestic problems
      1. The handling of the freed slaves
      2. Maintaining political freedom
      3. Assassination of Lincoln

Media

Filmstrips

E. B. Series Civil War at Sea
E. B. Series Gettysburg
E. B. Series Bull Run to Antietam
E. B. Series From Shiloh to Vicksburg
E. B. Series Sherman's March to the Sea
E. B. Series The Road to Appomattox
E. B. Series Unit 7, Part 1, 1861–1863
E. B. Series Unit 7, Part 2, 1863–1865

Tapes

A-19 #3, The Civil War
A- 6 #2, The Firing on of Ft. Sumpter
A- 6 #2, Bull Run
A- 6 #1, Gettysburg
A- 7 #1, The Monitor and the Merrimac
A- 8 #1, Lee Surrenders
A- 9 #3, Capture of John Wilkes Booth
A- 2 #2, Maximillian in Mexico
Critical Thinking Guide Unit Five, Area Two: "The War Between the Sections"

I. Criticize Lincoln's handling of the 'Secession Crisis' and the Fort Sumpter situation. Summarize your evaluation of his efforts.

II. Compare the Union's side of the war as seen by Grant, with the Confederacies side of the war as seen by Lee. Which side would you have supported? Why?

III. Summarize your opinion to why rational consent was rejected in favor of armed conflict to settle the value conflict evident prior to the Civil War? Did the war solve the conflicts that rational debate could not? Is war ever a justifiable substitute for rational consent? Why or why not?

IV. Summarize your opinion as to whether or not the leader of a nation has the right to order men to risk their lives for an abstract idea such as "preserving the Union." Also state your opinion as to Lincoln's right to subject our nation to violence and strife in order to give equality to a minority group. Does a President today have this right? Does the Supreme Court have this right?

Should minorities be forced to secure their own rights as best they can rather than subject an entire nation to the solution of their problem? Which do you feel is best?

V. Interpret the feelings of Americans today concerning racial equality and compare them with the feelings of Americans during the Civil War. State your opinion, as to how much progress Americans have made in solving problems concerning minority groups and states rights. Do you feel that Americans would again resort to armed conflict to settle these issues? Why or why not?

Be prepared to defend your position on all of these areas in a seminar discussion.

VI. Which specific values do you believe Lincoln was willing to compromise in this value conflict situation? Which values did he feel it was important to protect? Give examples to prove your statements.

VII. Do you ever compromise one value to protect a more important value? Is this an honest approach? How else might you solve a value dilemma other than by a compromise?
Unit Seven: Reaching into the World
Area Two: The Time of the Progressives

Beginning with the early twentieth century a movement known as progressivism began to permeate American life. This was a movement to improve life by expanding democracy and achieving economic and social justice. Progressives were optimistic and forward looking. They generally accepted urbanization and industrialization and hailed the benefits of the machine age, but sought to correct its evils.

Shocked by the sorry state of politics, the progressives sought to correct this evil by getting more Americans involved in politics. The remedy for the evils of democracy, progressives believed, is more democracy.

In addition to political reform the progressives planned to make social and economic reforms as well. They hoped to eliminate practices in America that were harmful to farmers, workers, tenement dwellers, and consumers and then further planned to expand government control in the name of the people, over many phrases of the economy.

The progressives gained their strength from several different groups. Among these were:

1. The farmers, with their populist heritage, who were still struggling against big business, particularly the railroad
2. The urban middle class and small businessmen who were alarmed by the power of giant trusts and political machines.
3. Most workers, who hoped the government would pass laws regulating working conditions for women, children and men in dangerous occupations.
4. Writers and journalists, who uncovered many faults in American society and called for much needed reform. These writers were often called "muckrakers."
5. Political leaders, many of whom were unhappy with the condition of American politics joined together in a loose confederation called the Progressive Party. This party, as a formal political organization, did not last long, but the ideas they began were accepted by many good citizens in both major political parties. These leaders were elected to offices in all levels of government and led many of the reform movement's activities.

