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in Social Education

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College and University
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Reviewers for this Issue of TRSE

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The Relationship Between Historical Response and Narrative in a Sixth-Grade Classroom

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Abstract

The relationship between narrative and historical understanding in a literature-based, sixth-grade history program was studied using the techniques of naturalistic inquiry—participant observation, structured and unstructured interviews, and daily observation logs. Analysis of the data indicated that response to history was influenced by teacher manipulation of the classroom context, the children's expressed need to know, their desire to explore the border areas of human experience, and the emotional impact of historical narratives. Children responded to the subjective nature of history as literature, retaining a degree of subjectivity as they investigated historical topics and wrote reports. Children demonstrated strong interest in history that demonstrated the possibilities of human behavior.

Recent research on the development of historical understanding has focused on secondary students. For several decades research has rested on the premise that historical understanding is demonstrated in the ability to analyze and interpret passages of history—or at least passages containing historical names, dates, and events. The results have indicated that if historical understanding develops at all, it does not appear until late adolescence (Hallam, 1970, 1979; Peel, 1967). From the perspective of those who work with younger children, however, this approach reflects an incomplete view of historical understanding.

The inference often drawn from the research is that young children cannot understand history; therefore history should not be part of their curriculum. Certainly, surveys have shown that young children do not indicate much interest in history as a school subject. Yet teachers and parents know that children evince interest in the old days, in historical events or characters, and in descriptions of everyday life in historic times, such as Laura Ingalls Wilder's Little House books (e.g., 1953). Children respond to history long before they are capable of handling current tests of historical understanding. The research, however, has not taken historical response into account in the development of mature understanding.

The research on children's response to literature provides some guidelines for examining historical response. Research by Applebee (1978), Favat (1977), and Schlager (1975) suggests that aspects of response are developmental. Other scholars (Britton, 1978; Egan, 1983[1]; Rosenblatt, 1938) extend that suggestion to historical understanding, arguing that early, personal responses to history—especially history embedded in narrative—are precursors to more mature and objective historical understanding.

Little has been done to study the form of such early historical response. Kennedy's (1983) study examined the relationship between information-processing capacity and historical understanding, but concentrated on adolescents. Reviews of research on historical understanding also fail to uncover studies of early response. There is nothing describing how children respond to historical material in a regular classroom setting. How do children respond on their own, or in contact with peers? What forms of history elicit the strongest responses? How do children express interest in historical material? Does the classroom context influence response? What teacher behaviors inhibit or encourage response?

These are important questions for the elementary teacher faced with a social studies curriculum that continues to emphasize history, as well as for the theorist interested in the development of historical understanding. Yet these questions cannot easily be answered by traditional empirical models. Research needs to be extended to include focus on the range of evidence available through naturalistic inquiry.

Using Naturalistic Inquiry to Study Historical Response

Classroom observation suggests that narrative is a potent spur to historical interest. Teachers note the interest exhibited by students in such historical stories as *The Diary of Anne Frank* (Frank, 1952) and *Little House on the Prairie* (Wilder, 1953) and in the oral tradition of family history (Huck, 1981). Research in discourse analysis and schema theory suggests that narrative may help children make sense of history. White and Gagne (1976), for instance, found that connected discourse leads to better memory for meaning. Such discourse provides a framework that improves recall and helps children recognize important features in a text (Kintsch, Kozminsky, Streby, McKoon, & Keenan, 1975). DeVilliers (1974) and Levin (1970) found that readers processed words in connected discourse more deeply than when the same words appeared in sentences or lists. Cullinan, Harwood, and Galda (1983) suggest that readers may be better able to remember things in narratives where the "connected discourse allows the reader to organize and interrelate elements in the text" (p. 31).

One way to help children understand history, then, may be to use the connected discourse of literature. Such an approach also allows the researcher to focus on response as the ongoing construction of meaning as children encounter history in literature. The following study investigated children's responses to a literature-based approach to history.

The Study

The study was conducted through participant observation in a sixth-grade class using a literature-based approach to history. The site was selected on the basis of the availability of an appropriate program and a teacher willing to work with a participant observer. The study was limited by the length of the program — three months during the second semester of the school year — and by departmentalization for instruction. I could observe only during the almost daily language arts and social studies periods and during those after-school hours when children stayed to work on related projects — an average of six hours per week.

The school selected for the study is a middle- to lower-class school in a medium-sized metropolitan area in the upper South. New, lower income housing and redistricting have affected the economic character of the neighborhood and of the school. Some children are bused in from more affluent areas of the city. The majority of pupils, both in the school and in the sixth grade, is white. All those in the observed class read at or above grade level, based on their performance in the Houghton Mifflin Reading Series (Durr, 1981).

The teacher, Louise Adams[2], has been working at the school for 3 of her 11 years as a teacher. She works with the nearby university as a cooperating teacher for field placements and student teachers and is active in several professional organizations, including the National Council for the Social Studies. Mrs. Adams has major responsibility for both social studies and reading/language arts. This dual responsibility allowed her to take advantage of an upcoming unit on research skills in language arts and a social studies History Day[3] project to involve children in an individualized reading program. She also wanted feedback on the program from someone outside the school setting and so was willing to allow a participant observer to enter the classroom for an extended period of time.

Methods used to collect and analyze the data were those of field studies in the ethnography of schooling (Goetz & LeCompte, 1984; Pelto & Pelto, 1978; Popkewitz & Tabachnick, 1981; Spindler, 1982; Wolcott, 1975) and in children's response to literature (Cullinan, Harwood, & Galda, 1983; Hickman, 1979). The primary data collection mode was observation. Along with keeping a daily log, I collected papers passed out in class, lists of books and materials, and copies of student journals and other writing documenting the relationship between narrative history and response. I also transcribed teacher and student comments — sometimes summarized, but usually verbatim.

I conducted both informal and structured interviews. My ability to move around the room for substantial portions of the observation period and my seat near the bookcase where students often congregated provided many opportunities for informal comment and discussion. Some of these were brief (e.g., S — "Do you know this book? It's neat. You can look at it." [moves off

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to get another book]). Others involved lengthy discussions of literary techniques and historical accuracy. I also checked initial perceptions with the teacher and sometimes with the school librarian, asking what kinds of books were shared during the library periods, and what did students select.

Structured interview opportunities were provided as a regular part of the program. I met with individuals and small groups so that by the end of the study, each child had been interviewed at least once, and several had become key informants. Individual interviews were structured to sample the range of student reading, from those reading most, to those least involved in reading; I based these assessments on teacher report, student report, and observation. Small groups were selected on the basis of their interest in a particular topic or book. As small group discussions were a regular part of class instruction, children did not hesitate to participate, nor did interviews disrupt the class.

The Program

Several concerns generated the approach adopted by Louise Adams.

1. Most of the children in the language arts class were competent, fluent readers. They were, Louise said, a good class. The children appeared capable of handling a high degree of independence and, their teacher thought, might benefit from a more challenging approach than the basal reader provided.
2. The children had expressed interest in the History Day program, and Louise was interested in having them participate.
3. Before allowing children to select History Day projects, Louise wanted students exposed to a variety of topics.
4. Louise wanted to encourage student interest in biography and historical fiction.
5. Because of the district's requirement for accountability in reading, Louise needed a system that would generate records tracing student progress.
6. There were instructional objectives that Louise intended to incorporate, including extending children's reading and speaking vocabularies and expanding their voluntary reading.

Mrs. Adams initiated the plan for individualized reading by bringing a collection of books into the classroom. She next solicited suggestions for topics from students and took a committee to the public library to check out additional titles. This classroom collection formed the basis of the program. Though students could read books on any historical era or event during the reading period, assignments during social studies were topic specific. The greater latitude of choice during language arts made that period richer in data for this study.

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Analyzing the Data

An observer has access to features of response that are publicly expressed. Analyzing data, then, becomes a process of identifying response behaviors and charting patterns and variations. Categories based on these analyses aid in understanding the variety of events recorded in the field notes. Categorization also directs attention to events that might otherwise be overlooked. The categories of response drawn from the class under study are listed next, in order of frequency of occurrence. These are followed by a discussion of conditions affecting response events and by a description of categories important in analyzing historical response.

Categories of historical response observed in this context include the following:
1. Selecting and Reading History.
   Attending to recommendations.
   Expressing a need to know about a topic.
   Selecting books that explore border areas — the unwished-for worst and hoped-for best.
   Losing self in book — absorption.
   Reading with a peer.
2. Oral Response.
   Statements of personal identification with historical characters or fictional characters caught in historical circumstances.
   Elicited discussion statements.
   Freely offered discussion statements.
3. Sharing Expertise.
   Sharing elicited by teacher or other adult.
   Sharing elicited by peers.
   Sharing volunteered.
4. Listening.
   Elicited — children directed to listen.
   Spontaneous — children listen in without direction.
5. Writing.
   Statements of personal identification with historical characters of fictional characters caught in historical circumstances.
   Sense of audience — adopting the narrative voice.
   Subjective reporting.
6. Research.
   Using classroom reference materials.
   Using outside sources such as community experts.
   Using library resources outside the classroom.
7. Developing Projects.
   Selecting and researching a topic.
   Building a display — home and school work.
   Attending History Day — local and state.

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Some of these categories might have been expected, given the program's heavy emphasis on reading and writing activities. There would have been no way, however, to predict the power of students' expressed need to know, the personalization of written and oral response, the interest in the border areas of human experience, or the impact of shared expertise. As pervasive features of historical response in this classroom, and because there is often little opportunity for any of these responses in traditional classroom settings, each is elaborated. First, however, a framework is provided, establishing the conditions affecting response events: the sequence of events, time effects, and cumulative effects.

Sequence of Events

The frequency of response events was determined to some extent by teacher assignment. The children were required to read for certain periods and to write daily. Although children could browse through books and talk to each other during the reading period, the teacher monitored their behavior and the time spent browsing or talking. If a student browsed too long, or engaged in conversation unrelated to the reading assignment, Mrs. Adams redirected the activity. She also insisted that students participate in almost all categories of response. Though not all students participated in all subcategories and students had choices within categories, the list provides an overview of both the frequency of occurrence and an approximate order of events.

A list, however, does not show the interrelatedness of events. Listening, for instance, occurred simultaneously with oral response and shared expertise. For an event to be considered sharing, a receiver must be available — either teacher, peer, or observer. The opportunity for such interaction and the sequence of response, especially between peers, can be seen in a series of events taken from the daily logs. The following excerpts begin with a student reading *Anne Frank: The Diary of a Young Girl* (Frank 1952).[4]

> Jan. 14 Diane has just finished *Anne Frank*. She closes book and looks over cover, turns book over, and scans (reads?) the back cover. To Anne: "You've got to read this." Anne picks up book. . . .
>
> Jan. 24 Louise calls up Anne's group [includes Diane]. They are to discuss books on holocaust. Enthusiastic response to grouping. Pull chairs in circle. Several run back to get books. Anne [describing *Anne Frank*]: "I would have run away! Why didn't they run away?"
>
> Diane: "I would have been terrified!" [nods of agreement from group]. Peter reads excerpt from an informational book on World War II, section on Hitler. He asks for the meaning of several German words. Louise calls Jennifer to group: "Jennifer, you've lived in Germany. Can you help us here?" Jennifer helps, returns to own reading.
>
> Jan. 26 Journal entries reflect interest in holocaust. Jane writes that she got so angry she wanted to "walk right up and punch Hitler in the

face." Several write: "I just didn't know how bad it was." "The book made me glad I live here, and not back then. I'm lucky." "I don't understand how this could happen! It's like prejudice against black people." Another small group forms, with several new members, to discuss *Friedrich* (Richter, 1970). I recount story of acquaintance who was in a concentration camp. General classroom hum ceases. The whole class is listening! Leaning forward to hear better. As story concludes, there are audible sighs.

Louise: "If you are interested in the Nazis, there will be a TV show on. . . ."

All the books on World War II are checked out. Students asked librarian for others. Angela tells me she checked a copy of *Friedrich* (Richter, 1970) out of the public library "because she [Jane] has the only copy, and she isn't done yet."

Jan. 31 Robert is reading a psychological biography of Adolf Hitler (Klein & Klein, 1976). Louise reports that Robert doesn't do much regular classwork [observed last week avoiding spelling test because "I can't find my pencil"]. Other teachers are discussing retention. Louise thinks he is very intelligent, but unhappy. Threatened suicide recently. [There is always a stack of books on his desk, and he does appear to read them].

Feb. 9 Robert participates in class discussion of Hitler. Louise: "What kind of man do you think Hitler was?"

Responses: "Awful," "Horrible," "Insane," and so forth.

Anne: "I think Hitler was brave to think he could conquer the world."

[There is a great deal of discussion]

Anne: "Brave doesn't have to mean good. . . ."

Robert begins to talk about his book.

Two girls who began the same book, but did not finish, grimace. "That book was nasty!" they say. "It talks about sex and that kind of stuff." Robert disagrees . . . "That stuff helps explain. . . ." The girls shake their heads, "no."

Later, in a separate interview, Robert explains the importance of understanding Hitler:

Linda: "Why did you choose this book?"

Robert: "I've been fascinated by Hitler, you know. He got to be so powerful. And why did he kill those people?"

Linda: "Why did he?"

Robert: "He was prejudiced. The way he was raised, he just didn't like some people. There was this scene in the book. He's at a meeting, and they're saying to join Austria, Germany, and another country. And he jumps up and says that's impossible. It'll never happen. He really

wanted power, and he would do anything to get it. At the end he knew he was going to lose so he killed himself. The book says he bit down on a poison capsule and shot himself in the head [Robert demonstrates]. I could not devote myself to killing and war like he could. He had a very messed up mind. He was very confused."

Toward the end of the observation period Anne and Diane ask Jennifer for assistance with several German words — blitzkreig, kristelnacht.

Feb. 10 Louise asks Jennifer to talk about what Germany was like when she lived there. In her journal entry, Jennifer discusses *Gentlehands* (Kerr, 1978) [first evidence of interest in holocaust literature]:" When I read *Gentlehands*, I realized why people joined Hitler's cause. I had thought that anyone to join Hitler must have been mean. I realized that it must have been appealing and also that people often feel that they should do whatever their leaders tell them, even if it is wrong." Robert is asked to join a small, teacher-led discussion group to share some of what he has learned about Hitler. He brings the book and refers to it throughout. Anne: "See, in Robert's book, Hitler is brave, but it is insane bravery."

Peter joins the group in order to confirm dates.

Louise: "Peter can help us with this problem . . ."

At the end of the study, children were asked to write about the books they most enjoyed or those from which they learned something. Once again, many referred to the holocaust books:

"I loved this book because it sees through the eyes of this person. I never knew how hard people had it. This book is so real. I find this period especially interesting for some reason I don't know about."

"I think it is interesting to know how the people hid from the Germans and Hitler. I never knew Hitler tried to kill the jews."

"I learned about the World War II in two books. I couldn't believe how cruel Hitler was to the Jews. . . . I enjoyed reading about WW II and will try and read more."

"I think this book is worth reading because for one thing, its well written, and for another, it tells just how the Jews were treated. . . ."

"I enjoyed this book very much and picked this book because it is about a jewish girl whose family had to go into hiding during World War II. I have become very interested in World War II, Hitler himself, and especially what happened to the Jews and I want to find out more about these things."

Many of those writing about the holocaust books reported that they "wanted to do something" about the books after they read them, as if the events were current, or they could exact retrospective justice. Robert went on to develop a History Day presentation in which he performed the roles of

American, Russian, and German soldiers, expressing their fears, discontents, and views of war. In an interview, he explained that his study had been worth doing, even though some of the reading was difficult, and he had not understood all the terminology. "Now," he explained, "I know the truth."

Time effects: Reencounter
Although all students did not participate in this entire sequence of events, it is representative of response patterns. Other sequences involving biographies of women, the American Civil War, and English and European history ran concurrently with or succeeded interest in World War II and the holocaust. In each case, time was important. Rarely was a response event a singular occurrence. Rather, students read, discussed, and then had time to reflect before regrouping. An issue could be reencountered from several perspectives over time. A student would propose a thesis (e.g., "Hitler was brave . . . .", listen to peer response, read and think more, and return to the issue (e.g., "Hitler is brave, but it is insane bravery."). Reencounter also meant that students could join in along the way, as Robert and Jennifer did.

Cumulative Response
Response can also be seen as cumulative in this sequence. A single student opportunity to share a well-liked book resulted in several students seeking "more like this." Diane, for instance, did not ask for others "like this" until her friends suggested she read *Gentlehands*. Shortly, the group enlarged beyond friendship affiliations, and more books were added, including biography and informational books. The initial personal identification ("I would have been terrified!") expanded to include consideration of the morality of events and the nature of bravery and responsibility (e.g., What should Friedrich's friend have done when the Jewish boy was forced from the air raid shelter?).

Student interest did not flow chronologically. Rather, it was triggered by the students' perceived need to know, by peer or teacher suggestion (e.g., "You've got to read this."), by a powerful interest in what Hardy (1978) calls "the unwished-for worst," and what might be characterized as the hoped-for best, as well as by an interest in sharing with peers.

These factors did not emerge as clearly during the regular social studies period when students followed a common, chronological curriculum. The social studies curriculum may have satisfied the students' need to know, as well as their desire to explore the border areas of human experience. It may also have provided less opportunity or necessity for expressing such interests or concerns. Given a context in which choice was encouraged, however, children tended to express their interests through these related factors: (a) the need to know, (b) personal identification (e.g., "How would I have behaved in like circumstances?" and (c) the exploration of the border areas of human experience.

The Need to Know

In Interviews, children reported overwhelmingly that they loved the opportunity to choose their own books, to explore topics in depth, and to work independently. They talked about being moved, inspired, and angered at times by what they read, and they frequently added that they had learned something they described as the truth.

Observation and interviews provide some background for this response, beginning with the students' need to know. In part, this was a creation of the teacher. Mrs. Adams explained that she purposely worked to build an environment in which both asking and knowing were important. In another sense, her arrangement may have freed children to do what several scholars suggest is the task of the beginning adolescent — the exploration of possible adult roles (Meek, Warlow, & Barton, 1978). A clear example of this behavior can be seen in the reading and discussion patterns of one group of girls.

Each girl had read at least one biography of a woman who had lived an unusual life. In interviews the girls were explicit in describing their reasons for selecting these books. They wanted, they said, to read about successful women. As one of them explained:

> [Amelia Earhardt] did what she wanted to do. . . . I would never have the guts to fly a plane across the Atlantic alone. Also, I would not die to make a record . . . but Amelia Earhardt has taught me that if you want to do something, go for it. Don't wait until the last minute. You can be anything you want to. Don't be a nurse if you want to be a doctor. Stick to your opinions and rights.

Another adds:

> I know now that I will be a doctor no matter what. I can do that [struggle as Elizabeth Blackwell had] too.

Using a variety of biographies, these girls went on to discuss possible adult roles and debated the relative merits of careers in medicine, physics, computer science, and translation:

> Maria: "I want to be a surgeon. . . ."
> Alice: "You want to cut people up? I'd rather be a nurse, then you could help people without all the blood and stuff."
> Jayne: "Oh, yeah? What about the icky stuff nurses do?" [reads passage from Blackwell biography].
> Kate: "Or working with computers. That would be a good thing. . . ."
> Sue: [Referring to another book] "And foreign language — you could be an interpreter at the U.N."

In a journal entry, one member of this group, Kate, speculated on a

women president [written prior to the nomination of a woman vice presidential candidate].

