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THEORY AND RESEARCH *in Social Education*

Vol. XVI

No. 1

Winter 1988

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and Fraenkel**

**An Analysis of Social Studies Research
Over an Eight Year Period**

Guyton

**Critical Thinking and Political
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**Carter
and Hacker**

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**College and University
Faculty Assembly**

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An Analysis of Social Studies Research Over an Eight Year Period

Norman E. Wallen and Jack R. Fraenkel
San Francisco State University

Abstract

Research studies published in Theory and Research in Social Education over an eight year period, beginning with the first issue in Volume VII (Spring, 1979) and ending with the last issue in Volume XIV (Fall, 1986) were reviewed and evaluated using an instrument developed by the authors. Descriptive summaries of our findings, and our interpretations of them, along with examples of good and bad practice, are reported.

Problem

Criticisms of the nature and quality of educational research continue to appear in the professional literature. More and more frequently, one sees arguments or proposals for changing not only the nature of research, but also the standards by which it is judged. There have been arguments to move more toward qualitative (as opposed to quantitative) analyses, to integrate quantitative and qualitative methods of inquiry, even to consider and develop new methods of inquiry altogether (Allender, 1986). Researchers have been urged to place less emphasis on external validity (Mook, 1983), to decrease their use of inferential statistics (Carver, 1978), to concentrate on common sense interpretations and replication to promote understanding (Stake, 1978), to consider introspection and speculation as valid scientific methods (Bakan, 1975), to conduct interpretive research (Larkins & Puckett, 1983), and even to consider art as a model for scientific investigation (Eisner, 1981).

Research in social studies education has not escaped these criticisms and suggestions. Social studies research has been criticized for insignificance in the questions it pursues, sampling bias, inappropriate methodologies, incorrect or inappropriate use of statistics, weak or ill-defined treatments, and/or lack of replication or longitudinal follow-up (e.g., see Cornbleth, 1982; Fraenkel, in press; Larkins & McKinney, 1980; Leming, 1986; Newmann, 1985; Shaver, 1979; Shaver & Norton, 1980). In 1980, Shaver and Norton

published an article in *Theory and Research in Social Education* (TRSE) in which they pointed out that much, if not most, research in social studies education suffered from two major faults in particular—lack of randomness in the sample selection and lack of replication of individual studies in an effort to corroborate findings. They found that in only four out of some 31 studies reviewed (13%) were random samples obtained. In 18 studies (58%), they were unable to discern the sampling method. None of the studies reported direct replications of another study, and only four (13%) reported some type of systematic replication (Shaver & Norton, 1980). Intrigued by these findings, we wondered if the quality of social studies research as reported in TRSE since then has improved with regard to these two factors, especially given the many recent criticisms of educational research and suggestions for change that have been appearing. We decided to find out.

Procedure

We decided to do a more comprehensive analysis than that performed by Shaver and Norton in their 1980 study. Accordingly, we reviewed all of the studies reported in TRSE since those described in the Shaver/Norton study. This covered a period of eight years, beginning with the first issue in Volume VII (Spring, 1979) and ending with the last issue in Volume XIV (Fall, 1986).

Sample

We read all of the studies contained in those issues, with the exception of those articles falling in one or more of the following categories:

- arguments or positions papers, in which the author(s) argued that a particular position or program of some sort should be adopted or considered by the social studies profession;
- historical studies, in which the author(s) described, reviewed, and/or analyzed some aspect of social studies education in the past;
- content analyses, in which the author(s) analyzed the contents of textbooks or other types of social studies documents;
- philosophical inquiries, in which the author(s) presented rationale statements of some sort, or delved into the meaning of various terms used by social studies professionals;
- methodological proposals, in which the author(s) proposed that a certain type of method be utilized by social studies teachers or researchers;
- literature reviews, in which the author(s) presented a summary of previous research and/or commentary on a topic or issue;
- reaction papers, in which the author(s) reacted to critiques of their work which had appeared in an earlier issue of the journal;
- validity or instrument development studies, in which the author(s) reported on their efforts to develop or validate an instrument of some sort;

Table 1
Type of Studies Reviewed

True experiments	7 (15%)
Quasi-experiments	7 (15%)
Correlational Studies	9 (20%)
Questionnaire-type survey studies	9 (20%)
Interview-type survey studies	6 (13%)
Ethnographies	9 (20%)
	n = 47*

*This total 47 rather than 46 because one study used two methodologies.

book reviews.

Of some 133 articles contained in TRSE for this period, 87 fell into the categories reported above. We decided not to include these types of articles in our review in that they did not lend themselves to the type of analysis we would perform. We intend, therefore, no implication of the quality of these articles in any way by their omission. This left a total of 46 articles which we reviewed. Their breakdown by type is shown in Table 1.

We defined each of the above types as follows:

True experiments. Two or more groups of subjects were compared in some way. Random assignments of subjects to treatment and control groups was assured. Administration of the treatment was controlled by the researcher.

Quasi-experiments. Two or more groups of subjects were compared in some way, with a treatment being administered to one of the groups. Random assignment of subjects to treatment and control groups, however, did not occur. Administration of the treatment variable may or may not have been controlled by the researcher. Causal-comparative and *ex post facto* studies were included in this category.¹

Correlational studies. The scores of one group of subjects on two different measures were correlated. Subsequent analyses such as multiple regression or path analysis may have been performed.

Questionnaire-type survey studies. A written questionnaire was administered, either by mail or in person, to one or more groups of subjects. No treatment was involved. The responses of the subjects to the questions were reported.²

Interview-type survey studies. An interview schedule was prepared and administered orally (by the researcher) to one or more groups of subjects. No treatment was involved. The subjects' responses to the questions were reported.

Ethnographies. One or more individuals were observed going about their daily activities in naturalistic settings. Their activities, and manner of per-

forming same, were described in detail. We included case studies, involving only a single individual, in this category.

Analysis

Both of us read every study during this period which fell into any of the categories listed in Table 1. We analyzed these studies using a category sheet which we jointly prepared. To test our agreement concerning the meaning of the various categories included in the instrument, we initially each read a sample of (the same) six studies and then met to compare our analyses. We found that we were in substantial agreement concerning what the categories meant, although it became apparent to us that we needed to add additional subcategories in places, and totally new categories in others. The final instrument is shown in the Appendix. We defined each of the categories listed therein as follows:

Type of research. See above

Justification of study. The degree to which the worth of the study was explicitly argued for and/or defended. We also looked to see if there were any ethical considerations involved (i.e., whether there might be any physical or psychological harm to the subjects), and if so, whether the author(s) took such into account.

Clarity. The degree to which the study was clear. We were concerned here with the focus of the study—its purpose and direction, and the degree to which (and when) the author(s) identified the variables they were investigating. We also looked to see if, in intervention studies, the exact nature of the treatment was made explicit, and if so, when. Finally, we identified any hypotheses which existed, and the degree to which they were made explicit.

Definitions. The degree to which important terms in the study were defined, and how.

Sample. The type, size, and adequacy of description of the subjects involved in the study.

Internal validity. The number of plausible alternative explanations for any reported outcomes that were conceivable, and the extent to which these alternatives were identified and discussed by the author(s). We also considered whether it was clear that a treatment (in the intervention studies) actually occurred, and when it did, if the length of time of the treatment could be considered sufficient to produce the effect(s) intended.

Instrumentation. The degree to which any and all instruments used were demonstrably reliable and/or valid. We considered in particular whether the investigator(s) conducted any form of reliability and/or validity check of the instruments used, and if so, whether these checks were adequate for their purposes.

External validity. The extent to which the findings of the study were generalizable beyond the particular sample studied. We considered both population and ecological generalizability, when and where the author(s)

generalized appropriately (and if so, to whom), when and where they did not, and when they could not, if they explained why.

Distinction between results and conclusions. The extent to which the author(s) clearly differentiated between their findings (empirical data) and the conclusions they arrived at based on their findings (subjective opinion).

Data analysis. Correct, and appropriate, use and interpretation of descriptive and inferential statistics.

Legitimacy of conclusions. Whether limitations raised crucial questions about the conclusions drawn.

Educational significance of the study. Our judgment of the importance of the study in practical or theoretical, as opposed to statistical, terms.

We then reread the initial six studies using the revised instrument, as well as the remaining 40 which fell into one of the categories previously described. When each of us had finished our independent analysis, we again met to compare our reviews. We do not report agreement of independent scoring because, although we had many disagreements, the vast majority were clear oversights by one of us and quickly resolved. It would have been desirable to compare our analysis with the findings of a second team, but this was not feasible. In the remainder of this paper, therefore, we wish to present the results of our analysis, using the major headings of our category sheet to organize our remarks. Both descriptive summaries of our findings, and our interpretation of them are reported, along with examples of both good and bad practice.