The progressive era marked the transition from laissez-faire to government regulation of the economy, and demonstrated that Democratic institutions could meet the problems of urbanization and industrialization.
The Progressive Era

I. A Rough Rider Takes Over the White House
   A. T. R.'s Early Career
   B. The Crusade Against Social Abuses
      1. The call for reform
      2. The Muckrakers
   C. Political Changes
   D. Social Changes
      1. Slums
      2. Temperance
      3. The "Unfavored"
   E. The "Square Deal"
      1. "Trust Busting"
      2. Legislative Achievements

II. William Howard Taft as President
   A. Troubles in Office
   B. The return of "T. R." The Lion Hunter
   C. The New Nationalism

III. 'The New Freedom' of Woodrow Wilson
   A. The Three Cornered Race
   B. The Democrats in the White House
   C. The Progressive Movement Slows Down

Media

Filmstrips
McGraw-Hill, Turn of the Century
Filmstrip House, The Struggle for Human Rights
E. A. Series, Unit 10, Part 1, 1901-1908
E. A. Series, Unit 10, Part 2, 1908-1914

Tape
A-25 The Progressive Era

Slides
American History "400," Slides D-43 to D-53

Record
Sounds of History, Record #9, The Progressive Era

Film
South West Media Center, #226-227, The Innocent Years, 1901-1914
Critical Thinking Guide, Unit Seven, Area Two: The Time of the Progressives

I. Compare the conception of the office of the President that was held by Roosevelt, Taft and Wilson. Which view do you support? Explain your choice.

II. A. Summarize the humanitarian values that were held by the Progressives.  
   B. What humanitarian movements are current in the U. S. today?  
   C. How successful are humanitarian movements in America? Which do you support? Why? Why do other people support humanitarian movements?

III. A. Summarize what you consider to be the basic assumption of the Progressive movement.  
   B. How well did the arguments put forth by the Progressives help their cause?  
   C. Do you believe the evidence from then to now supports their hypothesis? Explain.

IV. A. Frame a hypothesis that states why you feel the Progressive movement was as successful as it was.  
   B. Complete the steps necessary to strengthen or infirm your hypothesis.  
   C. State the conclusion you reached based on your research.  
   D. How valid were your sources of information? What were they?

V. A. Identify and interpret the responsibilities of citizenship that the Progressives argued the people were willing to accept if they had the opportunity.  
   B. Do you believe the responsibilities of citizenship are the same today as they were in 1900? Explain.  
   C. Summarize what you consider to be the responsibilities of citizenship today. Give an objective, honest, appraisal of how well you meet the requirements you established.

VI. A. Summarize the Constitutional changes that were made during the Progressive Era.  
   B. Interpret each of these changes as to whom these changes benefitted, who opposed them, why they took so long to be adopted by Americans, etc.

America during the depression years was fortunate that leaders of character were directing the activities of the nation. There will always be debate over the effectiveness of the methods used by Presidents Hoover and Roosevelt, but there can be no doubt about their sincere desire to see the ills of all men brought to a satisfactory conclusion.
Other parts of the world were not so fortunate as America, and other nations also devastated by depression, turned to less honorable men than did America, to find solutions to their problems. From the misery and fear of a world-wide depression emerged violent unscrupulous men who used the misery of the times to further their own selfish ambitions. These men blamed "foreigners," minorities, the weak and any one who could not defend themselves, as scapegoats for their countries' troubles. By getting the people to give them power to destroy those held responsible for their nation's plight, these power hungry dictators were able to emerge all around the world.

Hitler in Germany, Mussolini in Italy, and Tojo in Japan, all emerged during these years as dictators who were to throw the world into the violent convulsions of World War II. Russian leaders using similar tactics had emerged prior to this time.

America, just beginning to recover from the depression, had no desire to look outward to the problems of the world, and much isolationist sentiment still remained from the questionable results of World War I. America had never joined the League of Nations, and had passed laws prohibiting financial involvement in European affairs. Treaties of all kinds calling for disarmament, the outlawing of war, and searching for world peace in general were sponsored by America during this time and hopes for peace and prosperity were expressed by America's leaders.

The sad facts of this time are, however, that the dictators in Europe and Asia had no plans for world peace, except that the nations of that world were willing to surrender their sovereignty to these dictators without a struggle.

The story of this time in history is of the attempts of these aggressor nations to reshape the world in a manner profitable to them.

The nations of the world including America, was faced with the dilemma of stopping these aggressors, perhaps by war, or of seeing the world fall under the rule of despots.

The struggle to reach a decision in this difficult matter is agonizing as the U. S. decides the issue of being internationalist or isolationist, and the decision is a long and painful one, which is really concluded only when the Japanese attack Pearl Harbor. The decision once made is of momentous consequences and the results of it are much in evidence today.
The End to Isolationism

I. America Becomes a World Leader
   A. Results of World War I
      1. U. S. economic power
      2. Repayment of the "War Debt"
   B. The search for world security
   C. Outlawing war
   D. U. S. Leadership in Latin America
   E. The "Good Neighbor Policy"