> I think a woman has never been voted into the Presidential office because Americans portray females as the weaker sex. A typical family is the nuclear family, a mother, a father, and a child. Through the media and movies, we hear about the man working, the woman the housewife. Today things are changing: Latch-key children, single-parent families, or *both* parents working. Another factor in this issue is that women aren't even trying to be nominated, much less setting their goals as high as becoming President. Many women have been raised to think that men will rule the roost after marriage. Also, in some cases, they have been trained to think that they aren't capable of such a job. At the moment, I cannot think of a woman that might run for president and win. When I become of voting age, I would vote for a woman president not just to help her along. I would vote for her because she has the qualifications, has the stamina, and was willing to take on the responsibility of running a country with success. Note: Recently, I discovered if we had a woman president, we would announce her as Madam President.

In a later, separate interview, Maria, another of the girls discussing careers, elaborated on the need to know. She began by explaining that she was willing to read books described as slow such as a biography:

> Maria: "I like books that move fast and capture your attention in the first two chapters. Well, I like fact, too. And they don't always get exciting right away. I read that Elizabeth Yates book, and I liked that."
> Linda: "It wasn't exciting?"
> Maria: "No, but it was good. . . . I think that, well, its fact, you know; it's alright if it's a bit slow. Real life is like that. But if it's fiction, . . . the author ought to make it more exciting."

Other students reported a willingness to tolerate more difficult reading if they thought the result would be knowing. Robert needed to know what motivated Hitler; later he read a thick volume on coping with divorce because "I needed to know, and I didn't want to bother my mother about it." Scott reread one book four times because he "wanted to know about the blitz." Jennifer "liked the times and maybe needed to know some of my heritage." Chris knew "for a fact about World War II and the Jews and Hitler."

The need to know was generally synonymous in the children's conversation with a search for truth. Students explained that they knew the truth after reading, that they wanted to "know what really happened," or wanted to understand something from the past. This was particularly true in those

instances where humans responded with extraordinary bravery or outrageous inhumanity.

Personal Identification

Rather than searching for general historical information, the sixth graders in this study looked for topics with emotional relevance to their own lives. They compared literary characters to themselves (e.g., "If that were me, I would. . . ." or "I would have felt. . . ."). In *Literature as Experience*, Rosenblatt (1938) suggests that readers experience empathy with characters that allows them to test themselves against real and fictional circumstances. Responses in the class under study corroborate Rosenblatt's claim. Children asked about motivation (e.g., "Why did the people let Friedrich die?" or "Weren't they frightened? They were so brave to hold out and not give up!"). In journal entries, they discussed the corollary to their interest in historical motivation: personal comparisons and testing.

> "I wanted to be there to see what was happening and put a stop to it all. . . . I felt I was in Ilse Kohen's place." "When I read Helen Keller it really made me want to be like her because she was so determined whenever she wanted something, and she wanted to learn and read everything. I thought maybe I could do that too."

Children might read a book because a friend recommended it or because the title and cover were attractive, but they liked or disliked it for quite personal reasons.

> "I just wish [Helen Keller] was still alive so I could meet her."
> "I didn't like *Song for a Dark Queen* (Sutcliffe, 1979). I didn't like her killing herself . . . nothing to live for."
> "This was about a boy who played a violin. I wanted to take violin but my mother wouldn't let me. I really liked this book."

Overall, however, the most compelling books for this group of children explored the border areas of human experience.

Exploring the Unwished-for Worst and the Hoped-for Best

Kieran Egan (1979) argues that history, especially history as narrative, is appropriate content in the elementary school because it deals with basic and powerful emotions familiar even to young children. Although other forms of literature for children also have emotional power, the reality of history seemed to appeal to these sixth graders. Children demonstrated continued interest in history as it relates to human response to fear, discrimination, and tragedy. History provided them with real instances of human bravery or tragedy within a relatively safe framework. Even historical fiction, because it posited an individual response to a real even, encouraged children to speculate about their own abilities to handle real-life dilemmas. This, Hardy (1978) claims, is one of the functions of narrative or story.

In order really to live we make up stories about ourselves and others, about the personal as well as the social past and future (p. 13).

Not all students, however, displayed interest in this kind of history or literature. Six children read none of the books that might loosely fall into this category. Instead, they read standard youth biographies such as *Young Man from the Piedmont* (Webberly, 1953) or informational books such as the English Ladybug series (e.g., Peach, 1966). Although the subject matter in either could be made emotionally powerful, none of the students reading these books discussed them in the personal response pattern most common with their peers. Instead, they repeated information gathered, without noting any individual human consequences or identifying with the characters:

"It's very educational. . . . It tells the history of how man found out how to fly, and told everything that happened up to that moment."

"I learned about the first battle of ironclads on the Potomac River during the Civil War."

For others, interest changed when it was time to begin the History Day projects. Three students developed a project based on the class' social studies unit on Egypt, even though all three had concentrated most of their reading on Nazi Germany. A core of students, though, did develop projects that grew from their reading. Robert's performance on World War II soldiers was one example, but others worked on Jacques Cousteau's pioneering efforts to develop undersea diving equipment, Elizabeth Blackwell and the entry of women into medicine, Pearl Harbor, and the Battle of Hastings. None dealt directly with the holocaust. In interviews, three students mentioned that they did not think the holocaust had been a turning point in history, the History Day theme. They had interpreted turning points to be positive events. Other responses did not fall into any identifiable pattern.

In each case, where students wrote reports to accompany projects based on their reading, their reports demonstrate the influence of the literary introduction. Instead of reports that read like encyclopedias, the papers reflected how the writers felt about the subject. For instance, the paper on Elizabeth Blackwell includes this description of Blackwell's medical training:

When she arrived she was greeted cordially, but soon all the fun went away. The students were friendly, but some of the professors were obnoxious. When studying childbirth she was asked to leave the room, on one occasion they took a corpse apart and she was asked to leave, but instead of leaving she sat in her seat. The professor grew red and angry, but to everyone's surprise at the end of the class she had taken apart and labeled every organ correctly. (And didn't get SICK!). The semester went by and soon it was time to graduate. Elizabeth graduated at the top of her class with honors.

The young author of the Cousteau report was equally enthusiastic about his subject. As he described the impact of water pressure on a diver going below a certain point, he wrote, ". . . he would be CRUSHED!" Capitals punctuate the report, as does approval of Cousteau. The student had come to know his subject, and as with his peers he incorporated details that particularized the magnitude of accomplishments or problems and passed on knowing: the age of a sunken ship, the depth of a dive, the effects of pressure.

As writers, the children adopted the storyteller's voice rather than the more distant and impersonal reportorial tone. They attempted to engage their audience with the same elements that had first appealed to them — a more personal narrative structure. The children also addressed their audience with the recognition that writing could be a conversation with an unknown listener (cf. Britton, Burgess, Martin, McLeod, & Rosen, 1975):

> Hi, I'm Golda Mabovitche and I was born in Russia, but moved to America early this summer. Today was the first day of school and I don't know anyone. Mama walked me to school today to show me where it was, but tomorrow I'll go by myself . . . I felt so weird sitting in class and not knowing what people were saying. When someone said something to me all I could say was something in Yiddish. Well, I guess it wasn't that bad I made a new friend and found my way home!

Shared Expertise: A Teacher-Manipulated Context

The various responses to history observed in this classroom were nutured by a specific classroom context, including specific choices on student access to information, the exercise of authority, and the encouragement of peer interaction. In some classrooms, teachers sanction only information from approved textbooks. The textbook becomes gatekeeper and arbiter, limiting access to information and serving as final authority when a question is raised. Information is controlled by an authority rooted outside the classroom whose author and sources are invisible to students and unavailable for discussion. Mrs. Adams' approach was quite different. Rather than single sources, she encouraged reference to multiple sources. Rather than simply accepting the information or interpretation offered in a textbook, Mrs. Adams encouraged critical analysis of sources and asked students to make judgments about what they were learning.

Like a cogwheel, Mrs. Adams transferred power to her students, who, in turn, moved their peers. Within this classroom context, each student was a potentially active part of the community of learners. Scott explained, "You work hard, and sometimes I wish I was smarter, but it's the best class yet. She doesn't put you down, or tease. . . ." Instead, Mrs. Adams' classroom roles may be categorized as follows:

1. Selecting and suggesting resources. In addition to providing various references and literature in the classroom, Mrs. Adams also assisted chil-

dren in using community resources. An excerpt from the field notes demonstrates the process:

> 8:45 a.m. [Peter and Gary engaged in heated argument]
> Pete: [waves reference book on oceanography] "But it says so right here!"
> Gary: "So what? My book is by Jacques Cousteau, and he should know!"
> [Louise intervenes. Argument concerns the speed of sound waves in water. Louise helps outline plan for solution.]
> 8:55 a.m. [Pete and Gary leave for library.]
> 9:15 a.m. [Boys return with more possible answers. Louise has them check copyright, authors' credentials. Narrows field to three possibilities.]
> 11:20 a.m. [Louise arranges for Peter and Gary to call physics professor. He explains factors affecting velocity. Boys write report on their work and display it for the rest of the class.]

2. Organizing formal sharing opportunities. Formal sharing includes journal writing, whole class and small group discussions, individual conferences, book reviews, and a final project. Each opportunity for sharing also involves an audience.

3. Organizing an audience for student work. Mrs. Adams responded to journal entries with suggestions for further reading or thinking, compliments, and comments:

> "Interesting point of view. . . . There are usually two sides to an issue."
> "This [story] reminds me of the play we saw Thursday. Did you think so?"
> "You will be a good resource person. . . . I would really appreciate your reading [this]."

Mrs. Adams also set up student audiences. Book reviews were arranged so that peers could use the reviews in selecting a book to read. Group discussions also provided a forum for sharing, as did History Day.

4. Providing reading time. There was an established policy in the class, allowing reading time during every language arts period.

5. Providing a clear expectation that students would participate and do quality work.

Mrs. Adams did the kind of coaching Adler recommends in the *Paedeia Proposal* (1982). There was continuous input as children worked, both from peers and from the teacher:

Louise: "The word interesting is not sufficient. What makes it interesting?"

"There's your word. See if you can find out what it means. Put it on the board when you find it."

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6. Encouraging peer experts. As children read and studied and talked with the teacher, Mrs. Adams kept mental track of student interests and referred students to each other. This was the hub of the cogwheel, as experts were created and encouraged to share with their peers.

> Louise: "Jennifer has been reading in that area. Why don't you check with her?"
> "Paul, didn't you just write about that?
> Perhaps you should sit in on this discussion."
> "Ah! Good question! Let me know when you find out!"

During discussion groups a student expert might be called on to clarify a point or provide needed information. Children might not know the answers, but they usually attempted to find out or suggested where their classmates could find out. Soon reference to student experts did not require teacher suggestion. A student who wanted help in an area went to the person with the expertise.

7. Praising and attending. Mrs. Adams praised good work and attended to student needs and interests. She was able to put discussion groups together based on those interests or on particular needs she perceived as important, such as the creation of student experts or the possibility of encouraging further reading on a topic. She also pointed out good work to other adults in the classroom — student aides and student teachers, other teachers, and me.

In each of these roles, Mrs. Adams directed students to be agents of their own learning and aids to their peers. She manipulated the context to take advantage of the motivating power of literature to spur historical study and provide a setting for historical response.

Conclusions

The data clearly indicate that these children were interested in history and that interest and response were influenced by the teacher's manipulation of the classroom context. This raises several issues. First, the emotional impact of history as literature can be problematic. Literature raises issues in an emotionally charged context. In another context, children might never move beyond their initial emotional response to an examination of the different perspectives involved in any values issue. The availability of a variety of books, as well as time to encounter and reencounter ideas in a variety of contexts — reading, discussing, writing — appeared to be an important factor in this class.

Second, literature did provide information to children. Further, the information was strongly colored by the author's point of view and the reader's identification with particular characters. Although mature historical understanding may be more analytical and objective, children at this stage do respond to the subjective nature of history as literature. These

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children engaged in further exploration of topics, but their later reports retained a subjective dimension. Also, their research was not spontaneous, but an outgrowth of the teacher-directed context. In the same way, only a few children were spontaneously critical of literary sources. Even though they could explain the difference between fiction and nonfiction and did spontaneously critique books as literary creations, they tended to accept the history content as unimpeachable. Criticism directed at the veracity or accuracy of the created world remained a function of teacher suggestion and classroom protocol, especially as developed through the use of classroom experts and constantly re-forming discussion groups. The students' expressed need to know made it difficult for children to question the veracity of a book they had felt deeply.

Third, by changing the environment through who participated in discussion groups, what journal topics were assigned, and what books were made available, the teacher influenced historical response. There were numerous rewards for pursuing interest in history, both from peer interaction and teacher support for curiosity, inquiry, and expertise. The opportunity for continued encounters with content allowed time for response to occur. Such connections between historical response and classroom context bear continued research.

Finally, the strength of children's identification with historical characters or events demonstrated an interest in a particular kind of history. Children wanted to know about the world, about how people in the past had lived, and about the possibilities for their own futures. History and historical fiction provided a reality base for testing the possibilities for human behavior. Whether this interest is a phenomenon of early adolescence, a developmental stage preceded by other kinds of response, a common response pattern during the elementary years, or an artifact of a particular teacher or group of children remains to be researched.

Endnotes

1. Although Egan (1983) does not accept Piagetian descriptions of cognitive development applied to history, he does posit a curricular sequence beginning with narrative structures and characterized as accumulating history.

2. Louise Adams is a pseudonym. I have used the first name in the data to reflect the relationship between teacher and researcher, the last name is used in the narrative text to reflect the title used in her professional role, and Mrs. rather than Ms. as it is the form of address used in the school.

3. History Day is a national program intended to encourage student research in history.

4. All student names are pseudonyms; all transcriptions are rendered with student errors uncorrected.

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The Effects of Recycling and Response Sensitivity on the Acquisition of Social Studies Concepts

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Abstract

Findings from two studies that examined the effect of presentation order of examples and nonexamples on students' acquisition of concepts are reported. The first (Study 1) compared the effect of a response-sensitive presentation (presentation order determined by the students' response) to a response-insensitive presentation (order predetermined and presented in random order). In addition, the effects of recycling missed instances were examined. The sample consisted of 116 sixth grade students who were randomly assigned to one of two treatment groups or a control group. The concept of transfer propaganda was taught by two experienced teachers. Findings indicated that presentations that were response-sensitive and/or included the recycling of missed instances were no more effective than presentations that were insensitive or excluded recycling. The second (Study 2) was an attempt to replicate the findings concerning the recycling of missed instances in Study 1. In the second, 107 second grade students were randomly assigned to one of two treatment groups or to a control group and taught the coordinate concepts of consumers and producers. Findings reported in Study 1 were replicated. Recycling missed instances was no more effective than no recycling.

The importance of effective concept instruction has been discussed (Carroll, 1964; DeCecco, 1968; Gagne, 1965; Klausmeier, Ghatala, & Frayer, 1974; Markle, 1975; Markle & Tieman, 1969) and instructional models for effective concept teaching have been proposed (Clark, 1971; Gagne, 1965; Klausmeier, 1976; Merrill & Tennyson, 1977; Taba, 1966). Of these designs, the model developed by Merrill and Tennyson has stimulated much research and has been found to be effective in teaching concepts.

This model (Merrill & Tennyson, 1977) consists of a definition, an expository presentation of matched examples and nonexamples, and an inquisitory practice presentation of randomly ordered examples and nonex-

amples. The initial component of the model, a definition, is a statement that identifies the concept's critical attributes (essential characteristics).

The expository presentation follows the definition and consists of examples and nonexamples (Markle & Tieman, 1974; Suebsonthi, 1980/1981; Tennyson, 1973) matched on the basis of similar variable, or nonessential, attributes (Merrill & Tennyson, 1977; Tennyson, Woolley, & Merrill, 1972). Matching of examples and nonexamples which have similar variable attributes helps learners discriminate between classes (Merrill & Tennyson, 1978; Tennyson et al., 1972). Examples in the expository presentation should be divergent from other examples and range from easy to difficult (Merrill & Tennyson, 1977; Tennyson et al., 1972). Including divergent and easy to difficult examples facilitate generalization behavior (Merrill & Tennyson, 1978; Tennyson et al., 1972). During the expository presentation the teacher presents an instance, identifies it as an example or nonexample, and presents a verbal statement with each instance which analyzes the presence or absence of the critical attributes (an analytical explanation).

The inquisitory practice presentation consists of randomly ordered examples and nonexamples. Students are asked to identify the instances as either examples or nonexamples and to give an explanation. The teacher provides feedback. The importance of the practice presentation in concept acquisition has been demonstrated in several studies (Chao, 1979/1980; Coleman, 1979/1980; Suebsonthi, 1980/1981).

Recent research has suggested a modification of the above design. Park and Tennyson (1980) suggest that the examples and nonexamples in the inquisitory practice presentation should be ordered in a response-sensitive presentation rather than randomly ordered. In a response-sensitive presentation, the presentation is based on the students' on-task behavior. For example, if a student labels Concept A as Concept B, the teacher would explain why the correct response was Concept A, then immediately present the student with an example of Concept B. In the Park and Tennyson (1980) study, using computer-based individualized instruction, students who were taught coordinate concepts using a response-sensitive presentation order mastered the coordinate concepts significantly better than students using a response-insensitive (predetermined random) presentation. Burts, McKinney, Ford, and Gilmore (1983) found that a response-sensitive strategy also results in significantly better achievement on coordinate concept acquisition than a response-insensitive strategy in large group instruction.

Enhancement of concept acquisition may also be improved by recycling missed instances. Skinner (1958) found that repeating missed frames was useful, and Markle (1969) provided remedial loops for students who made errors in programmed instruction. Since computer-assisted instruction greatly facilitates this repetition of missed instances, Spannanus (1981/1982) viewed recycling as a possible technique for presenting practice instances in individualized computer-assisted instruction. However, too few

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students missed instances in his study, and he dropped this aspect from his research.

The purposes of the two studies reported below were to examine the effectiveness of a response-sensitive presentation and recycling on student achievement in learning a single concept in large group instruction and to examine the effectiveness of recycling missed instances on student achievement in learning coordinate concepts.

Study 1

Study 1 had three purposes. First, four methods of presenting instances in the inquisitory practice presentation were compared: (1) response-sensitive with no recycling, (2) response-sensitive with recycling, (3) response-insensitive with no recycling, and (4) response-insensitive with recycling. Second, the effectiveness of a response-sensitive presentation and a response-insensitive presentation was examined. Third, the effectiveness of recycling of missed instances and no recycling of missed instances was examined.

Procedures

Sample. The sample consisted of 116 sixth-grade students who attended three rural schools. The subjects, 46 males and 70 females, were randomly assigned to treatment groups. Students attending all three schools came from upper-lower to lower-middle class families.

Teachers. Two experienced, certified teachers administered the treatments. The teacher at School 1 was the regular classroom teacher who taught social studies to all sixth-grade students. In Schools 2 and 3, treatments were provided by a doctoral student with seven years teaching experience at the elementary level. Training sessions of approximately four hours were held with each teacher prior to the study. Lessons were scripted to maintain consistency across teachers and treatments.

Treatments. In the first treatment level, response-sensitive with no recycling (RSN), the instances in the practice presentation were randomly ordered prior to the presentation. During the presentation, the order of the instance presentation was adapted in response to the students' identification of the instance. If the student correctly identified the instance, the teacher reinforced the correct answer and made a verbal statement reiterating the critical attributes. Then the next instance in the random order was presented. If the student incorrectly identified the instance, the next instance corresponded to the incorrect answer given by the student. For example, if the student identified an example as a nonexample, the teacher correctly identified the instance as an example and gave an analytical explanation. Then the teacher presented a nonexample as the next practice to the same student.