Findings

Type of Research

The breakdown by type of research was shown earlier in Table I. As can be seen, experimental and survey research predominate. This is pretty much in line with what other reviews have indicated (e.g. see Fraenkel, 1987). Of interest, however, is the rather large number of correlational studies (almost 20 per cent of the total number reviewed) and the equally large number of ethnographic studies (also almost 20 per cent of those reviewed). Of the total number of articles published in TRSE during this period, however, readers should notice that we reviewed only 46 out of a total of 133. Of those we did not review, some 44 (33% of the total 133!) were arguments of one sort or another. This seems to be an unduly large proportion of the total of articles published in this journal. One type of research methodology was particularly noticeable by its omission—*ex post facto* research. We found not one example of this type of research published in TRSE during this eight-year period.

Justification

To what extent were these studies justified—that is, to what extent did the authors attempt to defend the worthwhileness of their research. We con-

sidered a justification to be any attempt by the authors either to argue explicitly why they thought their study was worth doing, or to imply clearly through their remarks its worth. We think it noteworthy that the great majority of researchers made either an explicit or implicit argument for the worth of their research, and did not simply take it for granted. Only two studies did not contain some form of argument about the worth of the intended research. The results in this category are shown in Table 2.

Clarity

The clarity of these studies received a mixed review. We were pleasantly surprised to find that the focus—the overall intent—of *every* study was clear. We had no trouble whatsoever discovering what the authors intended to investigate. The clarity of the particular variables being investigated, however, was not always made clear. To be sure, in the great majority of studies, the variables were made clear right at the start. But in seven of the studies, it took us awhile to be sure about the nature of the variables involved, and in another six, we never could discern what the variables were. Of these six, five were ethnographies. Since one of the claims made for ethnographic research is the elucidation of meaningful variables, this failing seems rather serious. We also note that the remaining four ethnographies that we reviewed did succeed in making their variables clear to us. Generally, too, in those studies involving an intervention of some sort, the treatment was made explicit, although there were two in which we could not be sure as to what the treatment actually involved. Twenty-eight of the 46 studies reviewed were seen by us as hypothesis-testing investigations. In over half of these, however, the hypothesis was implied (e.g., in the rationale for the study) rather than being stated explicitly. The results in this category are shown in Table 3.

Definitions

The definition of the key terms by the authors of these studies also drew a mixed review. Almost 30 per cent (13 out of 46) of the studies lacked any definition of the terms involved. Interestingly, seven of these studies were either true or quasi-experiments. It may be that since these studies tended to be on more traditional topics, using technical terms frequently found in the research literature, the authors merely assumed that these terms would be understood by the readership. This assumption may be questionable, how-

Table 2
Justification of Research

No mention of justification	2 (4%)
Explicit argument justifying study	35 (76%)
Implied argument justifying study	9 (20%)
	n = 46

Table 3
Clarity of Studies

Focus clear	46 (100%)
Variables	
Clear initially	31 (67%)
Clear eventually	7 (15%)
Never clear	8 (17%)
Treatment in intervention studies made explicit	
Yes	12 (26%)
No	2 (4%)
No applicable (no treatment)	32 (70%)
Hypotheses present	
No	18 (39%)
Explicitly stated	13 (28%)
Clearly implied	15 (33%)

ever, and needs to be considered carefully. Seventeen (38 per cent) of the studies utilized either operational or constitutive definitions of terms (or both), while in 16 (35 percent) the meaning of the terms involved eventually became clear within the context of the study. Almost all of these clear-in-context definitions occurred in the first half of the studies chronologically. Those studies in which terms were not defined occurred more frequently (10 of 13 times) in the more recent 23 studies, allowing us to conclude that, overall, a failure to define terms clearly, or at all, tended to increase during this time period. The results in this category are shown in Table 4.

Sample

Only two studies, of all those we reviewed, had truly random samples, i.e., randomly selected from a defined population, and these populations were so narrow as to be of dubious interest. They were (a) enrollees in teacher education at a particular university; and (b) students from two high schools. The great majority were convenience samples which, given the difficulties involved in doing research in the public schools, may (usually) be about the best one can expect. We had less difficulty with this fact than we

Table 4
Definitions

No definitions	13 (28%)
Operational definitions	10 (22%)*
Constitutive definitions	13 (28%)*
Clear in context of study	16 (34%)

*Some studies used more than one type of definition.

Table 5
Adequacy of Sample Demographics

Full demographics given	8 (17%)
Some demographics given	29 (63%)
No demographics given	9 (20%)

did with the fact that, oftentimes, the description of the sample left quite a bit to be desired. Many times we were not clear about the characteristics of the subjects involved in a study. (An assessment of the adequacy of description of sample demographics is shown in Table 5.)

These two facts—the lack of randomness in selecting samples, and inadequate description of sample demographics, raise serious questions about the generalizability of the findings of virtually all of these studies. We shall discuss this point in more detail later when we consider external validity. The size of the samples in these studies varied tremendously, ranging from an n of one in an ethnographic study to a very large n of 589 in an experimental study. The breakdown by type of sample is shown in Table 6, and by size, according to type of study, in Table 7.

Attempting to assess the adequacy of sample descriptions forced us to face an issue we believe is insufficiently discussed in the research literature, namely: “What constitutes adequate description?” Is there any agreement that certain demographics, such as gender, age, socio-economic status, or geographic area, should always be reported? We know of no consensus on this question. Further, descriptive information must surely depend on the nature of the study. Perhaps authors should be required to report evidence that their sample is similar to a defined target population on variables they consider important. Perhaps it is unrealistic to expect satisfactory description. If so, another argument is raised in favor of replication. Similar results obtained in several samples is an impressive argument for generalizability. We were pleased to find three studies (all from the University of Georgia) which reported some form of replication. In fact, a total of seven partial

Table 6
Type of Sample

Random selection	2 (4%)
Representation based on argument	6 (13%)
Convenience	29 (62%)
Volunteer	4 (8%)
Can't tell	6 (13%)
	n = 47*

*One study used two samples, selected differently

Table 7
Range of Sample Size by Type

<i>Type</i>	<i>Range</i>	<i>Median</i>
True experiments	42 - 589	211
Quasi-experiments	49 - 925	200
Correlational studies	33 - 1050	498
Questionnaire-surveys	25 - 554	234
Interview-surveys	7 - 70	27
Ethnographies	1 - 138	12

replications on the same topic—effects of teacher enthusiasm—were discussed. Unfortunately for the development of a knowledge base, however, the results were inconsistent and inconclusive.

Internal Validity

We were interested in how often alternative hypotheses could be suggested to explain positive findings. Accordingly, we examined each study for the extent to which one or more of the threats to internal validity identified by Campbell and Stanley (1963) might have been present.³ Oftentimes we found they were. The most frequent were subject characteristics (other characteristics of the subjects may account for the results), mortality (some of the subjects dropped out of one or more comparison groups in unequal amounts), a Hawthorne or John Henry effect (the subjects in the experimental or control groups knew they were part of an experiment of some sort), and, especially in the ethnographic studies, an experimenter effect (the researcher may have acted so as to bias the responses of the subjects in some way). Furthermore, when these threats existed, the researchers oftentimes did not seem to be aware of them, or at least they failed to discuss their implications (although this tended to improve somewhat in the more recent studies).

Table 8 shows the number of studies of each type in which we identified threats and the number where we judge them to be adequately discussed. Surprisingly, three of the true experiments contained threats (actual inequality of groups despite random assignment, lack of actual control over treatment and a possible John Henry effect), two of which were well discussed by the authors. We were surprised that none of the ethnographic reports acknowledged the problem of investigator bias, perhaps because it is thought to be an intrinsic limitation.