II. International Threats to World Peace
   A. Japan in Asia
   B. Italy in Europe and Africa
   C. Germany in Europe

III. American Response to Aggression
   A. Neutrality
   B. Quarantine
   C. Rearmament

IV. Hostilities Begin
   A. Nazis on the March
   B. Munich
   C. Poland
   D. England and France enter the War
   E. A change in U. S. sentiment
   F. The Destroyer Deal
   G. The Election of 1940 (Roosevelt)
   H. Lend-Lease

Media
   Filmstrips
   E. A. Series, Unit 14, Part 1, 1940-1942
   Tapes
   A-10 German Aggression
   A-12 The Snow Goose
   Slides
   American History "400" Slides E-1 to E-21
Critical Thinking Guide: Unit Eight, Area Four, the End to Isolationism

I. A. **Identify** the inference or conclusion concerning U.S. involvement in world affairs that Cordell Hull had reached according to his 1938 speech delivered in Washington. Was he isolationist or internationalist? How can you tell?

B. From your observation of the same facts, do you feel that Secretary Hull had reached a warranted conclusion? Explain.

C. **Evaluate** Secretary Hull's argument as to strength or weakness of presentation. What level of argumentation did he use? Cite some examples to strengthen your conclusion.

II. A. **Summarize** the attempts that were made by Americans to bring about world peace before World War II began.

B. **Summarize** your interpretation of these attempts and give your conclusion as to why these efforts were unsuccessful in achieving world peace.

C. **Formulate** a hypothesis that indicates what you believe to be the causes of World War II. Use the proof process to substantiate or confirm your hypothesis. **Classify** the validity of the sources of information you used to conduct your research.

III. A. How would you interpret the Election of F.D.R. to a third term? Why do you think he was re-elected this many times?

B. **Identify** some dilemmas F.D.R. faced in trying to keep America free and out of war at the same time.

IV. A. Compare world politics in 1940 with world politics in 1970.

B. What ethical standards did the U.S. feel were being challenged in 1940? What ethical standards are being challenged today? Who is challenging today's ethical standards?

C. What values were held by Germany, Japan and Italy in 1940? Compare these values with those held by England, France and America.

D. What responsibilities do you have to support the ethical standards and values of America? How well do you meet this responsibility?
Appendix B

Four Control Group Units
Area Five: What Were the Causes of the Revolutionary War?

A hundred and fifty years of virtual independence from governmental domination from England, a hundred and fifty years of solving one's own problems because of the fact that England was 2500 miles—six months' travel time away—came to an end in 1763 when England, now the dominant power in North America and deeply in debt because of almost continuous war for the past 100 years, attempted to regain control of the colonies she had been too busy to supervise in the past. Yet she is to find that those who have found that they can stand alone, those that have tasted the heavy power of virtual self-control are not prone to relish the taste of control—no matter what its form or content.

As John Adams stated, "The revolution was in effect before the war commenced. The Revolution was in the minds and hearts of the people." Yet the ties of blood and heritage are strong and not all are willing to make the break. Can such an upheaval truly succeed without losing all that is good? This is the question that only actions can answer.

Causes of the Revolutionary War

I. Policies of George III
   A. Molasses Act of 1732
   B. Proclamation line of 1732
   C. Sugar Act of 1764
   D. Quartering Act of 1765
   E. Stamp Act of 1765 (Tape: "Stamp Act")
   F. Reaction of the colonies
   G. Townsend Acts
   H. Tea Act
   I. Intolerable Acts
   J. Quebec Act

II. Colonial Defiance
   A. Principle colonial leaders
   B. Sons of Liberty
   C. Stamp Act Congress
   D. Liberty incident
   E. Non-importation agreements
   F. Boston Tea Party
   G. Gaspee incident
   H. First Continental Congress
   I. The Association
   J. Committees of Correspondence
   K. Watchdog committees
L. Lexington and Concord (Tape: "Lexington and Concord,"
   E. B. Series, Unit 2, Part 1, "Years of 1734-1774")
M. Second Continental Congress
N. Bunker Hill
O. Declaration of Independence (Tape: "Ratification of Declaration
   of Independence")
   1. Preamble
   2. New theory of government
   3. Reasons for separation (Filmstrip: "Causes of Revolution")
      (Filmstrips: "The American Revolution Series:")
      1. "Causes of Revolution"
      2. "The War from Lexington to Concord"
      3. "The Declaration of Independence"

Self-Evaluation Test for Area Five, Unit One
Causes of the Revolutionary War

1. What were the British Navigation Acts?
2. Why did the British begin taxing the colonies so heavily after the French
   and Indian War?
3. What was the Molasses Act of 1732?
4. Why was the Proclamation Line of 1763 issued?
5. What was the Sugar Act of 1764?
6. What was the Quartering Act of 1765?
7. What was the Stamp Act of 1766?
8. What was the reaction of the colonists to British taxation policies?
9. What were the Townsend Acts?
10. What was the Tea Act, and what was the reaction of the colonies to it?
11. Who were several of the important colonial patriots and how did they
    oppose British policies?
12. What was the Stamp Act Congress?
13. What brought about the Boston Massacre?
14. What was the First Continental Congress?
15. What were the results of this Congress?
16. What brought about the battles of Lexington and Concord?
17. What was the Second Continental Congress?
18. What brought about the Declaration of Independence?
19. What is contained in the Declaration of Independence?