The second treatment level was response-sensitive with recycling (RSR).

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The treatment was the same as the first treatment level except that those instances that were incorrectly identified were recycled—presented again at the end of the lesson. The students responded to these recycled instances until each was correctly identified.

In the third treatment level, response-insensitive with no recycling (RIN), the instances were randomly ordered prior to presentation. The instances were presented in this random sequence regardless of how the students responded. If the student correctly identified the instance, the teacher reinforced the correct answer and made a verbal statement reiterating the critical attributes. If the student incorrectly identified the instance, the teacher gave the correct response and a verbal statement analyzing the critical attributes. In either case, the teacher then presented the next instance in the predetermined random order. When all instances had been presented once, the treatment was concluded. This treatment followed the original recommendation for ordering practice instances (Merrill & Tennyson, 1977).

The fourth treatment level was response-insensitive with recycling (RIR). The treatment was the same as in the third treatment level except that those instances that were incorrectly identified were recycled; that is, presented again at the end of the presentation. Students responded to each recycled instance until correct identification was made.

Since students remained in their regular classrooms except when they were participating in the study, there was a possibility that students who had already participated in the research would discuss it with their classmates. Therefore, a control group was included to see if any interaction took place and if so, did it impact the study. The control group received no classroom instruction. This group was administered the posttest with the last treatment group at each school. The control group average on the posttest ($X =$ 6.286) reflected a chance score. There was a possibility that information was passed on. However, if it were, the impact on the achievement of the control group was negligible.

Treatments were rotated to control for possible effects of time of day and order of treatments. The treatments were randomly ordered for School 1. Then the treatment order was rotated by moving the last treatment to the first postion for each subsequent school.

Lessons. The concept taught in this study was transfer propaganda. This concept was selected because Merrill and Tennyson (1977) used this concept in their instructional guide, and it has been recommended for this grade level by textbook writers (Durr, Windley, & Earnhardt, 1976; Moffet, 1979).

During the presentations, the errors made in each treatment were recorded. In the response-sensitive with no recycling (RSN) group, two errors were made at School 1, three errors at School 2, and four errors at School 3. In the presentation to the response-sensitive with recycling (RSR) groups,

six errors were made at School 1 on four instances with two instances recycled one time, one instance recycled twice, and one instance recycled three times. Two errors were recorded in the response-sensitive with recycling (RSR) presentation at School 2 with each missed instance recycled only once. At school 3; four instances were incorrectly identified in the response-sensitive with recycling (RSR) group with each missed instance recycled only one time. In the response-insensitive with no recycling (RIN) presentations, five errors were recorded for School 1, four errors for School 2, and four errors for School 3. In the presentation to the response-insensitive with recycling (RIR) group at School 1, three errors were made with each missed instance recycled only one time. At School 2, six errors were recorded with four instances recycled once and one instance recycled twice in the response-insensitive with recycling (RIR) presentation. At School 3, in the response-insensitive with recycling (RIR) group, five errors were made with one instance recycled once and two instances recycled twice.

Instrumentation. A 32 item multiple-choice, true-false test was administered to each treatment group immediately following each presentation. The test items consisted of advertisements and cartoons mounted on construction paper. For each item, two instances were shown. If instance A was an example and instance B was not an example (a nonexample), then the students were told to mark choice A. If instance A was not an example and instance B was an example, then the students were told to mark B. If both instances A and B were examples, the students were told to mark C. If neither instance A nor B was an example (both were nonexamples), the students were told to mark D. Prior to the study, the subjects were taught a concept and tested using this format. Results indicated that the subjects had no difficulty responding to this format.

The original test used in the study consisted of 32 items. However, 8 of 32 items had correlations to the total test score that were less than $r = .15$. Since these items did not contribute useful information and were apparently confusing to the students, they were omitted. Reliability on the 24 item test, as estimated by Cronbach alpha, was .86.

Design and Analysis. A randomized posttest only control-group design (Campbell & Stanley, 1963) was used. Subjects were randomly assigned to one of four treatment groups or to the control group using random number lists.

Findings
Our first purpose was to examine the effectiveness of the four groups — response-sensitive with recycling, response-sensitive with no recycling, response-insensitive with recycling, and response-insensitive with no recycling. Results of analysis of covariance indicated that there were no significant differences among these groups, $F(3,90) = .6790$, p > .05. The

Table 1

Means, Adjusted Means, and Standard Deviations of Posttest Scores for Response-Sensitive with No Recycling (RSN), Response-Sensitive with Recycling (RSR), Response-Insensitive with No recycling (RIN), and Response-Insensitive with Recycling (RIR) Groups

Group	N	Covariate Mean	Covariate SD	Posttest Mean	Posttest SD	Posttest Adj. Mean
RSN	22	6.123	2.063	11.864	5.164	11.143
RSR	25	5.312	2.088	11.640	4.774	12.143
RIN	25	5.916	2.152	13.560	6.100	13.151
RIR	23	5.257	1.731	11.217	6.633	11.805

adjusted means for the treatment groups (RSN $\overline{X}$ = 11.143, RSR $\overline{X}$ = 12.143, RIN $\overline{X}$ = 11.805) differed only slightly (see Table 1).

Results of analysis of covariance indicated a significance difference among the four treatment groups and the control group, $F(4,110)$ = 5.6645, p < .05. Results of Scheffe's S test indicated that the adjusted means for three of the treatment groups (RSR $\overline{X}$ = 11.983, RIN $\overline{X}$ = 13.089, RIR $\overline{X}$ = 11.635) were significantly larger than the mean for the control group ($\overline{X}$ = 6.766). The difference between the mean of the response-sensitive with no recycling group (RSN $\overline{X}$ = 11.114) and the control group approached significance (p = .07).

The second purpose of this study was to compare the effects of response-sensitive presentations and response-insensitive presentations. Results of analysis of covariance indicated that there was no significant difference on achievement scores on the concept posttest between groups receiving response-sensitive presentations and those receiving response-insensitive presentations, $F(1,92)$ = .6711, p > .05. The adjusted means for the groups

Table 2

Means, Adjusted Means, and Standard Deviations of Posttest Scores for Responsive-Sensitive with No Recycling (RSN), Response-Sensitive with Recycling (RSR), Response-Insensitive with No Recycling (RIN), Response-Insensitive with Recycling (RIR), and Control Groups

Group	N	Covariate Mean	Covariate SD	Posttest Mean	Posttest SD	Posttest Adj. Mean
RSN	22	6.123	2.063	11.864	5.164	11.114
RSR	25	5.312	2.088	11.640	4.774	11.983
RIN	25	5.916	2.152	13.560	6.100	13.089
RIR	23	5.257	1.731	11.217	6.633	11.635
Control	21	5.210	1.803	6.286	3.311	6.766

Table 3

Means, Adjusted Means, and Standard Deviations of Posttest Scores for Response-Sensitive (RSN and RSR) and Response-Insensitive (RIN and RIR) Presentations

Group	N	Covariate Mean	Covariate SD	Posttest Mean	Posttest SD	Posttest Adj. Mean
Response-Sensitive	47	5.691	2.115	11.745	4.961	11.675
Response-Insensitive	48	5.600	1.989	12.437	6.468	12.506

receiving response-sensitive presentations ($\overline{X}$ = 11.745) and groups receiving response-insensitive presentations ($\overline{X}$ = 12.437) differed only slightly (see Table 3).

The third purpose of this study was to compare the effectiveness of recycling missed instances to no recycling. Results of analysis of covariance indicated that there was no significant difference in achievement between the groups receiving presentations with recycled instances and presentations without recycled instances, $F(1,92) = .0532$, $p > .05$.

The adjusted mean for groups without recycled presentations ($\overline{X}$ = 12.215) was only slightly larger than the adjusted mean for the groups with recycling presentations ($\overline{X}$ = 11.977). Recycling instances appeared to have no impact upon student achievement (see Table 4).

Discussion

The results of this study did not provide support for a revision of the Merrill and Tennyson model for teaching a single concept. Although studies have indicated the efficacy of inquisitory practice presentations that are response-sensitive in both individualized instruction (Park & Tennyson, 1980) and total group instruction (Burts et al., 1983) when teaching coordinate concepts, this study does not indicate that response-sensitive presentations are any more effective when teaching single concepts in large group

Table 4

Means, Adjusted Means, and Standard Deviations of Posttest Scores for Recycling (RSR and RIR) and No Recycling (RSR and RIN) Presentations

Group	N	Covariate Mean	Covariate SD	Posttest Mean	Posttest SD	Posttest Adj. Mean
Recycling	48	5.285	1.925	11.437	5.744	11.977
No Recycling	47	6.013	2.113	12.766	5.743	12.215

instruction than response-insensitive presentations. The use of recycling, which had been suggested as a technique to improve concept learning (Markle, 1969; Skinner, 1958; Spannanus, 1981/1982) in individualized learning, was not supported by the results of this study. Recycling of missed instances in the inquisitory practice presentation made no discernible impact on the students' posttest scores.

There are several possible explanations for the failure to find support in this study for the inclusion of recycling and response-sensitivity. A possible explanation lies with the difficulty of the test. The mean scores for the treatment groups (RSN $\overline{X}$ = 11.864, RSR $\overline{X}$ = 11.640, RIN $\overline{X}$ = 13.560, RIR = 11.217) were low, indicating that the test was not easy. The means of three of these groups did differ significantly from the mean of the control group, which indicated that the students in the treatment groups did learn the concept from the instruction with the Merrill and Tennyson model. Also, although the test may have been difficult, its reliability (alpha = .86) was relatively high.

Another explanation of the findings may have been the inability to determine the impact of response-sensitivity and recycling on the individual child. It may be that children who incorrectly identified an instance gained some information from immediately seeing an instance that corresponded with their incorrect response or having an instance they missed identified correctly at the end of the presentation, while the rest of the group did not gain from this sensitivity or recycling. These children may have performed differently than those who did not make any errors or who were not called upon. For example, if the student identified an example as a nonexample, he/she was shown a nonexample to identify in the response-sensitive presentations while the example would be recycled in the recycling presentations. This sensitivity to, and/or recycling of, this missed instance may have had a positive effect on the student who was called upon while having no effect on the other students. This study made no provision for analyzing possible differences among individual students.

Another explanation for lack of significant differences among the four treatment groups may be that the feedback that was given as part of the inquisitory practice presentation of the Merrill and Tennyson model is sufficient for student achievement. This study did not investigate the impact of this feedback since all four treatment groups received the same feedback on each instance regardless of the presence of sensitivity or recycling in the presentation. The immediate feedback given by the teacher in the scripted lessons to students when they respond correctly or incorrectly may be more effective than the giving of further feedback in recycling. This explanation is supported by the fact that in the 23 instances that were recycled only 5 had to be recycled more than once. Also, the response-insensitive with no recycling treatment group had the highest mean among the four treatment groups ($\overline{X}$ = 13.560). This mean was larger than the means for groups receiving response-sensitive presentations and/or recycling presentations.

Finally, a response-sensitive presentation for a single concept is different from a response-sensitive presentation for a corrdinate concept. For instance, when a student confuses one concept in the coordinate relationship for another (e.g., the student mislabels a mountain as a hill), the teacher immediately explains the concept (feedback) and then presents an instance of the concept that confused the student. This allows the student to see the differences between the two concepts. On the other hand, when a student confuses a nonexample with an example in a single concept lesson, something quite different occurs. The teacher explains the correct response (feedback) and then presents any nonexample (the reverse would be true if the student mislabeled a nonexample). This nonexample (or example) may not have any similarities to the missed instance. Thus, discrimination behavior is not facilitated. One way to correct for this in a single concept lesson may be to match instances in the inquisitory practice presentation. This approach would create organizational problems for teachers in that it could become difficult for teachers to select the next instance. It would create fewer problems in computer assisted instruction.

Study 2

Study 2 attempted to replicate the effects of recycling missed instances in the inquisitory practice presentation reported in Study 1. Instances in Study 1 were recycled only if students completely missed the item, i.e., students stated that they did not know whether an instance was an example or if the students responded incorrectly (called an example a nonexample or a nonexample an example). Partial misses were not recycled. Partial misses were defined as those occasions where students correctly labeled an instance but could not explain why it was or was not an instance. When instances are recycled solely on the basis of complete misses, student guessing cannot be ruled out. That is, when a student states that an instance is an example, he or she may simply be guessing. However, if the student can explain why an instance is or is not an example, most likely he or she understands the concept. Therefore, this study compared the effects of recycling complete misses, complete and partial misses, and no recycling on students' acquisition of coordinate concepts.

Procedures

Sample. The sample used in this study consisted of 107 second grade students who were randomly assigned to one of three treatment groups. There were 60 females and 47 males. The students attended an elementary school located in a rural area. The school was demographically very similar to the schools used in Study 1.

Teacher. The teacher used in this study had no previous teaching experience. She had just completed student teaching. The lessons were scripted; therefore, all the teacher had to do was follow the simple script. Prior to instruction the teacher practiced the lesson.

Treatment. The Merrill and Tennyson model for teaching concepts was used as in Study 1. In Study 2, however, coordinate concepts (producers and consumers) were used rather than a single concept as in Study 1. Also, items in the inquisitory practice presentation were presented in random order — the presentation was not response-sensitive.

Treatment group 1 consisted of no recycling. When students incorrectly identified an instance, the teacher gave the correct response and an analytical explanation. If the student called upon correctly identified the instance, but could not explain why (partial miss), the teacher gave an analytical explanation. During this presentation there were three complete misses.

Treatment group 2 consisted of recycling complete misses only. If a student completely missed an instance, the teacher made the correct response and presented an analytical explanation. This instance was then placed at the end of the lesson and was recycled. If the student correctly identified an instance but could not explain why it was or was not an example (partial miss), the teacher simply gave an analytical explanation. During this presentation there were five complete misses and two partial misses. One item had to be recycled one additional time.

Treatment group 3 consisted of recycling complete misses and partial misses. When students completely missed or partially missed an instance, the teacher gave an analytical explanation. Complete misses and partial misses were recycled at the end of the lesson. During this presentation there were five complete misses and six partial misses. One instance was recycled for a second time.

Test. Immediately following the administration of each treatment, a 22 item test was administered. All items were photographs. Students were shown a picture and asked to identify the person as either a producer or a consumer. The reliability of the test, as estimated by Cronbach's alpha, was .83.

Design and Analysis. A completely randomized posttest only design was used. Subjects were randomly assigned to one of three treatment groups. Analysis of covariance was used to analyze the data. Total reading scores on the California Achievement Tests were used as a covariate.

Findings

Results of analysis of covariance indicated that there were no significant differences among the adjusted means, $F(2,103) = .1366$, $p = .87$. The adjusted means were nearly identical (No Recycling $\overline{X} = 16.12$; Complete Miss $\overline{X} = 15.57$; and Complete and Partial Miss $\overline{X} = 15.98$). Recycling missed instances appeared to have little effect on student achievement (see Table 5).

Discussion

It appears that recycling missed instances during the inquisitory practice presentation has no effect on concept acquisition. The most probable ex-

Table 5

Means, Adjusted Means, and Standard Deviation for Three Methods of Recycling Missed Instances

Group	N	Covariate Mean	Mean	Standard Deviation	Adjusted Mean
No Recycling	37	52.054	16.108	4.695	16.117
Complete Miss	31	50.516	15.419	4.434	15.566
Complete and Partial Miss	39	53.538	16.103	4.500	15.978

planation appears to be that the feedback provided by the teacher immediately following an incorrect response is more effective or just as effective as recycling.

Summary

This report included findings from two studies. The first study examined the effectiveness of four presentation orders of practice instances in the inquisitory practice presentation of the Merrill and Tennyson model for teaching concepts. Previous research had suggested that response-sensitive presentations, that is, presentations adapted to students' responses, were more effective than response-insensitive or random presentations. Also, several researchers had suggested that missed instances be recycled. No significant differences were found in Study 1. Study 2 replicated one aspect, recycling, of Study 1. Again, no significant differences were found.

Several conclusions can be drawn from these studies. First, there is no evidence to support the claim that recycling missed instances facilitates the acquisition of concepts when taught in the context of the Merrill and Tennyson model.

Second, Study 1 provided no evidence that a response-sensitive presentation was more effective than a response-insensitive presentation in ordering instances of a single concept in the inquisitory practice presentation. However, this finding is tentative. Obviously, the subjects in all groups had difficulty with the concept, transfer propaganda, that was taught. Further research that utilizes other concepts is needed.

One should not interpret these findings to mean that the basic instructional design is ineffective. The purpose of the two studies reported here was to examine two methods for modifying the basic design. In a practical sense these findings are positive. Both modifications of the basic instructional design actually complicate the instructional procedure. Since neither of these complicated procedures increased learning, it does not appear that teachers need to modify the basic instructional design.

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Improving High School Social Studies: Advice from the Colleges

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Abstract

The effectiveness of college preparatory curricula in high schools has recently been the focus of both public and professional literature about public schooling in America. In response, many educators and political figures have suggested that secondary schools should gear their expectations to those of the colleges and universities. This article reports survey findings concerning the expectations of college sociologists for their students. The authors' in-depth interviews of 26 college instructors led us to conclude that success in social science courses is judged much more a matter of basic reading and reasoning skills and academic seriousness than acquisition of particular information during the high school years. Suggestions for curricular and instructional reform are proposed.

The recent reports and publications on the condition of the U.S. educational system (e.g., Boyer, 1983; National Commission on Excellence in Education, 1983) have recognized the critical importance of education for citizenship. The current assessments of citizenship education also indicate how timely it is to consider ways to establish and raise standards for the social studies curriculum (see National Council for the Social Studies Task Force on Scope and Sequence, 1983). Many educators and political figures alike have suggested that secondary schools, particularly in their college preparatory programs, should gear their expectations to those of colleges and universities. The presumption is that the colleges can provide a valuable guide and challenge for high school reform.

What, then, do we know about the expectations of social science scholars for their students? We have statements of rationales and major goals for the social studies curriculum (e.g., National Council for the Social Studies, 1979, 1980). But we are only beginning to look at the high school social studies curriculum from the distinctive vantagepoint of preparing students for college-level work. We know little about the academic skills and attitudes related to success in college-level social science courses and little more about the specific academic deficiencies of students who move on to the col-

lege level social science. As criticism of American education increasingly extends to both high schools and colleges, problems relating to the articulation of these educational levels warrant attention.

As a preliminary step in addressing problems of articulation, we report here some recommendations for high school educators which follow from the views of introductory sociology instructors in Virginia colleges.[1] In extended interviews we examined both their expectations for student performance and perceptions of student deficiencies in their own courses. To be sure, there are other voices to be heard, and we can hardly claim that our results represent hard evidence. However, the views of these educators with first-hand, concrete experience of teaching the products of high schools reveal important dimensions of the challenges involved. Not all of our recommendations may be endorsed by these instructors, but we do believe that they respond to the concerns of the interviewed instructors.

We also assert that the views of sociology instructors have a relevance which extends to its sister disciplines in the social sciences, especially psychology, political science, and anthropology. We, therefore, urge readers to consider the broader implications of what sociology instructors have to say.

Research Methods

Our research strategy was shaped by a preliminary sense of the problems students face in introductory sociology and by the distinctive nature of the social sciences. From the outset we presumed that success in introductory sociology did not depend on prior knowledge of specific sociological facts or conceptual perspectives. Indeed, college instructors cannot reasonably expect any prior systematic knowledge of the discipline since the overwhelming number of their students have never taken any sociology. Moreover, social science disciplines have a much lesser cumulative nature than the natural sciences or mathematics. A developed competence in solving specific sorts of algebraic equations may be necessary to study calculus successfully, for example, and a whole series of discipline-related skills may be specified as prerequisites for advancement within the natural sciences.[2] For the social sciences, however, it seemed more appropriate to identify the analytical abilities and attitudes toward learning that facilitate academic success than to specify prerequisites for learning.