A positive sign with regard to internal validity was that, generally, it was quite clear in the intervention studies that the treatment, whatever it was, actually did occur. We found only two studies (out of a total of 12) in which this was not clear. Whether the length of time of the treatment was sufficient to bring about the hypothesized or investigated outcomes, however,

Table 8
Threats to Internal Validity

Possible alternative explanations for the outcome obtained			
History			2
Maturation			0
Mortality			10
Subject characteristics			15
Pretest effect			2
Regression effect			0
Instrumentation			1
Experimenter effect			20
Hawthorne or John Henry effect			7
Threats identified and discussed			
<i>Type</i>	<i>Number</i>	<i>Identified</i>	<i>Discussed</i>
Tr experiment	7 (15%)	3 (7%)	2 (4%)
Quasi-experiment	7 (15%)	7 (15%)	4 (9%)
Correlational	9 (20%)	5 (11%)	3 (7%)
Questionnaire-survey	9 (20%)	3 (7%)	0 (0%)
Interview-survey	6 (13%)	4 (9%)	1 (2%)
Ethnography	9 (15%)	9 (15%)	0 (0%)
n - 47*			

*One study used both quasi-experimental and correlational methodology

was another matter. In only four of the 12 intervention studies did we think that the prescribed treatment was clearly long enough to give the hypothesized effects an adequate chance to manifest themselves. Table 9 presents our impressions as to whether it was clear that a treatment really did occur, while Table 10 indicates our judgment as to whether the length of time of the treatment variable was sufficient to produce the intended effects.

Instrumentation

In this category, we were concerned with the extent to which researchers ascertained the reliability and validity of the instrument(s) they used. We looked to see if these authors made some sort of reliability and/or validity check, and in the case of reliability, whether the type of check they did per-

Table 9
Was it Clear That a Treatment Existed?

Yes	12 (26%)
No	2 (4%)
Not applicable	32 (70%)

Table 10
Was Length of Time of Treatment Sufficient?

Yes	4 (8%)
No	2 (4%)
Questionable	7 (15%)
Can't tell	1 (2%)
Not applicable	32 (70%)

form was adequate for the type of study they were conducting. Those studies judged No or Questionable reported indexes below the rather lenient standard of .70. Here, as in other categories, results were not homogenous. It is somewhat sobering to note that of the total 46 studies reviewed, slightly more than half (25) did not make any reliability check whatsoever. Only four checked stability of effects over time, probably a more important issue than internal consistency, and only one reported the time interval involved. A startling 32 made no attempt to check instrument validity! A more detailed breakdown on these data is shown in Tables 11 and 12.

External Validity

External validity, of course, refers to the degree to which the results of a study are generalizable. It is in this category that we found, similar to the Shaver and Norton findings, that the studies reviewed were most deficient. We considered both population and ecological generalizability in this category. Population generalizability refers to an explicit extension of the findings of the study to one or more target populations (i.e., other *subjects*). Ecological generalizability refers to a reference to another setting of some sort (i.e., subject matter, materials, physical conditions, etc.) than the one in which the study was conducted. In some 22 instances, the researchers generalized to indefensible target populations, although we also noted with approval that caution about generalizing inappropriately was mentioned in

Table 11
Reliability

Empirical check made?		
No	25 (54%)	
Yes	21 (46%)	Scoring agreement only = 2
If yes, adequate for study?		
Yes	12 (26%)	
Questionable	4 (9%)	
No	4 (9%)	
Can't tell	1 (2%)	

Table 12
Validity

Empirical check made?	
Yes	14 (30%)
No	32 (70%)
If yes, type?	
Content (logical)	3 (7%)
Judge-supported	2 (4%)
Concurrent	5 (11%)
Predictive	0 (0%)
Construct	3 (7%)
Other (incl. factor analysis)	3 (7%)

another 13 studies. There was no mention of population generalizability in eight studies. Researchers were quite a bit more careful with regard to ecological generalizability, with only six studies containing an explicit reference to an indefensible setting. There was no mention of ecological generalizability in 32 studies, however, leading us to conclude that this, perhaps, is not something that these researchers generally considered. The breakdown of our findings with regard to external validity is shown in Table 13.

Distinction Between Results and Interpretations

Did the authors of these studies maintain a distinction between their findings (i.e., what they observed or obtained) and their interpretations (i.e., the conclusions they drew based on the nature of their findings)? Overwhelm-

Table 13
External Validity

<i>Discussion of Population Generalizability</i>	
Appropriate:	
Explicit reference to defensible target population	2 (4%)
Appropriate cautions expressed	14 (31%)
Inappropriate:	
No mention of generalizability	8 (17%)
Explicit reference to indefensible target population	22 (48%)
<i>Discussion of Ecological Generalizability</i>	
Appropriate:	
Explicit reference to defensible settings	1 (4%)
Appropriate cautions expressed	8 (15%)
Inappropriate:	
No mention of generalizability	31 (67%)
Explicit reference to indefensible settings	6 (13%)

Table 14
Distinction Observed Between Results
and Conclusions?

Yes	34 (74%)
No	12 (26%)

ingly, they did. Almost three-fourths of the studies maintained a sharp distinction between results and interpretations. This is shown in Table 14. The major exception was the ethnographic studies which account for nine of the twelve Nos. Although this is a widely known and, to some extent, unavoidable limitation of this type of study, we believe the authors of these studies could have done a much better job of making clear the basis for their interpretations. Failure to do so provides ammunition for those who allege that ethnographic research is little more than subjective impressionism.

Data Analysis

In almost all of the studies, the authors utilized some form of descriptive or inferential statistics. Did they use the correct procedure? Generally, yes! All five Nos for descriptive statistics reflect our opinion that additional descriptive procedures (e.g., frequency of response) would have greatly clarified the findings. Three of these five were ethnographies. Was their interpretation appropriate given the nature of their study? Here, the answer generally is yes when descriptive statistics were involved, but overwhelmingly no when inferential statistics were reported. The major error was the inappropriate use of a significance test in studies where the obtained sample was not random. A significance test is appropriate only when a researcher is assured that he or she has a random sample, and this was the case in only two studies.⁴ In six other studies, the authors argued for representativeness and hence (by implication) for significance tests; we found only one of these persuasive. Some researchers advocate the calculation of significance tests as an indication of important differences but with appropriate qualifications. We, instead, advocate the reporting of effect sizes. Effect size was not reported in any of these studies.

With regard to other forms of misinterpretation, one study made much of the relative contribution of different variables to a multiple correlation even after explicitly discussing the likelihood of chance fluctuations due to the small n (22). Another, otherwise commendable, study committed the error of treating non-significance differences as though the null hypothesis were proven. In fact, the differences between the highest group and each of the two lowest groups were such as to yield effect sizes of approximately .4 to 1.0, depending on which standard deviation was used.

We also found several studies in which the authors confused random assignment with random selection. Random assignment is a powerful,

though imperfect, technique for equating groups. Further, it permits comparison of variance between groups with variance within groups. It does not, however, justify the calculation of significance tests because generalization is a separate issue both from the equating of groups, and assessing the magnitude of differences. When reporting a significant difference between two groups equated by random assignment, the question is: "To what population may this difference be generalized?" In the absence of random sampling, and particularly in the case of convenience samples, which were used in virtually all of these studies, the answer must be: "No one knows!" Therefore, the information presumed in the finding of significance is, at best, meaningless and, at worst, misleading unless carefully clarified by the authors, a practice glaringly absent from these reports, probably because it is virtually impossible to do.

We found nine studies (out of 35) wherein the interpretation of the descriptive statistics used was highly questionable. Six of these were variants of correlation studies. Two of these combined scores of students with scores of their teachers in obtaining first order correlations in multiple correlation studies, a highly suspect practice (particularly with a teacher n of eight in one study). In one of these two, it appears that data on teachers and students were simply combined; in the other, the best we can deduce is that the teacher's scores were assigned to each of his or her students. The author of the latter study also concluded that the results of the study provided limited support for the position that teachers should be encouraged to focus their instruction around objectives. This conclusion was based on the findings that teacher use of objectives contributed one percent to the predicted variance of student achievement (whereas the CAT and pre-test combined contributed 42 percent)! In both studies, the unnecessary complexity of analysis and reported data virtually preclude the reader from determining what the findings really were.

In four other studies, too much was made of correlations below .40. While a case may sometimes be made for the importance of correlations of this magnitude in testing theory or in unusual practical applications (e.g., prediction with a very small selection ratio), one can hardly pay serious attention to correlations of this size when the variables are "historical understanding" and "information processing capacity" ($r = .14$); "economic knowledge" and "attitude toward the American economic system" ($r = .28$); "positive interracial contact" and "satisfaction with University life among Black females" ($r = .22$), even though statistically significant due to large n 's. Another study states that "some modest school effects were found for political interest, political alienation and anti-Vietnam war attitudes." The multiple correlations based on five school variables *plus* IQ and socioeconomic level were respectively; $r = .39$; $r = .16$; and $r = .41$ —modest indeed! Especially since the particular schooling variables were weighted differently for each attitude.