Area Two: What Were the Major Happenings of the Civil War?

The blow has fallen and the conflict must run its course. The giant
industrial North reels as the defensive South achieves one victory after an-
other. Yet slowly, ponderously, the North gathers momentum until the
South is crushed. A man named Lincoln gains immortality along with men
named Grant, Lee, Sherman, Jackson, Booth and hundred of other nameless
men. The blood of brothers mingle and the soil of the South is plowed with the weapons of war. Out of the ashes of war arises a reunited nation, whole, but not completely cured of those maladies that brought about the great conflict.

The Civil War

I. War Begins
   A. Southern Secession
   B. Fort Sumpter (Tape: "Firing on Fort Sumpter")
   C. Line up on states

II. Strengths and Weaknesses
   A. North
   B. South

III. Important Leaders
   A. Political
   B. Military

VI. War Objectives
   A. North
   B. South

V. Major Battles
   A. First Battle of Bull Run (Tape: "Bull Run")
   B. Union Naval Blockade (Filmstrip: "Civil War at Sea," tape: "Naval Battle Monitor and Merrimac")
   C. War in the West (1862)
   D. Battle of Antietam (Filmstrip: "Bull Run to Antietam")
   E. Battle of Gettysburg (Filmstrip: "Gettysburg")
   F. Battle of Vicksburg (Filmstrip: "From Shiloh to Vicksburg")
   G. Sherman's March to the Sea

VI. Peace
   A. Surrender (Filmstrip: "The Road to Appomatox;" tape: "Lee Surrenders")
   B. Terms of the surrender

VII. Effects of the War (Tape: "Gettysburg")
   A. South
      1. Manpower
      2. Finances
      3. Industry
      4. Agriculture
      5. Transportation
   B. North
      1. Manpower and the draft
      2. Finances
3. Industry
4. Agricultural growth
5. Railroads

C. Political Problems
1. Foreign
   a. Britain
   b. France (Tape: 'Maximillian in Mexico')
2. Internal
   a. Emancipation Proclamation
   b. Thirteenth Amendment
   c. Copperheads
   d. Election of 1864
   e. Lincoln's plan for the South
   f. Opposition to Lincoln
   g. Wade-Davis Bill
   h. Lincoln assassinated (Tape: 'Capture of John Wilkes Booth')
   i. Johnson becomes President

Filmstrips:
EB Series--Unit 7, Part 1 (1861-1863)
EB Series--Unit 7, Part 2 (1863-1865)
Civil War and Reconstruction

Self-Evaluation Test for Area Two, Unit Four
The Civil War

1. What was the pattern of secession for the Southern States?
2. What were the relative strengths and weaknesses of the North and the South when the war broke out?
3. How were the North and South mobilized for war?
4. Discuss reasons why the South was victorious in most battles at the beginning of the war.
5. What were several of the decisive battles of the war? Why?
6. What were the aspects of the war at sea?
7. How was the war ended?
8. What problems were created in foreign relations by the war?
9. What was Lincoln's plan for the South?
10. How was Lincoln's plan opposed and stopped from being put into effect?
11. What were the political conditions in the North and South at the end of the war?
12. What were the economic conditions in the North and South at the end of the war?
Area Two: What Social Problems Faced the United States in the
Post-Civil War Era?

Caught up in the crush of a rapidly expanding industrial economy, with the rapid development of urbanization, and masses of immigrants pouring into the United States yearly, the common man finds his plight more and more precarious. Child labor in the drab factories, pools of poverty in the urban slum areas, organized crime, drunkenness, and women's rights become ever present problems for the people of the nation and the solutions of these problems an ever pressing need.