We tested our views in an initial series of in-depth, unstructured interviews with instructors at six different institutions. The results of these interviews tended to support our general orientation and further suggested the value of continuing with in-depth interviews. (Such topics as academic seriousness and critical thinking seemed to lend themselves more to extended conversations than a few standard survey items.) Based on these initial interviews, we developed a semistructured schedule to guide the rest of our interviews. This schedule insured a common focus in our questioning but allowed for flexibility in probing the views of the interviewed instructors.

Altogether, we interviewed 26 instructors. We can make no claim that we achieved a representative sample of introductory sociology instructors in Virginia, nor was that our intent. Rather, we made a deliberate effort to talk with instructors at different kinds of colleges. Included were 6 community colleges, 7 state colleges and universities, and 13 private colleges and universities. These schools are diverse in terms of geographical location, size of the student body, and the academic selectivity of their admissions policy. We consciously included colleges which serve a predominantly black constituency and also those having a single sex. In addition, we gathered copies of course syllabi and tests so that we could make our own judgment about content, work load, and methods of evaluation in the courses.

In reporting the results of these interviews, we see little value in alluding to percentages. Rather, we hope to convey the general perceptions which emerged, while at the same time noting significant minority viewpoints.

Findings

Reading/Reasoning

We asked an open-ended question: "What do you see as the greatest deficiency in the students' high school preparation which affects how they do in the introductory course?"

The most common answer: reading ability.

We hardly need add our voices to the clamor that many high school students can't read well. At a general level, that criticism is both well-documented and not very useful. Here we would like to point to the kinds of deficiencies that particularly hinder the reading of social science material. These involve such higher order skills as distinguishing primary from secondary material, distilling the analytical core of an extended discussion, and integrating material into a conceptual order. Clearly these are skills which go beyond mastery of vocabulary and the recognition of literal meaning in sentences. Indeed, they may be more properly viewed as general analytical capacities than as reading skills per se. Predictably enough, all these deficiencies seem more pervasive at the less selective colleges, but we were struck by the fact that instructors at all colleges generally pointed to the same sorts of inadequacies.[3]

Instructors emphasized the following deficiencies, ranked here from relatively low to higher order abilities, with a corresponding and predictable increase in their prevalence.

Distinguishing between primary and secondary material. This ability is especially critical in all social sciences because their main intellectual effort is to discover general patterns by analyzing specific events. For example, in studying religion, sociologists may be interested in the conversion process among Black Muslims, but they are more interested in explaining general patterns of religious conversion. Such an explanation will be the key point in the text and what the students should learn. The students must be able to

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recognize that the material about the Muslims is illustrative of a more general idea. Similarly, in a discussion of the causes of social movements, the students should not concentrate on the fact that Movement X occurred during a time of hardship and Movement Y during a time of plenty but that the relationship between economic conditions and social unrest is uncertain.

Almost any paragraph or section of a typically used college text could be used for more illustrative material. The first task of a good social science reader is plain: recognize what is the main point and give it analytical priority; concomitantly, recognize how other material represents degrees of elaboration, support, etc.

Distillation of key ideas. This ability lies at the heart of that exam standard: compare and contrast the views of X and Y on Issue A. To take a sociological example, students are typically required to know the differences between functionalism and conflict theory on the causes of social stratification. Since the views of opposing theorists are typically developed at some length, the student must sift through primary and secondary material in at least several paragraphs to produce an analytical summary. Thus the ability to distill key ideas becomes critical.

This example about stratification, especially because it entails abstract considerations, apparently would be beyond the capacity of a majority of students in many classes. Indeed, the more abstract the material, the more difficulty the students have in first comprehending separate components of arguments and then distilling them into a coherent summary.

Integration of material. Beyond this summarizing ability, a capable social science reader must be able to see connections. To continue our example of functionalism versus conflict theory, the good reader must see how the opposing views of these theoretical positions on the causes of stratification are rather consistently carried over into divergent perspectives on other social matters, such as the division of labor within the family. Few texts leave such a task to the reader's own efforts, and yet an ability to integrate material and to perceive conceptual order is still at a premium.

The integration of material requires a reasoning/reading ability which is both deductive and inductive. The example above requires the deductive application of theoretical principles to specific realms of social life, but perhaps even more commonly the reader is asked (explicitly or otherwise) to see how specific events and patterns lead to some general conclusion. For example, the text may note (in separate chapters) that Americans have widespread agreement about what is desirable in a variety of different realms. The good reader, then, should develop a sense of whether there is a more general ideological consensus in our society.

Critical Evaluation. As a final step, the good social science reader is necessarily critical: how sound is the argument, does it make logical sense, how good is the evidence, etc.? At this step, the reader is not asked to use a skill so much as exercise general analytical faculties.

These critical faculties are essential to an active sociological imagination because the discipline only rarely provides unambiguous right answers which merely need to be learned. (The other social sciences share this condition.) As we discuss later, a healthy tolerance of ambiguity is greatly desirable. Nonetheless, not all answers are equally good; intellectual judgments can and should be evaluated.

The intellectual need for such critical evaluation recurs throughout any introductory course. For example, a standard topic is cultural versus structural causes of poverty. The arguments of each side are presented, and some relevant evidence is usually adduced. Students are also asked to read similar presentations on the pluralist versus elitist debate on the distribution of power and on competing theories of deviance. The intellectual task remains incomplete, however, unless the reader makes some provisional, yet systematic, assessment of the merits of these arguments.

In discussing this final deficiency, the instructors seemed struck by how strange this evaluative process in reading was to the students. One commented in a way that spoke for many, "I just don't have any sense that they have ever done it before—actually think for themselves." With a lack of practice, students generally seemed to avoid this task or approach it poorly.

Attitude: A Lack of Seriousness

"My students don't expect to have to work to do well in college."

"The students simply aren't willing to work hard. They think flipping through their notes before a test is studying."

"I think most of my students can read all right; they just won't."

Such comments were typical, though predictably the complaints were strongest at the less selective colleges. A lack of academic seriousness or commitment was cited almost as frequently as reading deficiencies as the greatest obstacle to doing well in the introductory sociology course. Many instructors placed equal value on each and indeed saw them as inherently related. As one noted,

> To be a good reader, you need to go over the material. It can't be read like a novel. But the students seem to think that if they don't get it the first time that they can't get it or that it isn't worthwhile. They expect me to explain it to them, not to figure it out themselves.

The term academic seriousness has many connotations, but what the instructors stressed in using this term was a simple willingness to work. Quite concretely, seriousness primarily means a willingness to pay attention in lectures and contribute to discussions, to read the assigned material thoroughly and on a timely basis, and to diligently review for tests with reasonable time budgeting. In short, instructors were not talking about an ideal student motivated by intellectual ambition but rather a student who meets some minimal sense of the work involved in that role. The instructors did hope for more: a willingness to reach an understanding of the material, a sense of

excitement about the issues, a desire to excel, and a sense of responsibility for one's own learning. But these were their hopes for a few, not their general expectations.

How much work do they expect? Many seemed to apply a rough formula of one hour of outside the classroom work (mostly reading in the text) for every hour in class. Others expected more, especially at exam time, though the expectations rarely exceeded five hours a week. (These figures refer to estimates to do satisfactorily, not to excel.) To place these figures in perspective, recognize that many instructors assign little more than one text-book chapter (approximately 25–30 pages) per week. Others assign as much as twice this amount or even more when monographs rather than texts are used.

The problem of a lack of academic seriousness is a general one which cuts across all disciplines, but at issue is whether the problem is particularly acute among students entering introductory sociology courses (and perhaps other social sciences). That is, do students come in thinking that sociology is easy, somehow requiring less rigor of thought or academic commitment than other fields? Not surprisingly, the instructors were quite insistent that their own course was not easy, a claim often buttressed by allusions to grade distributions which are typical for their institution. However, a good number reported that many recent high school graduates come into the class with the impression that it ought to be fun or at least not as serious as the natural sciences or courses which have a clear prevocational focus. One commented, "Many of my students seem shocked that they are expected to do something beyond advance their opinions. I don't think they have the same expectation about other courses." Another remarked, "I get the sense that high schools don't treat the social sciences very seriously and this carries over to college." Yet if some instructors saw their discipline as burdened with a distinctive image problem, the general consensus was that the lack of seriousness among introductory sociology students was much more reflective of their general academic orientation than an attitude specific to this course.

Writing

To the extent that instructors were in a position to judge writing ability, they pointed to widespread deficiencies, especially in sustaining an analytical argument at some length. It is important to note that many instructors have no basis, or only a very limited one, on which to make this assessment. In most introductory courses the writing is limited to a few short essay questions and perhaps a short reaction paper or two. Some courses require no writing; all testing is multiple choice/true-false. Others do require journals, short evaluative essays, and quasi-lab reports of research projects; however, developed writing skills are rarely a necessity.

Whatever the reasons for sparse writing assignments, those required often involve applying some conceptual perspective to specific events. The pre-

mium, then, is on the analytical integration of ideas and organizational coherence. The ability to write a library research paper, entailing the conventions of citation and the integration of diverse source material, is largely irrelevant.

Specific Knowledge and Skills

Instructors recognized that the large majority of their students have not had any systematic exposure to sociology as a discipline. A few did wish that students had some rudimentary acquaintance with such basic concepts as norms, roles, class, socialization and the like, but by no means was this expected. In fact, many expected that they would have to give much time to clarifying or even disabusing students of the popular notions of sociological concepts.

As a discipline which very consciously sees itself as a science of society, sociology increasingly incorporates statistical analysis. One is simply unable to evaluate recent social science literature without substantial statistical literacy. Departments of sociology and of the other social sciences have increasingly enhanced the statistical/research methods component of their major. However, this increased concern for analyzing quantitative data at the undergraduate level (primarily in upper division courses for majors) has not percolated down to the introductory course in any substantial way.

By the instructors' accounts, even the most basic familiarity with statistical concepts or tabular display of data is not a prerequisite for passing the course nor is it notably related to success. In all of their introductory courses statistical material is kept very minimal; an inability to interpret quantitative data is not a major obstacle to reading any of the standard textbooks or supplementary material. To the extent that quantitative data are considered, instructors expect to explain the relevant statistical concepts and the underlying scientific perspective. As one remarked, "I assume nothing and it seems just as well." Many instructors actually assume that students are wholly ignorant of such basic matters as the difference between a mean and a median. Although only a few reported that students had any significant difficulties in interpreting tabular displays of data, such presentations were generally unfamiliar to the students. In general, the instructors further presume that terms such as hypothesis or variable and the central principles of the scientific method hold no meaning for the students, even if they have been exposed to them in natural science courses in high school. Indeed, few instructors believed that the entering students even know that sociology has scientific aspirations.

Current Events

In the broadest meaning, sociological data are primarily the facts of the contemporary social world — and in practical effect, facts related to contemporary U.S. society. Instructors feel constrained in their teaching by the students' ignorance of recent history, even the events recently chronicled in

the newspaper. One noted, "If I want to talk about elite deviance, I can't allude to Watergate and assume that they will know what it's about. It's just a word they may have heard." He went on, "I wouldn't be surprised if many of them didn't know Grenada was invaded." In a similar vein, another told us, "If I bring up the ERA I have to explain what it is very carefully. They either have no idea or have some crazy notion." Besides this ignorance of the headline news, students come into class with little knowledge of basic facts about their society — for example, the approximate size of the population, the proportion of Blacks in the population, and average family income.

All such facts can be discussed in class or presented in readings, but the level of the course is necessarily reduced to the extent that time is given to such basic material. Nonetheless, most instructors seem resigned to this lack of awareness and do not believe that prior knowledge of such sociological data is necessary to do well.

Analytical Foundations

Although familiarity with sociological concepts per se is not assumed, many instructors feel handicapped by the students' lack of understanding of very general terms and intellectual traditions which define the nature of our society. We heard many examples cited, and we suspect the sociologists could not readily agree on an essential core set. Even so, we can illustrate this complaint:

"They should know what capitalism is."

"When I say someone is a liberal or conservative this should have some meaning. Of course I'd love to have them know what the broader Western liberal tradition is."

"All they know about communism is that it is bad and that Karl Marx was some kind of villain."

"Politics to them just means shady deals or the procedures listed in their civics book."

Such concerns are not the special domain of sociology but are essential for an informed discussion of society.

So, too, many contended, is an appreciation of basic principles of logical reasoning. What is a causal argument, and how is cause and effect different from a correlation between variables? What is the difference between a statement of fact and a statement of values? What do we mean by a syllogism? What do we mean by a probablistic statement? Again, these questions are not distinctly relevant to sociology, but point to principles essential to almost all disciplined inquiry, including the social sciences.

Intellectual Orientations

Beyond general analytical abilities, most sociologists would agree that sociological imagination — the professed yet indeterminate goal of most instructors — requires a certain intellectual outlook. Among the key com-

ponents is a critical stance toward received wisdom and an accompanying tolerance of ambiguity. On this matter, the instructors are virtually unanimous in their criticism of students. Their criticism could hardly be more forceful:

"They want the right answer. They don't think the issue is important or useful otherwise."

"Ambiguity upsets the students. They think you are just throwing words."

"There's a great resistance to altering ways of looking at the world."

"I really have to work to overcome their reliance on proverbs as a source of wisdom about the world."

"They don't have any appreciation of what is evidence. If I tell them that we can't be certain about something they automatically assume that their preconceived ideas must be right after all."

Such complaints came from instructors at every kind of school. Clearly they wanted their students to be different, and they believe that one of the prime aims of introductory sociology should be to foster this attitude. Nonetheless, with the reliance on multiple choice tests in most courses, a well developed critical sense and tolerance of ambiguity is not essential for passing the course. Such tests, however well constructed, cannot be used to adequately evaluate students' abilities to engage in such reasoning. One instructor, including himself in the criticism, remarked, "We want them to think critically, but we really don't test that." Another added, "The brute force approach works. They can get by memorizing. I'm forced to give As even though I know they really can't think sociologically." Unfortunately, we believe, there is an uncomfortable amount of truth in this indictment.

Ideally, a tolerance of differing viewpoints and cultural perspectives is also essential to a sociological imagination. Instructors across the range of schools expressed dismay about the attitudes of their students. They voiced such views as:

"They define different cultural groups as deviant. They are very orthodox in their thinking."

"My students are very sheltered."

"My students are narrow-minded. They can't imagine another way of living."

"They live insulated lives."

These views are more an expression of dismay than a statement that tolerance is a requisite for the course. We suspect that few could disagree with the instructor who commented, "Unless a student exhibits evidence of a huge psychological block or something, it is difficult to flunk because of intolerance."

Recommendations

It is much easier to record observations than it is to make constructive suggestions, and given the nature of our observations, we are faced with a

particularly difficult task. As should be clear, students in introductory sociology are much more hampered by poor reading and reasoning abilities and general attitudes toward study than any deficiencies which pertain specifically to sociology and other social sciences. Adding specific components to particular high school courses or using specific teaching techniques will not produce automatically better sociology students. The remedy is much more general: to produce better sociology and social science students it is necessary to produce better students capable and willing to understand abstract material and reason critically.

What follows is a set of recommendations which we hope are practicable. Some are very concrete, while others are necessarily more abstract, enccouraging general orientations in course design and teaching practice.

Critical reading and reasoning

There should be regular opportunities in readings, class discussions, and tests for students to develop their abilities in this hierarchy of analytical tasks:

> —Determine and express literal meaning of written material, including distinguishing primary from secondary material and distilling key ideas;
> —Synthesize and integrate concepts and ideas, including making inferences and generalizations from specific information (inductive reasoning) and applying generalizations and concepts to specific material (deductive reasoning);
> —Critically evaluate arguments.

We believe that there is value in having high school teachers explicitly recognize that good social science reading/reasoning ability involves a hierarchy of such analytical tasks.

We claim no originality in positing such a hierarchy; our suggestion largely parallels the work of learning theorists (e.g., Bloom, 1956). Others may have more refined hierarchies of reading or reasoning skills which are particularly relevant to social studies at the high school level. We argue that teachers would do well to use some such hierarchy as the basis for explicit teaching objectives in their courses. As teachers structure class discussions, assign readings, and design tests and other writing assignments based on the reading, they should consciously attempt to foster the skills of an analytical hierarchy. In doing so, they must recognize that each step in the hierarchy builds on the preceding.

We further believe that the students should be made aware that these objectives exist. Study guides for reading assignments, for example, could outline a progressive series of questions based on this hierarchy, and specific questions could be identified as representing a particular analytical level. Furthermore, in evaluating writing assignments or class contributions,

teachers should communicate to students their degree of mastery of these analytical skills. There may be a danger in overly mechanistic applications of these teaching objectives, but teachers and students alike should recognize that the ability to read social science material does not represent some amorphous totality. There are distinguishable levels of comprehension, and clarity on goals can only help focus the intellectual energies necessary to develop competence.

Fostering Academic Seriousness

Students cannot be commanded to be serious, to work hard, and yet the symbolic messages which educators convey have important repercussions. If we convey the message that students are expected to work hard, the probability that they will increases.

One symbolic way to convey this expectation is by distributing a syllabus in upper level courses. A syllabus (more than just an assignment sheet) can show to the students that the teacher has a planned coherent set of expectations — that is, that the teacher has done his or her side of the work. In turn, the syllabus can convey to students the expectation that work in the course will be regular with anticipatable demands on their time. It also can convey the message that isolated tasks (daily reading assignments and the like) are linked to an overall goal that requires persistent and protracted efforts. To some extent, a syllabus encourages students to take a long view of what is involved in being a student and to be responsible for taking up assignments themselves rather than responding to day-to-day orders from teachers. A further benefit is that students can get used to typical college procedure.

While the syllabus seems a suitable form for conveying expectations, the most important point is to increase reading assignments and make them regular. Educators may now bemoan a rising tide of mediocrity, but a long-standing recommendation has been to increase homework (see Goldstein, 1960; Hedges, 1971; Walberg, 1983). In response, others have portrayed such a general recommendation as simpleminded. We agree that homework per se is not a panacea, but students can pursue college level studies with success only if they become accustomed to regularly reading substantial amounts of material. Busy-work projects are of relatively little value; the great premium in college is on reading (see Sadler, 1984; Starkie, 1982).

If recent reports are to be believed, high school students typically spend only some eight hours a week on studying. It is simply unreasonable to expect many of these students to go to college and begin unquestioningly to spend three to five hours a week per course. For most students, college will be a step up in work load, but the step cannot be so great that many will not make it. High school teachers should keep in mind both the amount and kind of work expected in college.

The importance of reading can be further reinforced by the simple ex-

pedient of testing on its content. To varying extents, college instructors expect that students should learn material through their own reading. They do not explain in class all material covered on tests, and consequently students cannot do well by simply parroting their teacher's words. High school teachers can follow this practice and explicitly create incentives to do the reading by testing on material which is not fully outlined in class. The lesson to the students is clear: you are responsible for educating yourself.

We suggested that the lack of academic seriousness in introductory sociology courses may be aggravated by some special image problems of the discipline. We are not in a position to comment on what happens in high school sociology, but we share the suspicions of many instructors that students come into college thinking that sociology entails learning how to relate to people, have a good marriage, or cope with pressure. All kinds of life adjustment courses may have value for some students, but these courses should not be called sociology. Students who come in to college-level, academically-focused sociology with such expectations are in for a rude awakening.[4]

Writing Skills

As noted, writing does not figure prominently in most introductory courses, but high school instructors throughout the social studies should recognize that the college emphasis is on relatively short, analytically focused essays, not library research papers. The premium is on the development of a logical, coherent argument, usually entailing some assessment of evidence, application of some principle to a specific case, or comparison of relatively abstract perspectives.