Three studies using the group comparison model contain highly questionable interpretations. In one quasi-experimental study, the authors conclude, on the basis of non-significant t tests ($n = 49$ in each group) that there was a "lack of major effects on the attitude of MACOS students," while admitting that the MACOS group became slightly more tolerant of repugnant activities than did the non-MACOS group. Examination of the change in total test score means, however, shows that the MACOS changed -2.94 compared to $-.48$ for the comparison group. Estimation of the standard deviation of change scores for the comparison group suggests an effect size of .6 to .7, an impressive difference even though not statistically significant. The authors of another, otherwise well done, experimental study concluded that one of four teaching strategies was the most useful and devoted considerable space to discussing reasons why this might be so. This, despite the finding that this was the *poorest* of the four methods for one of their four interaction sub-groups (female poor readers), while another method was appreciably better. The authors of this study also committed the error of assuming that non-significant differences on pre-tests is tantamount to groups being equal. Regressed gain scores should have been used since pretests were given expressly to check on the efficacy of random assignments in equating groups.

One of two hypotheses tested in another quasi-experimental study was that regular value analysis discussions will increase students' social trust, social integration, political confidence and political interest, as compared to a reading-only and a control group. Under the results section of the study, the authors concluded that "there is some evidence to support the hypothesis." They go on to state that while the value analysis group did score significantly better statistically than the reading-only group, the difference between the two groups was minimal. In addition, the control group scored significantly higher than did the reading-only group on two of the measures. They then concluded that the results offer only modest and mixed support for the hypothesis. In actuality, the adjusted means for the value analysis and control groups were similar. The only meaningful finding is the lower scores for the reading-only group. The authors provide plausible interpretations as to why this group may have scored lower while the control group scored high, but such *ex post facto* speculation cannot obviate the finding that there is no support in the data for the hypothesis.

For the most part, the errors described above appear to support the opinion, increasingly voiced (e.g., see Carver, 1978; Shaver & Norton, 1980), that inferential statistics play too important a role in current research efforts. Not only are they, with rare exception, mathematically or logically indefensible, but also they often obscure the real findings of a study. Perhaps it is time for the profession to consider using descriptive statistics more meaningfully rather than continuing to foster the use of elegant but inappropriate inference tests. The breakdown with regard to the analysis of data

Table 15
Data Analysis

<i>Descriptive Statistics</i>	
Use correct?	
Yes	34 (74%)
No	5 (11%)
Questionable	1 (2%)
n/a	6 (13%)
Interpretation correct?	
Yes	26 (57%)
No	9 (20%)
n/a	11 (23%)
<i>Inferential Statistics</i>	
Technique correct?	
Yes	28 (61%)
No	1 (2%)
n/a	17 (37%)
Interpretation correct?	
Yes	3 (7%)
No	26 (56%)
n/a	17 (37%)

in these studies is shown in Table 15. In this table, n/a indicates that neither descriptive nor inferential statistics were reported, nor considered appropriate.

Legitimacy of Conclusions

Were the conclusions reached by the authors of these studies justified? We consider this to be the most important question we addressed. In attempting to answer it, we decided to focus on the extent to which the conclusions drawn by the authors were defensible based on the internal validity of the study, including the treatment of data (i.e., excluding the issue of generalization of findings). The main factors influencing our judgment were: (a) adequacy of instrumentation; (b) severity of threats; and (c) adequacy of the interpretation of data. In our judgment, the conclusions reached by the authors were justified in only 20 (44%) of these studies, as Table 16 reveals:

Educational Significance of Studies

Researchers often talk about the statistical significance of their findings, but just as often fail to talk about the significance of their results in any larger sense. Why are the results of the study important to the educational community as a whole (and in this case, to the social studies educational community in particular)? Just what practical significance do the results of a study have? Why do they *matter* (or do they)? We asked ourselves these

Table 16
Were the Conclusions of
the Study Legitimate?

Yes	20 (44%)
No	13 (28%)
Questionable	3 (7%)
Can't tell	10 (22%)

Table 17
Educational Significance of the Studies

Yes	22 (48%)
Questionable	10 (22%)
No	12 (26%)
Can't tell	2 (4%)

questions as we read these studies, and attempted to weigh them in this light. Would the results of any of these studies make a difference to teachers and other professionals? In our judgment, many of them would not. We give our impressions in Table 17. The phrase, Can't tell, indicates we were so confused by the study as to be unable to judge its significance.

Conclusion

What, then, can we say about these studies, and about social studies research? Have social studies researchers improved in the use of random samples and in replicating their work since Shaver and Norton did their analysis? It appears they have not. We found only two (4%) out of 46 studies that utilized truly random samples, whereas Shaver and Norton found four (13%) of 31. We also found no direct replications, although we did find three studies (7%) which were partial replications of other work.

The majority of the studies we reviewed did attempt to justify the worthwhileness of their research. The overall focus of every study was quite clear to us, although the particular variables being investigated in some studies were not. Definition of terms needed attention in several studies. Sample descriptions often left quite a bit to be desired, as did awareness and discussion of threats to internal validity. A positive sign with regard to internal validity was that, in the intervention studies, it was clear that the treatment, whatever it was, actually occurred. Reliability and validity checks on instruments were not performed in a large majority of studies.

It was in the area of external validity, however, that these studies were most deficient. In almost half of them, the authors generalized to indefensible target populations; in over half they made no mention of ecological

generalizability, thereby implying that it should be taken for granted. Finally, although these authors generally used the correct statistics in analyzing their data, they often interpreted their findings incorrectly, leading us to conclude that many in the profession do not appear to have an adequate understanding of statistical interpretation.

Endnotes

1. In a causal-comparative study, two groups known to differ on certain characteristics are compared. Factors that might possibly have caused the differences between the two groups are then inferred by the investigator. By *ex post facto* research, we mean any study in which an investigator seeks an explanation for findings which have already occurred. Suppose, for example, that an administrator in a large, urban high school notices that the end-of-year test scores for students in a particular social studies teacher's classes are markedly higher than the students of other teachers, and have been for several years. She wonders why, and decides to compare several characteristics of the more successful students, their teacher, and their environment over the years with the same characteristics (ages, grade level, courses taken, materials used in class, teaching style, etc.) of the other students in an attempt to gain insight into why the difference exists. The differential results, however, have already occurred, and the administrator is seeking an explanation for these results after the fact. *Ex post facto* studies are always causal-comparative studies, but not vice-versa.

2. One survey which utilized a questionnaire could also be classified as a causal-comparative study.

3. We have changed "subject selection" to "subject characteristics" to make the category appropriate to other than comparison group studies.

4. See the discussion under Sample.

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Appendix

Categories for Analysis

Type of research

- a. Experimental
 1. True
 2. Quasi
- b. Correlational
- c. Survey
- d. Interview
- e. Causal-comparative
- f. Ethnographic

Justification of study

- a. No mention of justification
- b. Explicit argument made concerning the worth of study
- c. Worth of study is implied
- d. Any ethical considerations overlooked?

Clarity

- a. Focus clear?
- b. Variables clear?
 1. Initially
 2. Eventually
 3. Never
- c. Is treatment in intervention studies made explicit?

- d. Is there a hypothesis?
 - 1.No
 - 2.If yes, is it:
 - a) Explicitly stated?
 - b) Clearly implied?

Are Key Terms Defined?

- a. No
- b. Operationally
- c. Constitutively
- d. Clear in context of study

Sample

- a. Type
 - 1. Random selection
 - 2. Representation based on argument
 - 3. Convenience
 - 4. Volunteer
 - 5. Can't tell
- b. Was sample adequately described? (1 = high; 5 = low)
- c. Size of sample (n)

Internal Validity

- a. Possible alternative explanations for outcomes obtained
 - 1. History
 - 2. Maturation
 - 3. Mortality
 - 4. Selection bias
 - 5. Pretest effect
 - 6. Regression effect
 - 7. Instrumentation
 - 8. Experimental effect
 - 9. Hawthorne or John Henry effect
 - 10. Order effect
- b. Threats discussed and clarified?
- c. Was it clear that there was a treatment? (in intervention studies)
- d. Was length of time of treatment sufficient (1 = high; 5 = low)

Instrumentation

- a. Reliability
 - 1. Empirical check made?
 - a) Yes
 - b) No
 - 2. If yes, adequate for study?
 - a) Yes
 - b) No
 - c) Questionable
 - d) Can't tell

- b. Validity
 - 1. Empirical check made?
 - a) Yes
 - b) No
 - 2. If yes, type:
 - a) content (logical)
 - b) judge-supported
 - c) concurrent
 - d) predictive
 - e) construct

External Validity

- a. Discussion of population generalizability
 - 1. Appropriate
 - a) Explicit reference to defensible target population
 - b) Appropriate caution expressed
 - 2. Inappropriate
 - a) No mention of generalizability
 - b) Explicit reference to indefensible target population
- b. Discussion of ecological generalizability
 - 1. Appropriate
 - a) Explicit reference to defensible settings (subject matter, materials, physical conditions, personnel, etc.)
 - b) Appropriate caution expressed
 - 2. Inappropriate
 - a) No mention of generalizability
 - b) Explicit reference to indefensible settings

Were results and interpretations kept distinct?