Social Problems of the Post-Civil War Years

I. Problems of the Era
   A. Child labor
   B. Urban slums
   C. Adulterated food and drugs
   D. Drunkenness
   E. Organized crime
   F. Occupational diseases

II. Muckraking and Social Reforms--Leaders
   A. Slum problems--Jacob Riis
   B. Settlement House--Jane Addams
   C. Scout movement
   D. Temperance
      1. Women's Christian Temperance Union
      2. Anti-Saloon League
      3. Eighteenth Amendment
   E. Women's Suffrage--Nineteenth Amendment (Tape: "Women's Rights Convention")

III. Roosevelt's Program
   A. Northern Securities case
   B. Elkins Act of 1903
   C. Hepburn Act of 1906
   D. Pure Food and Drug Act

Filmstrips:
   Our History 1860-1945, #4 "The Struggle for Human Rights"
   #6, "Our Cultural Heritage"
Self-Evaluation Test for Area Two, Unit Six

Social Problems of the Post-Civil War Era

1. Discuss briefly the conditions in each of the following that created problems for the American people: child labor, urban slums, adulterated foods and drugs, drunkenness, crime, disease.
2. What was muckraking?
3. Who were some of the leaders in the social reforms movement?
4. What brought about improvements in the slum problem?
5. How did Americans begin to attack the problem of drinking?
6. How did women's suffrage develop?
7. How did Theodore Roosevelt aid the reform movement?

Area Four: How Did We Become Involved in World War II?

Suddenly the seeds of totalitarianism and discontent sown after World War I germinate and are nourished by western appeasement policies and public indifference. The dictators of the world plunge into war once more as they seek world domination.

In spite of our concern with the course of the war in Europe where one nation after another has been crushed by the power of the Nazi blitzkrieg until only Britain stands alone, it requires the shock of the day of infamy--December 7, 1941--to thrust us out of our lethargy and back onto the stage of world involvement. Our role is the leading and decisive role of leading the forces of the United nations back from total defeat to the climax of unconditional surrender of the Axis powers.

The United States and World War II

I. Events Leading to the War
   A. Japanese aggression in the Pacific
      1. Korea
      2. Manchuria
      3. China
   B. U. S. appeasement policies--U. S. peace sentiment
   C. Problems in Europe
      1. Nazis
      2. Fascists
      3. Attack on Ethiopia
   D. Neutrality legislation and actions
   E. Hitler's aggression
      1. Munich
      2. Czechoslovakia
      3. Poland (Tape: "World War II German Aggression")
      4. War breaks out
II. Aid to the Allies
   A. German victories
   B. Election of 1940
   C. Battle of Britain (Tape: "Snow Goose")
   D. U.S. aid
      Filmstrips: EB Series--Unit 14, Part 1 (1940-1942); tape: "Voices World War I and II" (Side One)

III. U.S. Becomes Involved
   A. More German victories
   B. German allies
   C. U.S. policies toward Germany
   D. Germany attacks Russia
   E. U.S. policies in Asia
   F. Attack on Pearl Harbor

IV. The War
   A. Declaration of war
   B. Japanese victories
   C. North African campaign
   D. European campaigns
   E. Pacific campaigns (Tape: "D-Day + 20")
   F. Atomic bomb
   G. Civilian front

Establishing Peace
   A. The Big Three
   B. Wartime meetings
   C. Organization of the U.N.

Filmstrips:
   "World War II"
   EB Series--Unit 14, Part 2 (1942-1943)
   EB Series--Unit 14, Part 3 (1944-1945)

Tapes:
   "Voices of World War I and II" (Side Two)

Self-Evaluation Test for Area Four, Unit Seven
   Prelude to World War II

1. How did Japan become a problem in the Pacific from 1900 on?
2. How did the U.S. attempt to appease the Japanese?
3. How did radical groups develop in Europe during the 1920's and 1930's?
4. How did the United States attempt to remain neutral?
5. What were Hitler's early aggressive moves in Europe?
6. What caused the outbreak of the war?
7. What was the course of the war for the first two years?
8. What was the U.S. course of action during the first two years of the war?
9. What was the U.S. policy toward Germany before our involvement in the war?
10. Why did Germany attack Russia?
11. What were U.S. policies in Asia at this time?
12. Describe the attack on Pearl Harbor.
13. What were the early Japanese victories?
15. Describe the Italian campaign.
16. Describe "D-Day" and the campaign in Western Europe.
17. Describe the Pacific phase of the war.
18. Relate the development of the atomic bomb and the part it played in World War II.
19. Who were the Big Three and what part did they play in the war?
VITA

James Matheson Miller

Candidate for the Degree of

Master of Science

Thesis: American History and Teaching Critical Thinking

Major Field: Educational Administration

Biographical Information:


Education: Attended elementary school in Parowan, Utah; graduated from Parowan High School in 1955; received the Bachelor of Science degree from College of Southern Utah in elementary education, in 1959; received a secondary teaching certificate with a major in history and a minor in English from College of Southern Utah, in 1967; completed requirements for Master of Science degree in Educational Administration from Utah State University in 1970.