One value in emphasizing such assignments in high school is that it will prepare students for college. More importantly, we believe that such assignments generally can do more to foster critical thinking than the library research paper, typically an exercise in paraphrasing a number of sources with some attention to the conventions of citation. At the high school level the essay assignments could be explicitly designed to progressively develop the hierarchy of analytical abilities discussed in the section on reading. More of the same type of homework is not an adequate solution.

Intellectual Orientation and Content

To say that the social world is complex and that our knowledge of it is incomplete and necessarily subject to conflicting interpretations is only to repeat a widely recognized truth. Yet it is a major challenge to have students recognize that most important events cannot be explained by a single cause and that few unchallengeable right answers exist. Moreover, their difficulty in perceiving how personal values and epistemological assumptions affect their sense of evidence hinders their understanding of the social world.

The obvious but difficult challenge of social studies teachers is thus to foster appreciation of complexity, tolerance of ambiguity, and recognition of the difference between normative and empirical statements. These goals

should condition the design of courses (especially the selection of readings) and course procedures (teachers presentations, class discussions, projects, and tests).

In this effort, the value of cross-cultural material should be promoted. However, teachers should make a special effort to present this material so that more than its exotic nature is emphasized. This material should be used to develop a sense of cultural relativity and a sense of the distinction between statements of empirical fact and values. For example, it is an intellectual disservice to portray Khomeini as merely some religious fanatic. Students should be encouraged to understand what values he promotes, the source of his appeal, and how the force of religion differs in Iran and the U.S.

While the main thrust of our recommendations concern efforts to foster general academic abilities and attitudes, some changes in high school course content would be desirable. Even if the present content of introductory college social science courses places little emphasis on methodological and statistical reasoning, we make a special plea for the inclusion of such concerns at the high school level as a way to enhance the quality of both high school and college education.

We do not advocate formal instruction in quantitative research methods, but in a variety of courses (civics, history, sociology, economics) students could be exposed to simple tabular forms of data presentation. For example, civics classes could look at voting participation rates by income level as part of a discussion on the representativeness of our democracy. History classes could examine data on immigration waves. Such exposure would show students what quantitative evidence is and how it might be used. It would also underscore the fact that the social sciences involve disciplined assessment of evidence.

Students should realize that what they take as social studies have social scientific counterparts at the college level. The applicability of the scientific method to social matters can be directly explained in sociology and other social studies courses. Only a relatively few, however, are likely to hear the message if this concern is addressed only there. We suggest that natural science teachers can make some efforts to explain in their courses that the same logic can be profitably applied to the study of society. Similarly, as mathematics teachers explain probability theory, they might turn to a number of social issues to illustrate the value of thinking statistically. Such a call for interdisciplinary cooperation may strike some as idealistic folly, but we only urge some sporadic cross-referencing, not a full-scale redesign of the high school curriculum.

Conclusions

By no means are these college instructors' indictments of recent high school graduates novel, but they do reinforce and perhaps sharpen prevailing views of challenges facing high school educators, especially as they

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prepare students for further schooling in the social sciences. If there is one message from college instructors, it is that success in introductory social science courses in college is much more a matter of basic reading and reasoning skills and academic seriousness than the acquisition of particular information during the high school years. Our recommendations follow from this viewpoint. Social studies require specific, conscious reforms to enhance college preparation, but the challenge is broad and requires an integrative effort because the necessary skills and attitudes are fostered across the various programs of the high school curriculum.

In a most direct sense, our recommendations are intended to address these general deficiencies and thereby enhance articulation across levels of the educational system. Yet, we believe, the recommendations have a wider relevance than improving preparation for college-level work. All high school students—not just the college bound—would benefit by a social studies program which stresses serious, rigorous effort and critical thinking. To develop an informed and capable citizenry, it is precisely these general orientations which are necessary to cultivate an informed citizen. An intelligent understanding of the present and the future requires lasting analytical capacities which go beyond the uncritical absorption of specific facts.

Throughout this paper critiques and advice have largely flowed from college to high school. As a parting word, let us suggest that college educators in the social sciences should examine their own teaching practices and curricula in light of a similar analysis. Especially as the goal is the development of critical thinking, we suspect that problems of college and high school education bear striking similarities.

Endnotes

1. Our effort was part of the University of Virginia Funds for Excellence Curriculum Articulation Project. The general purpose of this project was to develop and validate materials and procedures to assist Virginia's secondary schools in improving their college preparatory programs. Task forces were formed for three disciplines: chemistry, mathematics, and sociology. Sociology was selected as the representative social science discipline largely because of the disciplinary training of those recruited for the task force, not because sociology was considered the most important social science or that sociologists were considered distinctly insightful.

2. The mathematics and chemistry task forces of the project did attempt to specify prerequisites. Even if their reports do not document a full consensus on the specific details of such prerequisites, the very effort to do so is revealing of the differences between the natural and social sciences.

3. Instructors at the less selective four year schools and at the community colleges do have distinctive problems. They report that a small minority of students have fundamental problems with vocabulary and comprehension of literal meaning. (The texts used at these colleges tend to be very simple, written at a high school level). A still larger group at these schools have difficulty with the reading material in the course because they read too slowly and inefficiently. Apparently, for these students, the typical weekly assignment of one chapter is beyond their capacity to assimilate on a timely basis, much less at one or two sittings.

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4. The image of the discipline also is not enhanced by the practice of steering the better students away from it. This is not the place to defend the intellectual value of sociology (or other social sciences), but counselors should recognize that it has a secure and substantial place in college curricula. There is no reason that it should not have the same status at the high school level. If students come into college-level courses with the expectation that sociology is less serious than other pursuits, this attitude can only hurt their performance.

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The Political Role Of The American School

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Abstract

Empirical research is reviewed which suggests that the American school does not prepare students to participate responsibility and competently as citizens of a democratic society. Particular messages and practices of the school are identified which appear to work against the development of politically informed, motivated and skilled future citizens. Several alternative models of political socialization are critically assessed to determine why the model may be failing to perform its political role vital to a democracy. A model emphasizing the political beliefs and attitudes of classroom teachers is introduced. Implications of the model for changing existing practices and outcomes of political education are discussed.

This paper has several related objectives: (1) to review the empirical evidence which indicates that, at present, political socialization in American public schools fails to prepare students to participate responsibly and competently as citizens of a democratic society, (2) to suggest, on the basis of this evidence, how this outcome is produced, (3) to review critically several alternative theoretical explanations of why the schools work in this way, and finally (4) to consider whether or not in the future the political education of American school children need to be conducted as it has been in the past. Discussing this fourth topic bears directly on both the desirability and the possibility of changing existing education policies and practices.

Some Findings on Early Political Learning

In most American elementary, middle, junior and high schools there is some manifest and systematic program for teaching specified political information, attitudes and values. Some of the political messages students encounter in the school are components of these programs. Other political messages are latent and sometimes are transmitted in unintended ways. While its relative influence varies under changing historical political conditions (Travers, 1983) the preuniversity school is an important context in which early political learning takes place (Ehman, 1980). To the extent that the school does operate as an agent of political socialization, the findings

reviewed below represent the consequences of receiving latent and unintended as well as explicit and intended political messages.

Empirical research on the political orientations of children has been conducted systematically for more than 25 years. In the case of American school children, five important uniformities are now well established. First, studies show that while there is some subcultural variation, by a very early age family and school have tended to develop within the child a strong sense of national loyalty (Almond & Verba, 1980; Hess & Torney, 1967; Maddox & Handberg, 1980).

A second well documented research finding is that, in their early school years, most American children come to idealize established political authority (Greenstein, 1960; Hess & Easton, 1960; Sigel, 1968). As children grow older they do become considerably less idealistic (Jaros, 1973, pp. 68–76). Nevertheless, they tend to remain less politically cynical than their parents — however cynical that happens to be (Greenstein, 1965, p. 42; Jennings & Niemi, 1981, p. 174).

A third uniformity concerns children's definitions of good citizenship. By eighth grade, children tend to understand the concept in terms of three attributes: general interest in public affairs, participation in the electoral process, and obedience to the law — in that order of importance (Jennings & Niemi, 1974, p. 271).

A fourth set of findings concerns the level of factual political information which children acquire during the school years. Research has dealt with three areas: knowledge about formal political structures, knowledge about contemporary government officials, and knowledge about basic political processes. In each of these areas the level of student information is remarkably low (National Task Force on Citizenship Education, 1978; Patrick, 1970; Sigel & Hoskin, 1981; Torney, 1970).

The fifth major finding on the political orientations of school children concerns their appreciation of democratic values. Research does indicate that while American public schools develop some abstract understanding of democracy, they do little by way of promoting its acceptance and support (Merelman, 1971, p. 109; Stacey, 1977, p. 67; Torney, Oppenheim, & Farnen, 1975, p. 329).

This set of findings suggests that political orientations promoted in public schools do not prepare students to be informed, active and responsible participants in the democratic political life of their society. While loyalty to nation has not been found at the level stated as, "My country right or wrong," it would appear to do little to promote in children any interest in some day looking to improve existing political realities — however improvement may be defined. Their commitment to an abstract and rather vague understanding of democracy would seem to provide no firm basis for grasping how to translate the ideal into concrete political actions. An idealized view of political authority would seem unlikely to facilitate understanding that in a

political democracy the right to govern is derived from the expressed will of the people. A passive definition of good citizenship would not appear likely to encourage close scrutiny of political affairs with the end in view of having one's voice heard when important policies are being formulated and political decisions are made. Failure to encourage an activist orientation toward politics during the school years might well reduce the probability that future citizens will participate fully in democratic political life as adults (Beck & Jennings, 1982; Sigel & Hoskin, 1981).

Techniques of Early Political Education

The preceding suggests several answers to the second question raised in this paper: How is this outcome produced? It is done in at least eight ways.

The first method of political socialization involves continual emphasis on affectively oriented, unifying political symbols and participation in patriotic rituals. Patriotism seems to be fostered at the expense of such democratic values as freedom to criticize government, equal rights for all citizens, tolerance of diversity and freedom of the mass media (Torney et al., 1975, p. 286).

Second, there are presentations of idealized views of political authorities, structures and processes. Teachers seldom tend to show concern with the causes and explanations of political events (Stacey, 1977, p. 67).

Third, there is either avoidance of controversial subject matter in the political realm or there are presentations of political opinions as if they were neither contested nor contestable. Although there are a few contradictory studies, most research reports that open classroom discussion is related to the development of more democratic attitudes (Ehman, 1980, p. 110).

A fourth set of practices involves discussions of good citizenship which (a) emphasize its nonpolitical aspects such as politeness and hard work or (b) stress loyalty and compliance as paramount political virtues and/or (c) emphasize the most passive forms of political participation such as keeping informed and voting. Data indicate schools usually have little concern with developing political competencies, motivational dispositions, and personal responsibilities beyond the conventional goals that pupils should grow up to work, pay their taxes, obey the law, vote in elections and concern themselves with individual and family matters rather than improving society for the common benefit (Stacey, 1977, p. 68).

Fifth, there is the presentation of materials and discussions in which success and failure in American society are ascribed to individual personality, skill and luck; they are not seen as the consequences of the character of institutions. Such accounts deflect attention away from structural limitations and onto individual failings and serve to legitimate an inegalitarian social order (Tapper, 1976, p. 47).

Sixth, promoting mildly allegiant value homogeneity among students also supports the established political order. It discourages fruitful discussions

and debates of legitimate challenges to the prevailing system (Merelman, 1971, p. 113).

Seventh, there are various forms of propagandizing. Ever since the 1940s, reviews of social studies texts used in American primary and secondary schools have shown that their treatment of the American political and economic systems offers little factual information and characteristically fails to distinguish empirically grounded claims from value judgements (Zeigler & Peak, 1970). Other studies have documented texts' emphasis on right facts and values and their failure to discuss the importance of critical thinking and protection of individual rights (Gillespie, 1975). A review of content analyses of texts on a wide variety of subject matter concluded that whether we are talking about science or social science or literature or music, the studies show the uncritical orientation of texts towards both the selection of facts and their presentation within an ideology which leaves unchallenged the status-quo (MacDonald, 1980, p. 40). In the past decade or so there has probably been a substantial reduction in the amount of overt propagandizing. However, while sins of commission may be less frequent, sins of omission continue. Content to which students are not exposed may be as important as content to which they are exposed. At all levels of instruction there is little real competition of ideas (Marger, 1981, p. 325). In addition, schools often use materials provided by businesses and industries. These may serve well as learning aids, but they also serve to promote corporate interests in maintaining existing political and economic structures (McConnell, 1976, p. 19).

The eighth set of techniques relevant to students' political learning involves the social relations of the educational encounter (Bowles & Gintis, 1976), teaching practices (Torney et al., 1975), the context within which teaching occurs (Jackson 1968; Sharp, 1980) and the presentation of implicit role models (Grumet, 1981) rather than the overt content of what is officially taught. This is the so-called hidden curriculum. Overall, the evidence is fairly convincing that there may be some relationship between such features of school organizational and governance climate and student political attitudes and behavior (Ehman, 1980, pp. 111-112).

Alternative Models of Political Socialization

If compliant, supportive and unquestioning political orientations are developed in the schools and are formed in the ways suggested above, the question arises: Why does the present political socialization of American school children proceed in this way? There are three alternative models which provide different answers to this question: the functionalist, the Marxist and the ideology of educators.

In the functionalist view, the importance of political socialization is found in the role it plays in enabling a political system to persist despite a variety of stress and strains to which it is exposed (Friedenberg, 1967). Deep-rooted attachment to the political system established in childhood can

serve as a source of diffuse support upon which a system can draw during times of crisis such as war and economic depression (Easton & Dennis, 1969).

The Marxist perspective focuses on how the structure of the education system and the nature of everyday practices in schools in capitalist societies are related, directly or indirectly, to the ways in which dominant groups attempt to secure acceptance and conformity to their beliefs, attitudes and interests.

Some writers working within this perspective have emphasized the ideological bias of schooling (Carnoy, 1974). Other Marxist theories of education stress that schools in capitalist societies are assigned the task of reproducing labor power for an industrial order whose jobs are arranged hierarchically (Bowles & Gintis, 1976). Yet another variety of Marxist theory (Willis, 1977) notes that those who administer and teach in the schools are in no sense servants of capitalism. Their professional goals are independent from the functional needs of capitalist society. However, in unconscious and unintended ways, educators contribute to the reproduction of the cultural conditions of the prevailing economic and political order.

The ideology of educators interpretation focuses on the social and political attitudes of those most directly responsible for the process — school board members, school administrators and school teachers. School board members tend to be drawn from professional, business and managerial strata whose social, economic and political views are often conservative. School administrators, by virtue of their professional training, occupational status and bureaucratic experience also tend to be ideologically conservative. Any influence exerted on them by school boards concerning civic instruction is likely to do no more than reinforce existing inclinations to maintain or restore noncontroversial programs and practices. Teachers are expected by administrators and by organizations dominated by middle-class parents to be conventional models for their children in their expressed social, political and economic attitudes. While, undoubtedly, many teachers find this a great burden, research does indicate that, as part of an authoritarian system, teachers develop appropriate occupational values. (Jennings & Ziegler, 1970; Weiser & Hayes, 1966).

Each of three models has both merits and limitations. Functionalists are probably correct in pointing out that the development of diffuse support in young future citizens contributes to subsequent national stability, particularly during periods of political, economic and social stress. However, like all functional approaches, this specifies consequences and not causes (Dore, 1961).

Marxists are on solid empirical ground in contending that American schools support and promote nationalism, the existing American economic system and what might be termed bourgeois democracy. However, the notion of orthodox Marxists that this represents the result of the intervention of dominant social groups would be difficult, if at all possible, to establish.

Research ranging from analyses of control of Chicago public schools (Wrigley, 1982) to studies of political socialization in other nations, even those with collectivized childrearing and with centralized schools (Prewitt & Okello-Oculi, 1970) suggest that manipulation and control of the educational system does not work as easily in practice as in theory.

The Marxist thesis that school personnel help reproduce labor power for a highly stratified system of industrial production in unconscious and unintended ways seems quite tenable. Its implications will be considered in subsequent sections of this paper. Here, however, two related points about such a modified reproduction theory should be noted. First, the view surrenders the school's capacity for contributing to political-economic change. Second, some recent writers (Apple, 1982; Wexler, 1982) have argued that classrooms are relatively autonomous social spheres in which interaction mediates and makes sensible political, economic and related cultural elements in the dominant social order. This relative autonomy makes the classroom a potential locus for the development of some critical orientations toward existing political-economic relations.

The ideology of educators model is valuable in that it directs attention to people immediately involved in the school rather than to highly abstract concepts such as the needs of national political systems or the working out of historical-social processes. However, empirical evidence bearing on its thesis is, at best, inconclusive.

There is some support for the view that the class status of school board members has a conservative impact on the schools. However, there are also available data which show that the goals school board members hold for their communities are not related to their education levels, income or party affiliations and still other data which show that school board members are somewhat more liberal than most of the citizens they represent (Brookover & Erickson, 1975, pp. 180–183).

A number of the factors noted above may encourage political conservatism among school administrators and teachers. Nevertheless, there can be countervailing influences in many communities. These include school boards with members drawn from the most liberal and tolerant within the community, liberal parental organizations, and pressures from interest groups such as organized labor or civil rights organizations.

Why the schools do not prepare students for active and competent democratic participation cannot be explained satisfactorily in terms of any of three models. Even an eclectic approach which combined components of each of the models which have demonstrated analytic utility in empirical research would fall short of providing a full account of the operation of the public school as an agent of political socialization. This is because each of the models fail to consider adequately a set of crucial factors. These are the political beliefs and attitudes of those directly involved in the socialization process — classroom teachers. The next section of this paper identifies the

teachers' orientations which appear likely to have an important impact on the political socialization process and its outcomes.

Teachers Beliefs and Attitudes

One point made in common by functionalists, Marxists and educator-ideology theorists is that schools at all levels transmit almost exclusively claims about the political system and its components which are compatible with positive and unquestioning support of the system. Why? An answer to this more focused question can be found by reference to teachers' attitudes and beliefs concerning: (1) the American political system in both its formal and operational aspects; (2) children's interest in and levels of information about politics; (3) children's abilities to understand and to evaluate both historical and contemporary political events; (4) the effects of certain classroom practices on political learning; (5) possible and desirable outcomes of political socialization in their classrooms.

Many teachers who are involved in formal programs of political education have considerable training in history and the social sciences. This is most likely to be the case at the middle and high school levels. However, political socialization which occurs in the schools begins in the earliest grades, continues at all levels and is not limited to these specific contexts. Nor at any grade level is it carried on exclusively by teachers whose own education has prepared them thoroughly to discuss political history, structures and processes.

There is little reason to believe that teachers other than those who have majored in the social studies have a much better grasp of politics than other members of the general public with similar years of schooling. While studies show gains in the political sophistication of the American public over the past few decades, modal levels of understanding, even among the better educated, remain low (Inglehart, 1979; Judd & Milburn, 1980). Data indicate that most teaching recruits are now drawn from the bottom group of SAT scorers and that most of the few top scorers who are recruited leave the profession quickly (Darling-Hammond, 1984, p. 2). There is also evidence that, historically, schools of education have tended to reduce creative political diversity among teachers (Guba, Jackson, & Bidwell, 1980). Such findings further cast doubt that most teachers are adequately prepared to discuss politics with their students. Finally, many of those who teach American politics, political history, civics and government may not have much personal interest in these topics. Their primary concerns may be with teaching other courses such as physical education, health or geography (Brookover & Erickson, 1975).