Data Analysis

- a. Descriptive statistics?
 - 1. Used correctly?
 - a) Yes
 - b) No
 - c) Questionable
 - 2. Interpreted correctly?
 - a) Yes
 - b) No
 - c) Questionable
- b. Inferential statistics?
 - 1. Technique correct?
 - a) Yes
 - b) No
 - c) Questionable

2. Technique appropriate?

a) Yes

b) No

c) Questionable

Were conclusions of authors legitimate?

Were outcomes of study educationally significant?

Critical Thinking and Political Participation: Development and Assessment of a Causal Model

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Abstract

This study assessed a model of the relationship between critical thinking and political participation. The direct effect of critical thinking was compared with its indirect effects mediated by personality/attitudinal variables, such as personal control, political efficacy, self-esteem, and democratic attitude. Data were gathered from intact classes of students (n = 118), approximately 65 percent of whom were undergraduates. Relationships among variables in the model were examined using path analysis. Findings indicate that critical thinking has indirect positive effects on orientations toward and reported political participation, that critical thinking positively affects personal control, political efficacy, and democratic attitude, and that personal control has a strong direct effect on political efficacy.

Introduction

Statement of the Problem

Two of the major goals of education in general, and of social studies education in particular, are education for citizenship and development of the ability to think critically. Traditional views focused on a citizen who knows how the government operates, respects authority, has desirable attitudes and has habits which generate support for the system and the status quo. This narrow view has yielded to contemporary views that emphasize skills in communication, decision-making, conflict resolution, and other areas relevant to citizenship competence and political participation (Thompson, 1970; Remy, no date; Massialas, 1972; Eyster, 1977). These broader definitions of the good citizen also focus on participation as a major component of citizenship (Renshon, 1974).

These two goals of social studies education, political participation and critical thinking, apparently are not being met. After reviewing the litera-

ture, Ehman (1980) concluded “that schooling is more closely linked as an important socialization agent in the acquisition of political knowledge and awareness than as a shaper of political attitudes and participation” (p. 103). Litt (1968), Langton and Jennings (1968), and Jennings, Langton and Niemi (1974) reported that civics courses have little effect upon students’ attitudes toward political participation. Levenson (1972) found a lack of congruence between teacher-expressed goals of citizenship education and political participation. Also, despite its prominence in the literature and in curriculum guidelines, current practice does not include teaching for thinking (Parsons & Shaftel, 1967; Shaver, Davis, & Helburn, 1979). If, as the research indicates, critical thinking and participatory citizenship are not being achieved in practice, what is the relationship between the two goals? Is critical thinking related to participatory attitudes and behavior? If so, is the relationship direct or indirect?

Purpose of the Study

The purpose of this study was to develop and assess a conceptual model of the relationship between critical thinking and political participation. The hypothesized model is depicted in Figure 1. The first stage of the model illustrates the effect of critical thinking on selected personality variables (self-esteem, personal control, and political efficacy). The second stage of the model illustrates the relative effects of critical thinking and personality variables on democratic attitude. The third stage of the model illustrates the relative effects of critical thinking, the personality variables, and democratic attitude on political participation.

In this study, the direct effect of critical thinking on political participation is compared with its indirect effects mediated by personality/attitudinal variables to determine the relationship between critical thinking and political participation and whether intervening variables contribute to the relationship. Path analysis is employed to test the hypotheses proposed by the model.

Hypotheses

The following sets of hypotheses are implicit in the model depicted in Figure 1. Theoretical and empirical support for the hypotheses is presented below.

Set 1. An assumption is that critical thinking is an exogenous variable, and no hypotheses as to its origins are postulated. Effects on critical thinking are entirely without the model. Critical thinking has a direct and positive effect on political participation. Critical thinking also has an indirect and positive effect mediated by the personality/attitudinal variables.

Set 2. Self-esteem, personal control, and political efficacy are functions of critical thinking and unidentified variables from without the model. They affect democratic attitude positively and directly. Directly and indirectly they positively influence political participation through the development of democratic attitudes.

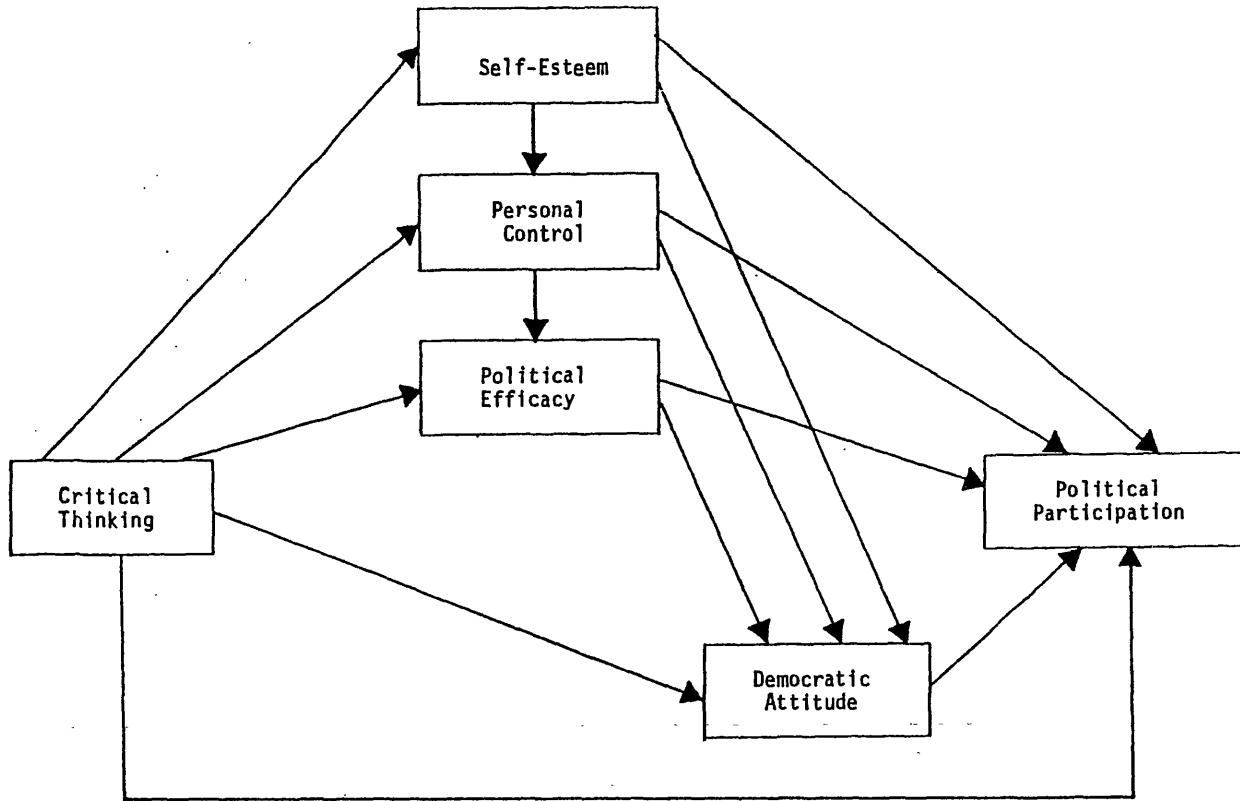


Figure 1.
Hypothesized Conceptual Model Examining The Relationship Between Critical Thinking And Political Participation.

Set 3. Democratic attitude is a function of critical thinking, self-esteem, personal control, political efficacy, and unspecified variables without the model. Democratic attitude affects political participation directly and positively.

Definition of the Variables

Critical Thinking

Most elaborations of critical thinking processes and skills have as their basis the writing of John Dewey. His now classic definition of reflective thinking serves the purpose of the study:

Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends constitutes reflective thought.
(Dewey, 1929, p. 9)

Personal Control

Personal control over one's life is a basic human need. Human development patterns, animal studies, and psychological theories are cited to establish this need as fundamental (Renshon, 1979). Personal control has a degree dimension and a scope dimension. Degree refers to the person's belief in his/her ability to personally control events, and scope refers to the extent of the environment that the individual seeks to affect. Personal control is the opposite of external locus of control, the belief that life is largely controlled by events, situations, and people over which one has no power.

Political Efficacy

Political efficacy is a two-dimensional concept with a personal effectiveness component (Campbell, Converse, Miller, & Stokes, 1964) and a government responsiveness component (Jennings, Langton & Niemi, 1974). It is the former dimension that is emphasized in this study. Political efficacy is the belief that one can have an impact on the political world.

Self-Esteem

Self-esteem refers to one's evaluation of self, self-respect, and feelings of worth and competence. Sniderman (1975) states simply that "self-esteem refers to how favorably (or unfavorably) a person evaluates his or her self" (p. 36).

Democratic Attitude

A person with a democratic attitude is one who supports democratic norms and values in the abstract and as applied to concrete situations. These norms and values are the ones embodied in the American Creed, freedom, equality, and democratic procedure, and in the Bill of Rights, basic civil liberties.

Political Participation

Political participation is multidimensional. Milbrath and Goel (1977) identified six modes of participation which are inclusive of the different manifestations of political activity. Voting is the most simple level of participation. Party and campaign activity consists of party membership and participation, active campaigning, monetary contributions, and registration efforts. Community activity is concerned with forming and working with groups to deal with problems. Contacting officials is the fourth mode and includes sending letters, making telephone calls, etc., to governmental authorities. Protesting includes street demonstrations, riots, meetings, and civil disobedience. Communication involves personal political interests as well as the promulgation of one's views and ideas.

Assumptions

Two basic assumptions are made in this study. The first is that participatory democracy is desirable. This affirms classical democratic theory which asserts that a stable democracy rests on widespread political activity and general agreement as to fundamental values and democratic procedure.

The second assumption is that human beings are rational, objective creatures who possess the will and the intelligence to conduct their own lives. This assumption does not deny the affective component (emotions, ethics, self-interest), but the model is intended to account for cognitive antecedents (critical thinking) of political participation.

A General Theoretical Framework for the Model

Specific theoretical and empirical support for the model will be presented next. The framework of the model is drawn from:

1. Political socialization theory in which democratic attitude and political efficacy are related to political participation;
2. Psychological need theory and political personality theory in which self-esteem and personal control are related to personality development and political attitudes; and
3. Cognitive and cognitive-developmental theories which outline the cognitive capacities and their functions.

The basic outline of the model follows. Certain psychological needs (self-esteem, personal control, political efficacy) exist. The satisfaction of these needs has cognitive antecedents, such as critical thinking. Satisfaction of needs has consequences for personality (democratic or not) and for attitudes and behavior (political participation), both of which have cognitive components.

Self-esteem is central to need theories. Lane (1964) states, "Somehow self-esteem seems to be bound up with all activity; it seems to be an ingredient of all other needs" (p. 38). Maslow's (1954) theory of human needs

places self-esteem as the next to highest type of need in his hierarchy of needs.

Personal control also is posited as a basic human need (Bay, 1977; DeCharms, 1976). Maslow's theory placed this need as a component of the esteem needs, conceptualized as "the desire for strength, for achievement, for adequacy, for mastery and competence, for confidence in the face of the world, and for independence and freedom" (p. 45). Bay (1979) spoke of personal control as "a broad range of need attributes, all having to do with the person's sense of being a chooser and maker of decisions that do have some probable influence and benefit affecting at least one's own life" (p. 11). DeCharms (1976) claimed that, "Man strives to be a causal agent, to be the primary locus of causation, or the origin of his behavior" (p. 4). Renshon (1979) clearly established the need for personal control.

Political efficacy usually is presented in the political socialization literature as an attitude and not a need. A logical extension of the need for personal control, it is construed as both in this study. Empirical evidence (presented below) indicates that a person with high self-esteem and feelings of personal and political control is more likely to adhere to democratic norms and values. Evidence also indicates that a person with a democratic personality is more likely to participate in the political sphere. Thus, the consequences of need satisfaction may bear directly and indirectly on political participation and directly on the development of democratic attitudes.

According to the model, critical thinking is an antecedent of need satisfaction, of the democratic personality, and of political participation. Most of the literature relating to the cognitive aspects of these variables is theoretical. It is implied in the writing of need theorists, political personality theorists, and political scientists, and in the nature of the variables, that the ability to comprehend and organize one's world has positive consequences (Smith, Bruner, & White, 1956; Katz, 1971).

If attitudes have a cognitive component, if psychological consonance is a basic striving within humans, and if attitudes serve to help organize one's world in a more comprehensible fashion, then it seems that the ability to think critically would have an important impact on attitudes.

Relationship Among the Variables

Critical Thinking and Political Participation

Very little empirical research bears directly on a relationship between critical thinking and political participation. Wilson (1954) found that critical thinking is positively related to participation in grassroots civic meetings on a college campus. Smith (1968) discovered a common characteristic among Peace Corps volunteers that is related to critical thinking; they maintain a highly articulate intellectual formulation of their situations and their problems. Bennett (1975), in developing and assessing a model of cognitive

development in political socialization, found a significant and positive relationship between grassroots activism and cognitive complexity.

The theoretical perspective regarding critical thinking and political participation is more highly developed in educational and political literature. In developing a competency-based approach to the promotion of students' political competencies, Gillespie and Patrick (1974) identified four sets of political competencies necessary for acting in participant roles. These competencies are acquisition of useful knowledge, proficiency in basic intellectual skills, and maintenance of a particular set of attitudes. The intellectual skills that Gillespie and Patrick posited as necessary to the analysis and evaluation of political life are similar to critical thinking. Newmann, Bertocci, & Landsness, (1977), also indicated the crucial nature of critical thinking. Citizens need to be able to collect and logically interpret information on problems of public concern (p. 16).

Patrick (1977) distinguished between political socialization (generating support for the sociocultural order) and political education which "asks how individuals learn to create and change political orders" (p. 193). Patrick stressed that political education should encourage students to be active seekers and users of knowledge rather than passive receivers, should teach skills of using knowledge to make decisions and solve problems, and should create the capacity for learning how to learn. Cleary (1971) also advocated civic education that includes the rational analysis of public issues to create "thinking citizens who make rational decisions in problem situations" (p. ix).

Classical democratic theory holds that a true democracy is dependent upon the model of the citizen as an active participant in politics. Descriptions of rational activists imply the need for critical thinking (Simpson, 1971; Freire, 1974; Pranger 1968).

One of the classical theorists, Weissberg (1974) stated that, "In any complex modern political system, the desire to participate is not enough, one must also know *how* to participate" (p. 71). He concluded that political education does not foster intelligent political participation because the emphasis is on the learning of objective facts rather than on analytical thinking and the ability to conceptualize, organize, and evaluate political phenomena. He described three versions of democracy: (a) The basic idea of the electoral competition democracy is that citizens have the right to choose their leaders. This model reflects contemporary democratic theory. (b) Citizens of a representative democracy choose leaders who are broadly responsive to public opinion, and they are more active. (c) At the core of participatory democracy, Weissberg's third model, is the belief that politics extends beyond the government to any decision-making situation in social life and that people ought to have control over all aspects of their lives. Weissberg advocated this latter model of democracy and asserted that citi-

zens can be educated (implicitly, critical thinking is part of that education) to participate in it, but he concluded that political socialization in the United States, through a reliance on traditional teaching methods which teach factual information and not intellectual skills, is socializing citizens to the electoral competition model.

Theoretically, then, intellectual skills, including critical thinking, are associated with political participation. It is not assumed that only knowledge of facts produce politically active citizens; political participation is facilitated by the abilities to think critically, solve problems, make decisions, accept conflict. Participation is not fostered simply through factual knowledge of political institutions and their functions; it is preceded by knowledge of and skills in the processes by which one is able to deal with problems and make decisions. The complexities of the political world and the issues within it would discourage participation by a person without the intellectual skills needed to comprehend, organize, and deal with that world.