Some teachers who lack political sophistication of their own might rely on texts when dealing with politics. However, as noted above, the treatment of this topic in textbooks has been notoriously poor. Even though substantially improved text resources are now becoming available, there is reason to

doubt this will improve substantially teachers' presentations of politics. What appears in textbooks is not necessarily what is taught in the classroom. Individual teachers will adapt officially adopted curricula according to their own educational beliefs and perceptions about their students' needs (Brophy, 1982).

Lack of sophisticated understanding of the formal and operational aspects of the American polity, the absence of a variety of texts based on the best information currently available on American politics, and some conservative inclinations all may promote the tendency for many teachers to present politics in superficial and noncontroversial terms. This is one set of reasons why students are presented the materials which do not significantly inform but which do significantly promote loyalty, idealism, and passivity.

As noted above, the practice of presenting politics in bland and superficial terms may have further consequences. Chief among these are failure to generate support for democratic values, failing to generate lasting interest in politics, and failure to encourage the development of politically relevant skills. Some teachers' lack of an adequate understanding of the effects some of their classroom practices and the hidden curriculum have on the political socialization of their students, in addition to their own limited understanding of politics, also may reinforce the unrecognized result of helping maintain the unquestioned political-economic status-quo.

A second set of teachers' beliefs might also contribute to the consequences of political socialization in the schools considered in this paper. These are beliefs they hold concerning children's interest in and levels of information about politics. A study which included a number of teacher interviews (Wasburn, 1977) suggests that many teachers may see children as being uninformed about and disinterested in politics. Such an assumption, if it is made, discourages discussion of contemporary political events and thereby discourages the possible development of analytic skills and further political interest. Failure to discuss ongoing events in the classroom — events which are often highly visible due to the mass media, can suggest to the student that politics is not worthy of serious consideration.

Teachers' beliefs about children's abilities to understand and to make careful judgments may influence their choice and style of presentation of various subjects. It would make little sense to attempt any presentation of political topics to children if it were believed that these would be too difficult for them to understand and to evaluate. Teachers in the early grades would seem to be particularly likely to judge political topics as too complex for their students.

There are empirical studies which support the assumption of children's limited cognitive and evaluative capacities. (Adelson & O'Neil, 1966; Hess & Torney, 1967, chap. 3). Beyond such research are the developmental theories of such diverse analysts as Mead, Freud and Piaget. While there are major substantive differences in their work, all argue that there are some

earlier developmental stages during which children are not capable of responding meaningfully to some materials.

A critical point must be made concerning the implications to be drawn from this research and theory. In terms of the logic of explanation, terms such as simple, complex, concrete, abstract, and so on refer to the ways in which a subject is conceptualized and not to inherent qualities of the subject itself. Politics is not an inherently simple or complex subject. It is a subject, like all others, which can be treated in relatively simple or relatively sophisticated ways. To believe that children cannot be taught about contemporary political realities because, somehow, politics is too complex or too abstract is to miss the point.

If some teachers themselves do not have a good grasp of politics, and if they believe that the children they teach have little political interest and do not even have the ability to understand the topic, then their discussions of politics are unlikely to move much beyond concern with the flag, Washington, Lincoln, the Constitution, and some factual details of American political history. If some teachers do not recognize the consequences of their decisions to have or to limit open discussions, their teaching efforts are unlikely to promote systematically, if at all, the commitment of their students to democracy in principle and in practice (Ehman, 1980, p. 110).

Teacher orientations probably are more amenable to change than are most of the other identified conditions which influence political socialization in the public schools. The following section considers the importance, probability and consequences of changing these.

Changing Early Political Education

The three models of political education carry with them different implications for changing existing educational practices and their outcome. Since, according to the functionalists, schools operate in part to meet the needs of political systems, and since these needs are constant, significant change is unlikely without unacceptable consequences of future political instability.

The theoretical and normative presuppositions of the functionalist position are rejected here on two grounds. First, there is little, if any, empirical evidence to support the claim that youth who are politically informed, competent and motivated to participate in democratic political life as adults will make excessive demands on their political system. Second, one might worry about the consequences of continuing to idealize national political authority and emphasize passive citizenship in the post-Vietnam post-Watergate era in which the American public has lost some confidence in its political institutions (Lipset & Schneider, 1983) and in which, due to the extension of the mass media and the increased level of education of the general population, children are more politically informed than they ever were in the past.

In the traditional Marxist view, until the prevailing capitalist mode of production has been replaced, the schools in capitalist societies cannot be much more than instruments which contribute to the reproduction of markedly inegalitarian social systems.

A less rigid interpretation, such as that of Willis (1977, pp. 186–187), contends that there is no contradiction in asking educators to face immediate problems in doing the best for their students so far as they can see it, while appreciating that these very actions may help to reproduce the oppressive structures within which their own adult working class lives will be lived. There are potentials for changing the balances of uncertainty which reproduce the ongoing society.

Willis contends that educators can begin by recognizing the accurate perceptions of concrete social, economic and political relationships the children they teach might already have. Once these are known, educators can build upon students' insights in order to provide them with a more elaborate and systematic understanding of society. Subsequently they may be better able to motivate students to become politically competent. All of this is far better, pedagogically, politically and morally, than giving up.

Others in this tradition suggest that teachers and pupils take forms of curriculum and organized knowledge which may well be predicated upon dominant ideologies as bases for their activities and work on these for their own ends. To some extent schools can produce ideologies as well as having them thrust upon them (Apple, 1982).

The ideology of educator model suggests that political socialization in the public schools could be improved by increasing teacher autonomy. With some insulation from the direct pressures of school boards, administrators, parents groups and some community organizations for the presentation of what they consider noncontroversial topics and the use of tried-and-true teaching methods, teachers may be more likely to introduce programs encouraging genuine commitment to democratic values and promoting interest in actively participating in political life in an informed manner.

The central concern with teacher beliefs and attitudes shares several theoretical and normative presuppositions with both the less-rigid Marxist position and the ideology of educators approach. All three assume that: (a) Changes in the processes and outcomes of political socialization in the public schools are desirable and possible. (b) Desirable outcomes include increasing student cognitive sophistication, political competence, commitment to democratic values and practices, and desire to participate in political life as adults. (c) Some progress toward realizing these outcomes can be made by those most directly involved in the teaching process.

Beyond these apparent agreements, all three models are compatible with the recent proposals for improving public education offered by the National Commission on Excellence in Education (1983). These suggestions include extending the school day, integrating more technology into the classroom, paying teachers higher salaries and providing additional incentives to attract

more talented students into teaching careers, rewarding excellence in teaching, modifying state certification rules to permit highly qualified persons from other fields to teach and encouraging a more effective partnership between the public schools and colleges and universities, establishing promotional gates at all grade levels to eliminate automatic social promotion, raising college admission standards and establishing competency tests for candidates before they begin teaching.

The focus on teacher beliefs, attitudes and practices is considerably more specific than either the modified Marxist or ideology of educators models in its suggestions for improving political socialization in the public schools. It also adds detail to the recommendation of the two Commissions on Education.

Teachers who become relatively free from political pressures might well continue to maintain the beliefs and practices which, research suggests, produces politically uninformed and uninvolved future citizens. Teachers who are sensitive enough to take into account and elaborate the political beliefs and attitudes their students bring into the classroom might still fail to prepare them adequately for future informed active and effective participation in democratic political life. Longer school days or semesters should be filled with exposure to additional information about political structures and processes presented in less authoritarian ways if the additional hours of schooling are to affect the outcomes of political socialization. Outside experts and new technologies in the classrooms should be used in ways which provide certain previously ignored subject matter and learning experiences. Recruiting and training brighter students for careers in education in themselves seem unlikely to produce significant improvement. Rewarding excellence in teaching also seems unlikely to be sufficient unless the measures of excellence specifically take into account the political socialization of students along with the other dimensions of teaching performance. The same can be said for competency tests used as promotional gates.

If teachers are to convey effectively information about formal and informal political structures and processes and about the actions of government, they themselves should have a good understanding of these matters. If they are to lead students personally to support democracy, they themselves should have some fundamental understanding of how democracy operates and of the experiences which promote democratic attitudes. To interest, inform and motivate they should clearly understand the interests, information and cognitive abilities of those being taught.

Teacher education programs are obvious starting points for developing teachers whose efforts can become a first step toward improving the political role of American public schools. Courses dealing with American politics which are taken by future teachers could be significantly modified to include much more material emphasizing the latent as well as the manifest functions of its formal structure, the roles played by parties and interest groups, citizen participation and ideology. Required courses in

child development could be restructured to place much greater emphasis on such topics as cognitive capabilities, the development of interests, the agencies of socialization and the social perceptions of children—particularly those from different class backgrounds.

The modification of courses within teacher education curricula might seem unlikely to promote change in the outcome of early political learning. In fact, there are some grounds for questioning the claim that any possibly available changes can be of much consequence. Neither quality education per se (Merelman, 1971) nor extended instruction in politics (Langton & Jennings, 1968) has been found to have much effect. However, for purposes of seeking ways to improve the outcomes of political education in the public schools, the focus of studies which consider up-grading over-all quality is far too broad while the focus of studies which investigate ways of improvement through increasing amounts of course instruction is far too narrow.

No matter how high the overall quality of an educational system and no matter how many courses of civic instruction it offers, if the teachers' understanding of the American polity is limited to the facts of historical events and to general features of formal political structures, the cognitive outcome of political education may remain basically unchanged. No matter what other alterations might be made in an educational system, if teachers do not encourage open political discussions, or if they remain reluctant to discuss controversial topics or if they refuse to modify authoritarian classroom organization, the affective commitment of their students to democracy in principle and in practice is unlikely to be strengthened. No matter how well teachers understand the actual structure and operation of the American polity and how academically respectable the texts they use, teachers may fail to educate politically competent students unless the teachers are consciously committed to the development of their students' politically relevant skills and trained to do so.

During the present period of economic retrenchment the call for educating better teachers who will provide students more effectively with marketable skills has broad popular support. It should be remembered that this also is a period in which a substantial proportion of the public blames the nation's economic woes and the resulting uncertainties of their children's futures on the actions of government (Lipset & Schneider, 1983). The call for educating better teachers who will provide students with a realistic political perspective and practical political skills for keeping government reasonably responsive to their expressed needs in the future is likely to find some popular support as well.

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Evaluation of a Second Generation Dissemination of a Local Improvement Project: Implications for Theory and Procedures

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Abstract

The article reports three second generation dissemination evaluation studies of the secondary component of a locally developed improvement project. The evaluations focused on whether a change model validated in the originating school system could be successfully disseminated. Results indicate successful adoption was possible when adopting school systems patterned their implementation of the change model after the originating school system implementation. The results also helped clarify what causes both cognitive and affective changes in students. Finally, the study exemplifies methods of conducting second generation evaluations and discusses ways to improve the models used.

The Improving Citizenship Education Project (ICE) was a locally developed project initially funded under an Elementary and Secondary Education Act Title IV-C grant.[1] The ICE project involved a new approach to curriculum change (Hepburn, 1980). The important aspect of this curriculum *change model* was to coordinate five support areas which would aid teachers in designing a curriculum that included political content in all social studies courses 1-12. The five support areas were: (1) delineation of curriculum goals and objectives; (2) staff development to enhance teaching skills deemed necessary for citizenship education; (3) identification or development of needed curriculum materials; (4) identification of and access to useful community resources (i.e., resource persons, field trips, etc.); and (5) administrative support. It was theorized that, if these five support components were made available to teachers, their classroom activities and content would be altered, and in turn, the citizenship knowledge and attitudes of students would be increased. The meaning of citizenship knowledge and attitudes in the project is illustrated in the specific objectives of the project listed in Table 1.

Table 1
Specific Objectives for the Improving Citizenship Education Project

1.0 Know and apply specific facts, basic concepts, and processes related to government and politics.
    1.1 Identify specific facts, processes, and basic concepts of national government.
    1.2 Identify specific facts, processes, and basic concepts of state and local government.
    1.3 Identify specific facts, processes, and basic concepts of democracy.
    1.4 Identify specific facts, processes, and basic concepts of politics.
    1.5 Identify specific facts, processes, and basic concepts of law and individual rights.
    1.6 Identify specific facts, processes, and basic concepts of global affairs.
    1.7 Identify participation skills related to government and politics.
    1.8 Utilize analytical skills with government and political data and issues
2.0 Demonstrate commitment to democratic institutions, principles, and processes.
    2.1 Express commitment to democratic institutions.
        2.11 Identify magnitude of agreement with statements about political institutions as others should view them.
        2.12 Identify magnitude of agreement with statements about political institutions as self views them.
    2.2 Express commitment to community democratic processes.
        2.21 Identify magnitude of agreement with statements about community democratic participation as others should view them.
        2.22 Identify magnitude of agreement with statements about community democratic participation as self views them.
    2.3 Express commitment to school democratic processes.
        2.31 Identify magnitude of agreement with statements about school democratic participation as others should view them.
        2.32 Identify magnitude of agreement with statements about school democratic participation as self views them.

Source: Margolis (1981)

In 1980 and 1981, the support components were disseminated in the local *validation school system* to selected teachers who were designated as the project group. Using a group of matched teachers in the same school system as controls, the ICE project underwent an evaluation for validation by the funding agency. The secondary component of the project (grades 8-12) was validated in 1980, and the elementary component in 1981 (Hepburn & Napier, 1984).

The secondary component of the ICE project was disseminated in the state to *adopter school systems* receiving funding from the state as well as to systems funding their own adoption. The purposes of this paper are: (1) to report the results of the second generation evaluation of the secondary component of the ICE project; (2) to report tentative conclusions which refine

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our understanding of the *change model* used in this project; and (3) to provide insights concerning evaluation procedures which might be used in field settings.

Evaluation Strategies

A search of evaluation literature produced only one source which aided in designing the evaluation. In a rough draft of a paper by Yeany and Okey (1982), use of a Separate-Sample Pretest-Posttest design (see Campbell & Stanley, 1963) and use of effect size to judge success were advocated. The design suggested by Yeany and Okey was not used because it would reduce the sample size, which might distort the effect size. However, the idea of using effect size was accepted. An effect size is basically a standardized score which reflects the magnitude of change of the experimental group from pretest to posttest or between experimental and control group posttests.

Funds for conducting the second generation evaluation of the ICE project were limited even for school systems receiving state funds. Therefore, use of a very elaborate evaluation procedure was not possible. Three procedures were developed for the evaluations. If an adopting school system accepted the total infusion concept of the project (i.e., used it in all secondary grade levels) and was funded, the evaluation followed a norm-referenced method labelled direct comparison. If an adopting school system used the total infusion concept but had no state funds, a norm-referenced method termed indirect comparison was employed. If a school system used only the curriculum process model on a limited basis (i.e., with one course), the evaluation followed a quasi-experimental method. While these methods are not necessarily original with this study, the use of effect size in conjunction was novel.

The report presents three separate studies, each with a description of procedures and results. A joint conclusions section, however, is given which uses the results of the three studies to discuss the successfulness of the dissemination, refinement of the change model, and the methods used in collecting the dissemination data.

Direct Comparison for Totally Infused Adoption

One funded school system adopted the project using the total infusion conception of the Improving Citizenship Education curriculum change model. The direct comparison approach used with this one system involved comparison of raw data between teachers and students at the adoption and validation sites.

The direct comparison of teacher information from the adopter site and teacher information from the validation site included comparison of the results from: (1) three questionnaires (usefulness of objectives; usefulness of materials; helpfulness of administrators); and (2) daily logs (contents used; activities used; materials used; time spent covering contents). The questionnaire results provided information on all but the staff development

component of the change model (see first paragraph above). The daily logs provided information on whether the teachers actually altered their class activities to change student knowledge and attitudes. The statistical analysis used in making these comparisons was an independent t test. The desired outcome of the direct comparison was to find a non-significant ($p > .05$) t value. A nonsignificant difference between the adopter site teachers and validation site teachers on the three questionnaires and daily log would indicate that the curriculum process model to which the teachers were exposed (questionnaires) and the process to which the students were exposed (daily logs) were similar to the processes in the validation study. If differences were noted then the information was used to explain why any differences between student performance at the adopter site and validation site occurred.

The direct comparison of student information included comparison of results from the adopter site with results from the validation site on: (1) Citizenship Knowledge Test; and (2) Opinionnaire on Political Institutions and Participation (these instruments are described later). The statistical analysis used in making these comparisons was analysis of covariance. Posttest scores from the adopter and validation site were compared using adopter site student scores, the validation site project student scores, and the validation site control student scores. The desired outcome was a significant F value. If a significant F value was found, follow-up analyses using posthoc procedures (i.e. Newman-Kuels) were planned. If the adopter site students and the validation site experimental students performed at a similar level, and both of these groups performed at a significantly higher level than the validation site control students, then calculation of an effect size was planned. The term effect size for the direct comparison approach was an expression of the magnitude of difference between the adopter site students and validation site control students posttest scores. Effect size was calculated by subtracting the adjusted posttest mean scores of the adopter site and validation site control students and dividing by the standard deviation of the validation site control group (Glass, 1978). An effect size of at least 25% for the Citizenship Knowledge Test and 10% for the Opinionnaire on Political Institutions and Participation would indicate practical differences and the adoption deemed successful.[2]

Procedures

Sample. In the original validation study (Napier & Hepburn, 1984), five schools were selected as project schools on the basis of their representation of the community settings, racial makeup, occupational types, and type of housing found in the school system population. Each project school was matched with a similar school for control classes. A total of 10 teachers in project schools conducted the experiment in their classes, and were matched with classes in nonproject schools. The grade distribution of the 10 project and control teachers is given in Table 2.

Table 2
Distribution of Grade Level of Validation and
Funded Total Infusion Adopter Site Project Teachers

Grade	Validation Site[1]	Adopter Site
11–12	1*	7*
10	0	3
9	6	1
8	3	3

[1]Source: Napier and Hepburn, 1984.
*The validation site teacher and one adopter site teacher actually had a few tenth graders in their classes.

Each of the 10 validation site project teachers from the five secondary schools had one of their social studies classes randomly selected as the treatment class by a project staff member. Control classes were selected in the same manner. There are 345 secondary students involved in the study; 165 were experimental students and 180 were control students. The N of 345 included only those students who were present for all four test administrations. The determination to drop partial data was based on the reasoning that only regular attenders would receive the full treatment of the improvement program.

Three schools were selected as project schools at the adopter site. A total of 14 teachers conducted the experiment in their classes. The grade distribution of the 14 adopter site teachers is given in Table 2. Each of the 14 adopter teachers had one of their social studies classes randomly selected as the treatment class by the local project coordinator. A total of 303 secondary students were involved in the evaluation. As in the validation study, only those students who were present for all four test administrations were included in this evaluation.

Teacher Instruments. Data for the process evaluation were obtained from three questionnaires—Questionnaire on Management Support, Questionnaire on ICE Objectives, and Questionnaire on Materials including community resources (copies are found in Margolis, 1981). Each questionnaire had two parts. The first part asked teachers to rate the supportiveness or helpfulness of the specific process component on a scale of 1 (low) to 4 (high). The second part asked teachers to review in more detail the effectiveness of each support area. This second part was designed to obtain descriptive information for the project staff. No formal attempt was made to determine validity or reliability of these questionnaires. Informally, the information from the instruments was verified by conversations with the validation site project teachers.

Student instruments. The Citizenship Knowledge Test (CKT) was used to collect data on cognitive outcomes of the project. The secondary level test has two forms, Form A and Form B. The secondary level CKT has 73 items in eight subtests related to the specific cognitive objectives of the project (Table 1). These are: National Government (11 items), State and Local Government (10 items), Politics and Political Ethics (11 items), Democratic Principles (7 items), Law and Individual Rights (10 items), Global Affairs (5 items), Participation Skills (10 items), and Analytic Skills (9 items). Variation in number of items per subtest, i.e., items per objective, reflected the emphasis each subtest area was given on the secondary level of the ICE project. The total test score for the secondary level CKT could range from 0 to 73.

In the validation site evaluation, Form B of the secondary level CKT was used, following the rationale offered by Hepburn and Strickland (1979). The validity and reliability of Form B have been documented elsewhere (Hepburn & Strickland, 1979; Napier, Hepburn & Strickland, 1981). Cronbach alpha procedures were used to calculate reliability estimates of the adopter site secondary student CKT scores. The reliability estimates were .91 for the pretest scores and .92 for the posttest. In general these values were similar to those found in the validation study (Hepburn & Napier, 1984).

The Opinionnaire on Political Institutions and Participation (OPIP) was used to collect data on the affective outcomes of the project. The OPIP is a 48 item instrument with six subtests each containing 8 items. The six subtest areas related to the specific affective objectives of the project (Table 1).

The first and second subtests measure attitudes about political institutions. The first subtest, Political Institutions-Others, indicates the respondent's perception of how people in general should view American political institutions. The second subtest, Politial Institutions-Self, reflects the respondent's personal attitude toward American political institutions.

The third and fourth subtests assess attitudes related to participation in public political processes. The third subtest, Public Political Participation-Others, reflects the respondent's perception of whether individuals should participate in public political processes. The fourth subtest, Public Political Participation-Self, measures the respondent's attitude toward personal political participation.

The fifth and sixth subtests measure attitudes toward participation in school political processes. The fifth subtest, School Political Participation-Others, reflects the respondent's perception of whether others should participate in school political processes. The sixth subtest, School Political Participation-Self, reflects the respondent's attitude toward personal participation in school political processes.

The secondary form is designed so that individuals respond to the 48 statements on a 5-point scale: Strongly Agree, Agree, Uncertain, Disagree,

or Strongly Disagree. In the validation study and this evaluation, the secondary form was scored on a 3-point scale because the instrument was validated using that scale (Hepburn & Napier, 1980, Napier & Hepburn, 1981). Consequently, the overall score for the secondary form could range from 48 (very negative) to 144 (very positive).

The validity and reliability of the secondary level OPIP is documented elsewhere (Hepburn & Napier, 1980; Napier & Hepburn, 1981). Cronbach alpha reliability estimates for the adopter site secondary subjects were .81 for the pretest and .84 for the posttest. Again, the values found were similar to those found in the validation site study (Hepburn & Napier, 1984).

Treatment for teachers. Staff development for project teachers at the adopter site presented objectives of the ICE project and immersed teachers in teaching activities, strategies, and materials to achieve the objectives. The group participated in a program which followed the lessons and objectives presented in the project's implementation handbook (Margolis, 1981).

Treatment for students. The adopter site project teachers implemented a ten-week treatment utilizing selected project objectives, materials, and activities. The nature of the treatment was recorded on the Daily Logs kept by the adopter site teachers. Table 3 presents descriptive information from the

Table 3
Descriptive Statistics and *t* Ratios for Daily Log Information from Validation and Funded Total Infusion Adopter Site Teachers

Source	Statistic	Validation Site[1] (10)	Adopter Site (14)	t[3]
Number of Materials (Scale 1–8)	Mean S.D.	7.6 0.8	6.3 1.7	2.24*
Number of Activities (Scale 1–8)	Mean S.D.	7.0 1.1	4.6 0.6	6.89*
Number of Contents (Scale 1–8)	Mean S.D.	7.2 0.8	6.2 1.7	1.72
Time on Contents[2]	Mean S.D.	1332.0 234.1	1660.2 673.1	1.69

[1]Source: Napier and Hepburn, 1984.
[2]A six-weeks treatment was used for the Validation site, and ten-weeks for the adopter site.
[3]Heterogeneous variance *t*-tests used when necessary.
*Significant at $p = .05$ level.

daily logs on the number of activities, number of contents, and number of materials used, as well as the time spent on the content areas.

Table 3 also contains the information from the daily logs kept by the validation site project teachers. From inspection of the table, it was noted that the adopter site teachers used a similar number of contents and time covering the content areas (i.e., no significant difference). However, there were significant differences in the number of materials and activities used. The adopter site teachers used fewer materials and activities than the validation site teachers. The possible implications of these differences in implementation is discussed in the conclusions section.

Collection of teacher data. The adopter site teaches responded to the three questionnaires at the end of the implementation period in December. Four teachers did not return the questionnaires. In addition, three other teachers did not complete the questionnaire on management support, stating their principles did not do anything to rate.

Collection of student data. The adopter site students took the two pretests in September. The attitude test was given one day, and the knowledge test was given the next day. The posttests were given to the adopter site students in December in the same order as the pretests.

Results

Teacher Data. Table 4 presents the descriptive data for the adopter site teachers and the validation site project teachers on the three questionnaires.

Table 4
Descriptive Statistics and *t* Ratios for Responses to Questionnaire
on ICE Objectives, Management Support and Materials by Validation and
Funded Total Infusion Adopter Site Teachers

Source	Statistic	Validation Site[1]	Adopter Site[2]	t
Objectives	Mean	3.4	3.0	1.18
(Scale 1–4)	S.D.	0.7	0.8	
	N	10	10	
Management	Mean	2.6	2.5	0.20
Support	S.D.	1.1	0.8	
(Scale 1–4)	N	10	7	
Materials	Mean	3.6	3.1	1.54
(Scale 1–4)	S.D.	0.5	0.9	
	N	10	10	

[1]Source: Napier and Hepburn, 1984.
[2]Four teachers did not return the Questionnaires and three other teachers did not rate the Management Support Questionnaire.
*Significant at the $p = .05$ level.

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There were no significant differences in rating. Both groups found the objectives helpful, management somewhat supportive, and the materials helpful.

Student data. Table 5 presents the adjusted mean scores for the posttests and *F* statistics for the comparison of adopter site project teachers, validation site project teachers, and validation site control teachers. The results of the analysis of covariance test on the CKT indicated that there was a significant difference. Further analysis using the Newman-Kuels procedure (Table 6) indicated that the adopter site students were significantly higher than the validation site control students, but were significantly lower than the validation site project students. That is, the adopter site students gained more than the comparison control students but did not gain as much as the validation site project students. There was also a significant difference on the OPIP, but the Newman-Kuels analysis (Table 6) indicated the difference was between the validation site project and control teachers. There was no significant difference between adopter site students and the validation site control students.

Applying the test of practical significance to the CKT results, the effect size of the difference between adopter site students and validation site control students was .25 indicating a medium effect. Thus the adoption was partially successful. A discussion of possible explanations for these findings is presented in the conclusions section.

Indirect Comparison for Totally Infused Adoption

A number of school systems in the state funded their own adoption of the Improving Citizenship Education project using the total infusion conception. An indirect comparison approach was used for these systems. The indirect comparison approach used summary data (i.e., means and standard

Table 5
Descriptive Statistics and *F* Ratios for Validation Site Project and
Control plus Funded Total Infusion Adopter Groups on Knowledge and
Attitude Pretests and Postests[1]

Source	Group	N	Pretest Mean	S.D.	Posttest Unadjusted Mean	S.D.	Adjusted Mean	*F*
Knowledge	Project	165	31.9	12.5	36.8	12.5	36.8	
	Control	180	29.7	10.3	30.3	10.9	32.1	18.43*
	Adopter	303	33.1	12.6	35.9	13.3	34.8	
Attitude	Project	165	122.0	9.3	123.2	9.9	122.3	
	Control	180	119.3	9.9	119.2	10.5	120.3	3.87*
	Adopter	303	121.0	10.5	120.5	11.6	120.3	

[1]Source for Validation Site Project and Control statistics: Napier and Hepburn, 1984.
*Significant at the $p = .05$ level.

Table 6
Newman-Kuels Test for Knowledge and Attitude Scores for Validation Site Project and Control plus Funded Total Influsion Adopter Groups

Source	Validation Control Mean	Adopter Project Mean	Validation Project Mean	r	Critical Ratio
		Knowledge			
	32.1	34.8	36.8		
Validation Control	——	2.7*	4.7 *———3————— 1.68		
Adopter Project		——	2.0 *———2————— 1.41		
		Attitude			
	120.3	120.3	122.3		
Validation Control	——	0.0	2.0 *———3————— 1.82		
Adopter Project		——	2.0 *———2————— 1.52		

*Significant at the $p = .05$ level.
Note: Ñ = harmonic N of 201.
  MS_w for knowledge was 52.0, and for attitude was 60.4.

deviations) from the adopter site. By having the adopter site collect and provide summary data to the evaluators, the cost of the evaluation was minimized.

The indirect comparison approach involved the comparison of summary statistics from the teachers and students at the adopter sites with summary statistics from teachers and students of the project group at the validation site. This approach assumed that teachers/project coordinators could properly administer and collect teacher and student data, and correctly score the student tests using the test manuals (Napier & Hepburn, 1981; Napier, Hepburn & Strickland, 1981). As will be discussed later, this assumption was not totally valid.

The indirect comparison of teacher and student information from the adopter sites and teacher and student information from the validation sites included comparison of the means and standard deviations from the same measures used in the direct comparison. An independent t test was also planned in making the statistical analysis of the teacher information. Student information from the adopter site and validation site were compared using only the effect size statistic. The term effect size for the indirect com-

parison approach referred to the magnitude of change from pretest to post-test. It was stipulated that to be considered a successful adoption the effect size from the adopter site must be equal to or greater than the effect size found in the validation study for the project group. For the Citizenship Knowledge Test, the effect size therefore must be 39% (Hepburn & Napier, 1984). For the Opinionnaire on Political Institutions and Participation, the effect size must be 13% (Hepburn & Napier, 1984). Therefore, the major difference between the direct and indirect comparison approaches was in the criteria used to evaluate effectiveness/success in changing student performance. With the direct approach, both statistical significance (comparison between adopter site scores with validation site project and control scores) and effect size were used. With the indirect approach only effect size was used.

Procedures

Sample. A description of the project schools involved in the 1981 validation study was presented in an earlier section. Initially fourteen adopter schools systems were sent evaluation materials. However, only ten returned evaluation materials, and of these, only six returned usable data. One school system returned student data but did not return teacher data. Without the daily logs, it was impossible to judge whether the treatment had been given; therefore the data from this school system were eliminated. The other three school systems returned daily logs but did not return student data on the Opinionnaire on Political Institutions and Participation. The criteria used in the evaluation at the validation site required all four tests, so the same were applied to the evaluation from adopter sites. Therefore, data from these three school systems were not used.

The identity of the six school systems returning usable data is not given in this report because of the promise of confidentiality. The systems were identified by letter only. Systems A, B, C, and F used only one school in the evaluation while System D used two schools and System E used four schools.

System A used 2 teachers, 1 at grade nine and 1 at grade twelve, with a total of 34 students for whom all test data were available. System B also used 2 teachers, both at grade eight, with a total of 37 students. System C used 1 ninth grade teacher with 31 students. System D used 4 teachers, 2 at grade eight and 2 at grades ten-twelve, with a total of 79 students. System E used 7 teachers, 3 at grade eight and 4 at grade nine, with a total of 132 usable scores from the Citizenship Knowledge Test and 79 usable scores from the Opinionnaire on Political Institutions and Participation (3 teachers did not properly score the attitude test but since the 53 students in these classes had been present for the tests they were included in the analysis of the knowledge data). System F used 1 teacher, at grades nine-twelve with a total of 28 students.

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Improper scoring of the attitude test from System E was not the only problem with data from that System. Seven other teachers returned data, but none of their data could be used. Four teachers did not return daily logs and their data had to be excluded. One teacher kept a daily log but improperly recorded the implementation of the project. One teacher kept a daily log but the data from it indicated the project was not implemented in the class. Finally, one teacher did not score the attitude data but kept a daily log and returned knowledge data on students. Thus, half the potential data from System E had to be eliminated.

There were missing teacher data from the other systems. However, these data were from the three questionnaires. In the evaluation at the validation site, data from teachers who did not return one or more of the questionnaires were retained if they kept a daily log. The same criterion was also used with the adopter site data.

Measurement instruments. The same teacher and student instruments used in the direct comparison evaluation discussed were used in this study. Since only summary data were used and the items on the CKT were scored right/wrong, reliability estimates using the Kuder-Richardson Formula 21 were computed. For the pretest, the reliability estimates ranged from .38 to .99 with a median value of .87. For the posttest, the reliability estimates ranged from .69 to .99 with a median value of .88. Because summary data were used and the items on the OPIP are scored on a scale of 1 to 5, no reliability estimates could be computed.

Treatment. Project teachers participated in the same type of staff development as teachers in the validation study using the implementation handbook (Margolis, 1981). The adopter site teachers implemented a ten-week treatment utilizing selected project objectives, materials, and activities during winter (Systems A, B, D, and E) or spring (Systems C, D, and F). (System D had two teachers implement in winter and two in spring.) The nature of the treatments was recorded on the daily logs kept by the adopter site teachers. Table 7 presents descriptive information from the daily logs on the number of materials, number of activities, and number of contents used; plus the time spent on the content areas. In addition, information from the daily logs kept by the validation site project teachers is presented for comparison.

The System A teacher used significantly fewer activities than the validation site teachers, while there was no significant difference in number of materials or contents employed. The System A teacher did spend significantly more time covering contents than the validation site teachers. There were no significant differences between System B teachers and validation site teachers. For system C, there were significant differences for number of activities, number of contents covered and time spent on contents. System C teachers used fewer activities and contents but spent more

Table 7
Descriptive Statistics for Daily Log Information from Validation and Non-funded Adopter Site Teachers

Source	Statistic	Number of Materials (Scale 1–8)	Number of Activities (Scale 1–8)	Number of Contents (Scale 1–8)	Time on Contents
Validation Site	Mean	7.6	7.0	7.2	1332.0
	S.D.	0.8	1.1	0.8	234.1
	N	10	10	10	10
System A	Mean	6.5	4.5*	6.0	2345.0*
	S.D.	0.7	0.7	2.8	205.1
	N	2	2	2	2
System B	Mean	6.5	4.5	6.0	1862.5
	S.D.	2.1	3.5	1.4	597.5
	N	2	2	2	2
System C	Mean	8.0	6.0*	5.0*	3265.0*
	S.D.	0.0	0.0	0.0	0.0
	N	1	1	1	1
System D	Mean	6.3*	4.5*	6.0	1163.5
	S.D.	2.1	1.0	1.4	177.6
	N	4	4	4	4
System E	Mean	5.6*	4.7*	4.7*	1315.7
	S.D.	1.5	1.0	1.8	847.8
	N	7	7	7	7
System F	Mean	6.0*	6.0*	6.0*	946.0*
	S.D.	0.0	0.0	0.0	0.0
	N	1	1	1	1

*Significantly different from Validation Site Teachers at $p = .05$ level

time covering contents than the validation site teachers. There were significant differences between System D teachers and validation site teachers on number of activities and materials, but no significant differences on number of contents or time spent covering contents. System E teachers used significantly fewer materials, activities, and contents than validation site teachers, while there was no significant difference on time spent covering contents. Finally, System F used significantly fewer number of materials, activities and contents, and spent less time covering contents.

In summary, only System B met the criteria of having no significant differences on number of materials, activities, and contents than the validation site teachers, and of spending time equal to or greater than the validation

site teachers covering content. The other five systems varied from the criteria in some fashion, and the implications of this variation in implementation are discussed in the conclusions section.

Data collection. The adopter site teachers responded to the three questionnaires at the end of the implementation period in either winter or spring quarters. There were missing data only from System E. Three teachers did not return any of the questionnaires, and the other four did not return data on the Questionnaire on ICE objectives.

The adopter site students took the two pretests at the beginning of the implementation quarter. The OPIP was given one day, and the CKT was given the next day. The posttests were given to the adopter site students at the end of the ten-week implementation in the same order as the pretests.

Results

Teacher data. The descriptive data for the adopter site teachers and the validation site project teachers on the three questionnaires are presented in Table 8. There were no significant differences in the responses to the three questionnaires between the teachers in Systems A, B, D, and E and the validation site project teachers. Responses of the teacher in System C were significantly lower than the validation site project teachers on the usefulness of the ICE objectives and materials. Responses of the teacher in System F were significantly lower than the validation site project on the usefulness of the materials. The implications of these differences are discussed in the conclusions section.

Student data. Table 9 presents the means and standard deviations for the pretest and posttest CKT and OPIP scores from the validation site project students and the adopter site students in the six systems. In addition, the gain scores and effect size for the CKT and OPIP are given in the table.

Systems A, B, C, and D had effect sizes greater than the effect size found at the validation site on the CKT. System E had an effect size just below the validation site while System F had an effect size much below the validation site. Thus, it appears that four of the six systems improved the citizenship knowledge of students equal to or greater than the validation site project teachers. Systems A, B, C, and F had effect sizes greater than that found at the validation site on the OPIP. System D had an effect size just below the validation site while System E had an effect size of zero. Again, four of the six systems improved the citizenship attitudes of students equal to or greater than the validation site project teachers.

Only Systems A, B, and C successfully changed knowledge and attitudes, and thus successfully implemented the ICE project. Two systems, System D and F, were partially successful in implementing the ICE project. System E was unsuccessful in implementing the ICE project.

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Table 8
Descriptive Statistics for Responses to Questionnaire on ICE Objectives, Management Support, and Materials for Validation and Non-funded Adopter Site Teachers

Source	Statistic	ICE Objectives (Scale 1–4)	Management Support (Scale 1–4)	Materials (Scale 1–4)
Validation Site	Mean	3.4	2.6	3.6
	S.D.	0.7	1.1	0.5
	N	10	10	10
System A	Mean	4.0	4.0	4.0
	S.D.	0.0	0.0	0.0
	N	2	2	2
System B	Mean	3.0	4.0	3.5
	S.D.	0.0	0.0	0.7
	N	2	2	2
System C	Mean	2.0*	3.0	2.0*
	S.D.	0.0	0.0	0.0
	N	1	1	1
System D	Mean	3.5	3.5	3.3
	S.D.	0.6	0.6	1.0
	N	4	4	4
System E	Mean	—	3.5	3.3
	S.D.	—	1.0	1.0
	N	—	4	4
System F	Mean	4.0	3.0	3.0*
	S.D.	0.0	0.0	0.0
	N	1	1	1

*Significantly different from Validation Site Teachers at $p = .05$ level

Quasi-Experimental Comparison for Limited Adoption

One school system adopted the Improving Citizenship Education Project curriculum change model but used it with only one course. The school system received state funding and collected raw data for teachers and students using a comparison group. A quasi-experimental evaluation procedure termed the nonequivalent comparison approach was used with this system. Basically this was the same evaluation procedure used in the validation study (Hepburn & Napier, 1984).