Critical Thinking, Personal Control and Political Efficacy

Assuming that political efficacy is the belief that one has personal control over the political sphere, arguments by Seigel (1980), Ryckman (1979), Sniderman (1975) and Lefcourt (1976) linking critical thinking and personal control are also valid for positing a relationship between critical thinking and political efficacy. The political world is complex, with numerous and confusing issues; it is easy to see how one might feel baffled and powerless in the face of it. The ability to think critically—to organize political data, to support hypotheses and knowledge regarding the political world, to make generalizations about political events—should engender a sense of control over political outcomes. Instead of a confusing and random series of events, the political world should be more orderly and predictable to the critical thinker. This perspective has not been developed in the literature, but borrowing from the support for a cognitive base for personal control, one might expect to find a link between critical thinking and political efficacy.

Critical Thinking and Self-Esteem

Sniderman (1975) found that

of the personality characteristics likely to affect the relationship of self-esteem and political learning, perhaps the most important are cognitive abilities and skills. (p. 130)

Garett and Wulf (1978) found that, for females, measures of ego development and critical thinking are significantly related. Maslow (1954) classified the need for intellectual mastery and competence as part of the esteem needs and verified this desire to know and understand through evidence from animal psychology, the history of humankind, studies of psychologically healthy people, studies of late infancy and early childhood, and studies of

the psychopathological effects of cognitive frustration. It seems logical that a person who is intellectually capable of dealing with the world would experience a more positive sense of self.

Critical Thinking and Democratic Attitude

DiPalma and McClosky (1971) claim that democratic values have a cognitive base. Deviants from American norms and values are lower in intellectual performance and cognitive skills and fail to realize that their claims of support for democracy are not consistent with their attitudes. Those who conform to democratic principles are "more intellectually oriented, more politically aware, and more proficient in their cognitive skills" (p. 299). The strong implication, empirically and theoretically, is that the individual with highly developed cognitive skills such as critical thinking is more likely to comprehend the democratic creed, to detect inconsistencies between personal attitudes and those prevalent in the American creed, and to have these beliefs well-grounded. It would seem that critical thinking would be particularly important in one's application of democratic norms to specific situations; many studies (McClosky, 1964; Prothro & Grigg, 1960; Weissberg, 1974; Zellman & Sears, 1971) show that support for democratic values does not extend beyond a lip-service conformity. The critical thinker should be better able to detect inconsistencies between claims and application and to avoid irrational, emotional grounds for actions and reactions in given situations.

Self-Esteem, Personal Control, Political Efficacy, and Democratic Attitude

Self-esteem, personal control, and political efficacy can all be viewed as factors that contribute to the democratic personality. Sniderman (1975) assessed the relationship between self-esteem and commitment to democratic norms and values. Those low in self-esteem are less likely to adhere to the democratic creed, whereas persons high in self-esteem are more likely to support procedural rights, have more tolerance, and have more faith in democracy. DiPalma and McClosky (1971) found that deviants from the cultural ideals expressed in democratic norms and values have less self-esteem than conformists. Adorno et al. (1950) found that authoritarians show less self-confidence. Frankel-Brunswick, Levinson, and Sanford (1974) found that self-esteem is central to the democratic personality.

The importance of personal control to the development of the basic personality was asserted by Renshon (1979). Renshon construed personal control as a foundation for assumptive beliefs that influence the development (or retardation) of a basically democratic personality. Feelings of trust in others, and one's perception of the world as friendly or hostile, influence whether one is tolerant and committed to democratic norms and values. Renshon (1974) also found that individuals with low personal control are more likely to view unconventional methods of political participation as the

most efficacious type of political behavior and to accept violence as a legitimate political activity, thus lending support to the notion that low personal control engenders less acceptance of democratic procedures. Other writers similarly assume the centrality of personal control in the democratic personality (Simpson, 1971; Allport 1960).

Political efficacy has been associated with democratic attitudes. Many studies used authoritarianism as a major variable and assume that an authoritarian is a person who does not support democratic norms and values. Janowitz and Marvick (1953), concluded that "authoritarianism is significantly and directly related to feelings of political ineffectiveness" (p. 199). Agger, Goldstein, and Pearl (1961) found a positive relationship between feelings of political impotency and political cynicism (lack of trust in the democratic system). Horton and Thompson (1962) studied voting patterns regarding local issues and found that those with feelings of powerlessness are more inclined to negative voting, voting down a referendum for no apparent reason except to register a negative vote. Ransford (1974) found a strong relationship between powerlessness and violent political participation. All of these studies indicate that lack of political efficacy is negatively related to at least certain components of a democratic attitude.

Maslow (1954) endorsed the view that need satisfactions affect democratic attitudes. At the end of the explication of his theory of human needs, Maslow discusses phenomena that are affected by need gratification. Among the cognitive effects is a less rigid, robot-like conventionality; among the character trait effects is that of being more profoundly democratic; and among the interpersonal effects is the characteristic of being more democratic and less authoritarian. To Maslow, need gratification produces a democratic personality.

Self-esteem and Political Participation

The relationship between self-esteem and political participation is fairly well documented empirically and theoretically (Sniderman, 1975; Smith, 1968; Rosenberg, 1954-55). As Milbrath and Goel (1977) state, "In general, the conclusion of many studies is that persons with a sense of confidence are more likely to assume political activist roles" (p. 78).

Smith (1968) found that self-confidence is a characteristic of Peace Corps volunteers. Rosenberg (1954-55), in data obtained from seventy qualitative interviews regarding students' social participation in a high school, found that low self-esteem encourages apathy and that persons high in self-esteem participate more in extracurricular activities and voluntary formal organizations and are more likely to hold leadership roles. Milbrath and Klein (1974) found that self-esteem "worked remarkably well in discriminating between participants and non-participants" (p. 119). Barber (1965) found that the most politically active lawmakers are also the highest in self-esteem.

Personal Control and Political Participation

The relationship between personal control and political participation is also well-grounded. Knutson (1973), derived that "a multitude of studies . . . have demonstrated that there is a relationship between an inner feeling of potency and the degree of political activity in which one engages" (p. 45). Renshon's (1974) findings regarding past rewards of political participation related to high personal control pointed to the individual with high personal control being more consistently and rationally involved in politics. Renshon's (1974) research indicated that people with low personal control frenetically engage in random and unconventional political behavior or withdraw from the political sphere. A minimal degree of personal control appears to be necessary to structured and rational political participation.

Political Efficacy and Political Participation

Langton (1969) stated that research overwhelmingly attests to the link between political efficacy and political participation. The research of Jennings and Niemi (1974) supported the relationship. The relationship between the two variables is generally accepted in the political socialization literature (Milbrath & Goel, 1977; Renshon, 1979).

Democratic Attitude and Political Participation

Support for the link between democratic personality and political participation is indirect. The political elite and those with higher educational and economic backgrounds are more likely to support specific applications of democratic norms and values (Prothos & Grigg, 1960). Individuals from higher socio-economic levels are also the most participatory citizens (Berelson, Lazarsfeld, & McPhee 1954; Verba & Nie, 1972). Milbrath and Klein (1974) found that authoritarians are less likely than equalitarians to engage in campaign activity. Knutson (1972) concluded that "those who do not participate politically are likely to have a highly undemocratic view of the world" (p. 260).

Research Methodology

Subjects

The data were collected from 118 undergraduate and graduate students. Since this study was concerned with theory-building rather than with generalization about a given population, no attempt was made to randomize. Intact classes were used. Undergraduates were approximately 65 percent of the subjects. Demographic data indicated that the subjects were a relatively normal group. The educational level of the subjects was, of course, skewed in an upward direction. Some subjects did not complete all or some parts of the demographic section of the survey; thus, the following figures do not total 118. The age range of subjects was eighteen to fifty-one. The mean age was twenty-six and median twenty-two. Thirteen subjects were black, eighty-eight subjects were white, and none were classified as

other. The sample included seventy-four females and thirty-six males. Using a rough classification scheme based on the subject's parents' income and occupations if subjects are supported by parents and the subject's own income if self-supporting, eighteen subjects were classified as lower middle class, fifty-three subjects as middle class, and thirty-six subjects as upper middle class. Thirty-two subjects identified themselves as Republicans, fifty-one as Democrats, twenty-two as Independent, and four as other.

Instrumentation

Critical thinking. Critical thinking was measured by the *Watson-Glaser Critical Thinking Appraisal* (1980). The *Critical Thinking Appraisal* is divided into five subtests intended to measure skills of inferring, recognition of assumptions, deduction, interpretation and evaluation of arguments.

Split-half reliability coefficients for the *Critical Thinking Appraisal* ranged from .69 to .85. Correlation between responses to the tests administered with three months between testing periods was .73 (Watson & Glaser, 1950). The authors cited studies to support the content and construct validity of the *Critical Thinking Appraisal*.