The nonequivalent comparison of teacher data used results from the daily logs only. An independent t test was used to examine differences between

Table 9
Descriptive Statistics, Gains, and Effect Sizes for Validation and Non-funded Adopter Site Students

Source	N	CKT Pretest Mean	CKT Pretest S.D.	CKT Posttest Mean	CKT Posttest S.D.	Gain	Effect Size	N	OPIP Pretest Mean	OPIP Pretest S.D.	OPIP Posttest Mean	OPIP Posttest S.D.	Gain	Effect Size
Validation Site	165	31.9	12.5	36.8	12.5	4.9	.39	165	122.0	9.3	123.2	9.9	1.2	.13
System A	34	41.7	13.6	54.6	11.0	12.9	.95	34	123.0	11.4	125.7	8.3	2.7	.24
System B	37	27.0	5.2	36.1	8.7	9.1	1.75	37	121.2	8.3	122.4	7.8	1.2	.14
System C	31	20.1	5.2	26.2	7.3	6.1	1.17	31	109.8	10.2	111.6	8.2	1.8	.18
System D	79	31.0	9.9	35.3	11.1	4.3	.43	79	116.9	10.6	118.2	11.1	1.3	.12
System E	132	30.8	10.3	34.6	11.2	3.8	.37	79	122.4	10.3	122.2	9.6	−0.2	.00
System F	28	40.6	8.2	42.1	9.3	1.5	.18	28	122.6	7.5	124.0	9.5	1.4	.18

contents covered, activities used, materials used, and time spent covering contents. The desired outcomes from these comparisons were significant *t* values. Significant differences would indicate differences between the treatments given by the two groups to students. In addition, content areas covered were examined to determine how the project was implemented. For the results from the three questionnaires (usefulness of objectives, usefulness of materials, helpfulness of administrators), comparisons used descriptive statistics (i.e., means and standard deviations). It was assumed that control teachers would score low on all three measures; therefore, they did not complete them. The desired outcome was to find that project teachers had a high mean score indicating usefulness or helpfulness of the curriculum process model components.

The nonequivalent comparison of student data used the results of the Citizenship Knowledge Test, or the subtest areas covered in the adoption, and the Opinionnaire on Political Institutions and Participation. Data were analyzed using analysis of covariance, because it can detect small differences better than analysis of variance (Cook & Campbell, 1979, p. 152). The desired outcome from the posttest analyses was to find significant *F* values. If a significant *F* value was found, then an effect size was calculated to test for practical significance. An effect size of 25% for the Citizenship Knowledge Test and 10% for the Opinionnaire on Political Institutions and Participation was used to determine practical significance as in the original validation study (Hepburn & Napier, 1984). If the data analysis indicated the findings were also practical, then the adoption of the curriculum process model into one class or on one grade level was deemed successful.

Procedures

Sample. There were four teachers involved in the evaluation. Two teachers were in the project group and taught tenth grade citizenship courses. Two teachers were in the control group, and one taught tenth grade Geography and the other tenth grade world history.

The students involved in the evaluation came from classes taught by the four teachers. From each teacher, two classes were selected. A total of 157 subjects were involved in the evaluation — 85 in the project classes, 72 in the control classes.

Measurement instruments. The same teacher and student instruments used in the evaluation of funded and non-funded school systems that implemented the total infusion concept were used for this evaluation. Cronbach alpha procedures were used to calculate reliability estimates for the total secondary student Citizenship Knowledge Test (CKT) scores, and they were .74 for the pretest and .82 for the posttest scores. Cronbach alpha reliability estimates for secondary subjects on the Opinionnaire on Political Institutions and participation (OPIP) were .79 for the pretest and .78 for the posttest.

Treatment. After training using the implementation handbook (Margolis, 1981), the two project teachers implemented a ten-week treatment in a total of four classes utilizing selected project objectives, materials, and activities. The nature of the treatment was recorded on the daily logs kept by the project teachers. Table 10 presents descriptive information from the daily logs

Table 10
Descriptive Statistics and *t* Ratios for Daily Log Information from Funded Limited Adoption Project and Control Teachers

Source	Statistic	Project[1] (4)	Control[1] (4)	t^2
Number of Materials	Mean	6.5	4.0	2.10
(Scale 1–8)	S.D.	0.6	2.3	
Number of Activities	Mean	5.5	4.0	5.00*
(Scale 1–8)	S.D.	0.6	0.0	
Number of Contents	Mean	6.5	2.5	3.33*
(Scale 1–8)	S.D.	1.7	1.7	
Time on Contents				
Total	Mean	2242.5	1101.5	2.81
	S.D.	195.3	798.5	
Nat'l Gov't	Mean	442.5	0.0	3.66*
	S.D.	241.9	0.0	
St. & Local	Mean	1454.5	0.0	12.23*
	S.D.	237.9	0.0	
Politics	Mean	32.0	5.0	1.44
	S.D.	37.0	5.8	
Dem. Princ.	Mean	67.0	0.0	2.76
	S.D.	48.5	0.0	
Law-Rights	Mean	41.0	0.0	1.73
	S.D.	47.3	0.0	
Global	Mean	5.0	274.5	− 1.70
	S.D.	5.8	317.0	
Analytical	Mean	124.0	338.5	− 1.46
	S.D.	47.3	290.9	
Participate	Mean	81.5	493.5	− 8.55*
	S.D.	1.7	96.4	

[1]N of 4 represents 2 teachers times 2 classes.
[2]Heterogeneous variance *t*-tests used when necessary.
*Significant at $p = .05$ level.

on the number of activities, number of contents, and number of materials used, plus the time spent on the eight content areas for project and control teachers. The project teachers used significantly more activities and contents than the control teachers but did not use significantly more materials. From inspection, it is obvious that the adopter site implementation predominately involved the content areas of national government, and state and local government. The treatment used by the adopter site project teachers covered only two of the eight subtests on the Citizenship Knowledge Test; therefore, any differences between the adopter site project and control teachers would be expected on only those two subtests. (Note: the negative *t* test result for *Participate* in Table 10 indicated that the Control group spent more time on this content area).

Data collection. The teacher data were collected from the two project teachers at the end of the implementation period in December. Both teachers completed the three questionnaires: Questionnaire on Management Support, Questionnaire on ICE Objectives, and Questionnaire on Materials.

Pretest data from students were collected in September, and posttest data were collected in December. At both times, the attitude test was given one day and the knowledge test the next day. Only students who completed all four instruments were used in the evaluation.

Results

Teacher data. Table 11 presents the descriptive data for the project teachers for responses to the first part of the three questionnaires. Questionnaire results indicated that the objectives and materials were very helpful, and administrators were supportive.

Table 11
Descriptive Statistics for Responses to Questionnaire on ICE Objectives, Management Support and Materials for Funded Limited Adoption Project Teachers

Source	Statistic	Project
Objectives	Mean	4.0
(Scale 1–4)	S.D.	0.0
	N	2
Management	Mean	3.5
Support	S.D.	0.7
(Scale 1–4)	N	2
Materials	Mean	4.0
(Scale 1–4)	S.D.	0.0
	N	2

Student data. Table 12 presents the descriptive data for the project and control students on the Citizenship Knowledge Test and subtests, and over- all score on the Opinionnaire on Political Institutions and Participation. A significant difference was found on three of the subtests from the CKT. As expected, the project group did better on the two subtest areas related to the content emphases of the implementation, which were National Government and State and Local Government. The third subtest, Law and Individual Rights, was also significantly different in favor of the project groups. The remaining five subtests showed no significant differences between the two student groups.

Applying the test of practical significance to the three CKT subtests for

Table 12
Descriptive Statistics and *F* Ratios for Funded Limited Adoption
Project and Control Groups on Knowledge and Attitude
Pretests and Posttests

Source	Group	N	Pretest Mean	S.D.	Unadjusted Mean	S.D.	Adjusted Mean	*F*
Total CKT	Project	85	26.1	7.7	28.9	9.4	28.1	2.61
	Control	72	23.8	7.6	25.3	8.6	26.3	
Nat'l Gov't	Project	85	3.2	1.8	4.3	1.9	4.2	9.48*
	Control	72	2.8	1.7	3.2	1.9	3.3	
St. & Local	Project	85	4.1	1.7	4.9	2.1	4.7	7.78*
	Control	72	3.5	1.9	3.8	1.9	4.0	
Politics	Project	85	4.1	1.9	4.4	2.3	4.2	2.34
	Control	72	3.5	1.8	3.6	1.9	3.8	
Dem. Princ.	Project	85	2.5	1.3	2.5	1.5	2.5	0.16
	Control	72	2.3	1.4	2.5	1.4	2.6	
Law-Rights	Project	85	3.3	1.4	3.7	1.5	3.6	3.99*
	Control	72	3.0	1.5	3.1	1.5	3.2	
Global	Project	85	1.9	1.2	1.8	1.2	1.8	0.31
	Control	72	1.9	1.2	1.9	1.1	1.9	
Analytical	Project	85	3.3	1.3	3.2	1.5	3.1	0.93
	Control	72	2.9	1.4	3.3	1.4	3.4	
Participate	Project	85	3.8	2.0	4.3	2.1	4.3	2.82
	Control	72	3.9	1.7	3.8	2.0	3.8	
Total OPIP	Project	85	117.0	11.3	116.6	11.2	115.1	10.92*
	Control	72	112.6	9.7	117.0	9.1	118.7	

which mean differences were statistically significant, all three differences were deemed practically significant. The effect size for national government was .47; for state and local government was .37; and for law and individual rights was .27. It is possible that the results from the law and individual rights subtest were a chance finding. However, it is more likely that the content of this area was developed under the national government and state and local government contents which were the main focus for the project teachers.

The results from the Opinionnaire on Political Institutions and Participation indicated that the control group had a significantly higher mean than the project group. This was the opposite finding than expected. The only OPIP subtest in which the control group was higher was Public Political Participation-Others (project adjusted mean = 19.3 and control adjusted mean = 20.1; $F = 6.92$; df = $1/154$; $p = .009$). For the other five subtests, there were no significant differences although the control group had observed higher adjusted mean scores on four of the remaining five subtests. A possible explanation for these results can be found in the results from the daiy logs (Table 10). The control teachers spent significantly more time covering participation, and the subtest on which there was a significant difference was related to this content. Therefore, the control group may have achieved higher attitude scores because their classroom activities focused on participation and the project group did not.

Conclusions

Successful Adoption

All systems which adopted the ICE Project provided teachers the five supports of the change model. However, some systems were able effectively and successfully to adopt the ICE project while others were not. Data from the three questionnaires and daily logs provided information which helps explain why some systems were more successful than others.

Four of the seven systems which used the total infusion conception had effect sizes for knowledge scores equal to or greater than that found in the validation study. The key to successful change of knowledge appears to be the use of a large number of the contents and expenditures of time equal to or greater than the time spent at the validation site. Thus, to affect knowledge, number of contents covered and time spent on contents appear to be critical factors.

Four of the seven school systems using the total infusion conception of the project changed attitudes equal to or greater than the validation site project group. Examination of the teacher data indicates that use of a combination of a large number of materials and activities was necessary to cause successful adoption for attitude gain. It must be noted that the average number of materials and activities for Systems A and B in the Indirect Comparison evaluation is misleading. In each system, one of the two teachers ac-

counted for the difference in attitude and in both systems that one teacher used a combination of a large number of materials and activities.

The results from the limited adoption of the ICE project seem inconsistent with the conclusion that variety is a key to successful change of attitude. However, the adoption of the ICE project in only one course distorts the major purpose of the curriculum change model (see Hepburn, 1980). Examination of the daily log results from the teaches at the limited adoption site indicates a heavy emphasis on traditional content of national and state and local government. Further, more detailed examination of the responses to the questionnaire on ICE Objectives indicates the project teachers did not use the affective objectives to guide the development of lessons. Therefore, an additional condition seems warranted. Attitude change results when the affective objectives of the project are used to develop lessons, which is only logical.

Providing the five supports to teachers does not guarantee effective and successful adoption. Teachers must use the cognitive and affective objectives, cover a large number of contents, spend sufficient time covering contents (i.e, equal to or greater than the validation site), and use a variety of activities and materials. In others words, effective and successful adoption of the ICE project occurs when teachers use the supports as done at the validation site. Merely providing the supports without teacher willingness to use the supports inhibits effective and successful adoption.

Change Model

The results of the second generation dissemination help explain how knowledge and attitudes were changed in students. Knowledge was changed by increasing the number of contents and time spent on the contents of the project. Attitude, on the other hand, was changed by variety of instruction rather than increasing the number of contents and time spent on them. The findings about changing both knowledge and attitudes simultaneously has potential implications for other curricular goals and objectives in social studies.

There was a notable exception to the claim that attitudes are changed by variety of instruction. In the limited adoption, the control group gained more in attitude but did not use a larger variety of materials and activities. Rather, the control group spent more time on the content of *Participate.* Further study needs to be done to clarify this contradiction. It is possible that variety is not the sole contributor to attitude change as indicated in the data from the indirect comparison for totally infused adoptions.

Methodologies

The three evaluation methods used are applicable to other second generation project evaluations. The direct comparison and quasi-experimental approaches are more traditional methods of evaluating curriculum innovations. However, they are expensive. The less expensive indirect comparison

approach appears a useful alternative to evaluators. There were some problems encountered in using the indirect approach, but with better precautions by evaluators these problems could be reduced or eliminated.

There were two major problems found in using the indirect approach. First was the problem of teachers scoring the tests, and second was the lack of understanding in several of the non-funded adopter systems of the need to obtain complete data from all participants. Therefore, evaluators who are interested in using the indirect approach need to:

1. Better prepare individuals who will score the various measurement instruments by providing training at the evaluation site (i.e., do not assume local school personnel can do this training).
2. Be sure both local school personnel and evaluation participants fully understand the nature of the evaluation and the need to obtain complete data from all participants.

Endnotes

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2. There are no established criteria for judging whether a given effect size indicates practical significance. The best source for locating a suggested criterion is the work of Cohen (1977). Cohen suggested examining the size of the effect using the idea of small, medium, and large effects. A small effect (10% of the standard deviation used in the calculation) is a change that is unlikely to be observed but which has some theoretical value. A medium effect (25% of the standard deviation used) is a change that might be observed and which is the effect size most often found in psychological research. A large effect (50% of the standard deviation used) is a change that can be easily seen but an effect size rarely found in psychological research. In the validation study as well as the dissemination study a small effect was expected for the attitude change and a medium effect for the knowledge change. Attitudes are difficult to change and even a small positive change would be of value. Knowledge is changed much more easily; however, the knowledge test used was a general measure of citizenship knowledge and large effect size changes were unlikely.

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Book Review

Solomon, Barbara Miller. (1985). IN THE COMPANY OF EDUCATED
WOMEN: A HISTORY OF WOMEN AND HIGHER EDUCATION IN
AMERICA. New Haven: Yale University Press. 298 pages, $25.00.

Reviewed by: Hugh Wease, Department of History, East Carolina University.

In the Company of Educated Women, a history of women's higher educa-
tion in the United States, begins with the colonial period when no women
attained higher education and extends to the late twentieth century when
females outnumber males in colleges and universities. Barbara Miller
Solomon, Senior Lecturer on History and Literature and on the History of
American Civilization at Harvard University, chronicles the persistent but
successful struggles to increase the accessibility of female collegiate educa-
tion. But she does much more. Solomen explores the nature and meaning of
the collegiate experience for women; she notes the uneasy connection be-
tween feminism and expanded educational opportunities for women.
Despite impressive educational advancements and broader employment op-
tions in the trades, professions, and academia, women's changing roles are
still met with mixed feelings. This ambivalence, which pervades many of the
complexities of the women's movement, is viewed as a serious challenge to
women's push for human equality. Professor Solomon proposes "to il-
luminate some of those complexities in the belief that the knowledge will
strengthen future generations in taking the next steps toward true equality"
(p. xxi).

The author uses an engaging narrative and a blend of statistics to develop
the basic themes and accomplish the general aim of the book. Each chapter
topic is amplified with poignant quotations which, in turn, are followed by
an overview of the principal issues with a pivotal question to engage the
reader at the outset. Closing chapter summaries serve as quick reviews of
the material. In addition, 28 pictures provide visual stimulation, depicting
people, events, and activities from the 1840s to 1982. A general introduc-
tion, a conclusion in the form of afterthoughts, notes, sources, and a long
selected bibliography enhance the scholarly utility of the volume.

The chapter which describes and analyzes the major historical movement
toward collegiate education for women is exceptionally strong. This move-
ment had its first stirrings in the female seminaries of the early nineteenth
century. However, very little progress was made until state universities in
the West opened their doors to women in the years immediately before and
after the Civil War. Unlike the coeducational university pattern in the West,
the predominant pattern in the East became single-sex colleges with the
establishment of high-quality women's colleges such as Vassar, Smith, and

Wellesley. By the time Cornell went coeducational in the early 1870s, antipathy toward women in higher education began to dissipate in the East and to a lesser extent in the South. Harvard, Columbia, and Tulane gave birth to a third pattern of higher education for women when, in the name of coordinate education, they established strong familial ties with Radcliffe, Barnard, and Sophie Newcomb colleges, respectively.

With higher education for women firmly in place, with coeducation as the eventual model, and with more female than male graduates from high school, the company of educated women grew rapidly during the twentieth century. But what education is of most worth? Solomon clearly champions a liberal education for educated women. She argues that with a liberal education one has the choice "to go into any of the roles of an educated women — wife, mother, careerist" (p. 194).

In the Company of Educated Women deserves to be on the bookshelf in the company of other significant studies of social history, history of education, and feminist works. The book is a valuable contribution to historical scholarship in general and the history of American higher education in particular.

ERRATA:
THE TABLE WAS TURNED!

In our article, "An Overview of Social Studies Dissertations, 1977–1982," in the Summer, 1985, *TRSE* Table 1 is incorrectly set up and labeled. The table was correct in the original materials prepared for the Social Science Education Consortium, but somehow in the division of labor on the article

Table 1
Number of Doctorates by Institutions: Top 32 in 1969–73 and Comparative Data from Subsequent Studies

Universities	1969–1973	1973–1976	1977–mid 1982
Temple University	1	9	17
Boston University	13	4	16
Indiana University	19	8	14
Ohio State University	15	6	13
Florida State University	9	6	13
Columbia University	10	12	12
University of Georgia	11	5	12
Stanford University	10	8	9
University of Texas	9	4	9
University of Pittsburgh	6	6	9
Pennsylvania State University	11	4	9
Auburn University	9	3	9
University of Michigan	15	5	8
University of Wisconsin—Madison	1	2	8
University of Missouri—Columbia	0	4	7
University of Northern Colorado	3	3	7
University of Colorado	4	6	6
Michigan State University	5	3	6
University of Maryland	7	9	6
University of Illinois	9	2	5
Carnegie-Mellon University	2	11	5
University of Virginia	2	6	5
West Virginia University	3	2	5
University of Nebraska	7	6	4
New York University	5	3	4
University of North Carolina	0	6	4
University of Iowa	8	3	3
University of California—Berkeley	8	1	2
Northwestern University	9	6	2
Wayne State University	6	10	1
Syracuse University	9	13	1

and in communications between authors in Texas and Georgia, two of the columns were reversed. Apologies to *TRSE* readers.

Table 1 has been retitled and corrected as shown below. The intent was to trace change over time as suggested by the three studies.

One concern about the reversed columns was that they were misleading in regard to what might be considered the top institutions in dissertation productivity in the recent period. The first 23 institutions shown on the table are still included in the most productive. However, in the recent period, there are several institutions not listed in previous studies which turned out four or five dissertations and would be considered part of the recent top 32 These were: East Texas State, University of Minnesota, Rutgers, and University of Virginia each with 5 dissertations; and University of Akron, University of Nebraska and University of Washington each with 4 dissertations.

It should be noted again that there are likely to be some missing data because the tabulations were based on abstracts turned up by ERIC searches with all of the limitations mentioned in the article.

<div align="right">Mary Hepburn and Al Dahler</div>

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