The *Watson-Glaser Critical Thinking Appraisal* is consistent with Dewey's definition of critical thinking. It includes critical skills needed for minimal participation in the political world, although it does not embody all types of critical thinking skills. Making inferences from facts, supposed or observed, recognition of assumptions explicit or implicit in statements, making deductions from given information, interpreting data, and evaluating the strength of arguments seem to be necessary, if not sufficient, skills for political participation.

Personal control. Levenson's (1972) Internal, Powerful Others, and Chance Scales were used to measure personal control. Levenson's scales attempt to measure "the degree to which a subject perceives the events in his own life as being a consequence of his own acts, under the control of powerful others, or determined by chance forces" (p. 202). This scale was chosen because it divides locus of control into several distinguishable factors.

Cronbach's alphas of .77 for the Internal scale, .71 for the Powerful Others scale, and .73 for the Chance scale were reported. For the data for this study, the Cronbach's alpha was .62. The following are examples of the items.

1. I can pretty much determine what will happen in my life. (Internal scale)
2. People like me have very little chance of protecting our personal interests when they conflict with those of strong pressure groups. (Powerful Other scale)

Political efficacy. Stentz and Lambert (1977) developed ten new items for possible inclusion in a scale designed to measure political efficacy. Four of

these items loaded on a factor not found in other instruments, a feeling that the individual can have influence over the government. This political effectiveness dimension of political efficacy is of particular interest in this study, so the Stentz-Lambert items were used. The Cronbach's alpha for these data was .82. Following are examples of items in the instrument.

1. Citizens don't have a chance to say what they think about running the government.
2. If I joined together with others of similar political ideas, we could cause some of the laws to be changed.

Self-esteem. The self-esteem items in the instrument were developed by Knutson (1977) to measure satisfaction of self-esteem needs based on Maslow's hierarchy of needs. Nine of Knutson's nineteen items were used. The items were selected to achieve balance between negative and positive wording. The Cronbach's alpha for these data was .72. Following are examples of the self-esteem items used.

1. There are some things I'm not good at, but a lot of things I can do very well.
2. I don't expect much from myself, either now or in the future.

Democratic attitude. Items to tap support for democratic norms and values are from McClosky (1964) and Prothro and Grigg (1960) as reported by Robinson, Rust, and Head (1969). No reliability or validity data were reported for the Prothro and Grigg items, but they are used widely in political research. McClosky reported no reliability data but reported that the scale items have been independently validated by empirical procedures employing appropriate criteria groups or by a modified Guttman reproducibility procedure supplemented, in some instances, by expert ratings. The Cronbach's alpha for the study data was .73. Items focus on support for free speech and opinion, political equality, majority rule, minority rights, and social equality. Following are examples of items.

1. I believe in free speech for all no matter what their views might be.
2. If a Communist were legally elected mayor of this city, the people ought not to allow him/her to take office.

Political participation. The participatory attitude scale was developed by the author and is based on Milbrath and Goel's (1977) list of activities involved in different modes of participation. The scale attempts to tap two different dimensions of each single activity: (a) the subject's general attitude toward that particular form of participation, and (b) the subject's projected participation in that activity. Items are worded positively and negatively to avoid response set. The Cronbach's alpha for the political participation data was .87. Examples of items measuring attitudes toward participation are:

1. Joining and working in a political party is an effective way of influencing the government.
2. Voting is a waste of time.

Examples of items used to measure projected personal participation are:

1. If I joined a political party, I would be active only during elections.
2. If I felt strongly about a public issue, I would try to persuade others to share my point of view.

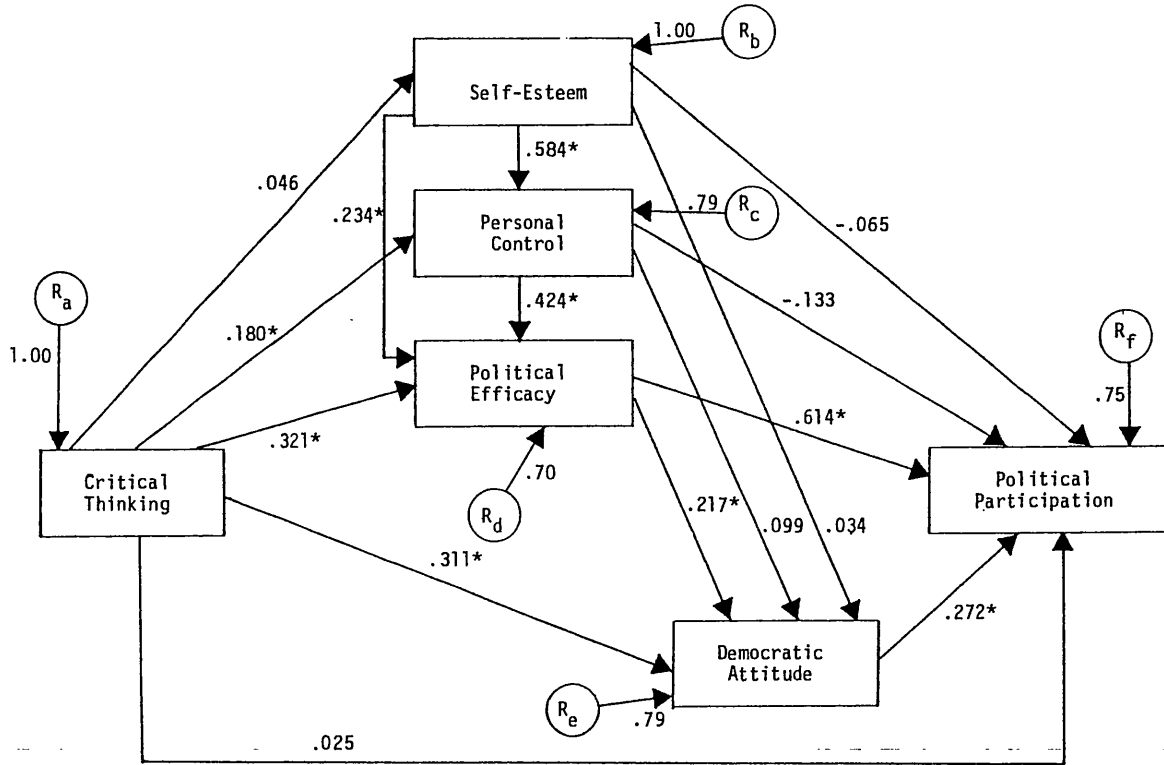
Political participation was measured by a check-list which reflects Milbrath's modes of participation. Subjects noted the activities in which they participated and the frequency of participation. Activities listed included conventional (voting, writing letters, etc.) and unconventional (protesting, refusal to obey laws considered unjust, etc.). The political participation score was determined by combining attitude toward participation and reported participation.

The personal control, political efficacy, self-esteem, democratic attitude, and participatory attitude items were all included in survey form which utilized a Likert-type scale. Items relating to the different variables were scattered throughout the instrument. The scale items were validated using item rating by experts. Personal control and self-esteem statements were presented to a panel of five educational psychologists, and an item was included only if four of the five experts rated it as valid. The political efficacy, democratic attitude, and political participation items were judged by five political scientists, and an item was included only if four of the five experts rated it as valid.

Path Analysis

Path analysis is a statistical technique that provides a method of indicating influence of one variable on another; influence is defined as an alteration in B caused by changes in A (Simon, 1957). The unique quality of path analysis is that it allows causal interpretation to be made based on a theoretical framework that supports the positing of asymmetrical relationships. Land (1969) identified three primary sources of information from which causal assumption may be derived: time order, existing experimental or case-study results, and the theoretical assumptions of the particular substantive area under investigation. It is the last two sources that were the basis for the model used in this study. The experimental and theoretical evidence does not firmly establish a causal relationship between and among variables. Barring evidence to the contrary, though, a methodological assumption is made that the causal relationships posited by the model exist. The data do not contain measures based on changes in time, because they were obtained from one sample at one point in time. Changes in dependent variables were inferred from a statistic (the path coefficient) that represents the effect of one variable on another.

The path diagram, employed in the study is shown in Figure 2. According



*Path coefficients significant at .05 level.

Figure 2.

Path Diagram Showing The Direct Effect of Critical Thinking And The Indirect Effects Of Critical Thinking Through Self-Esteem, Personal Control, Political Efficacy, And Democratic Attitude On Political Participation.

to conventions for constructing path diagrams, one-way arrows are used leading from each determining variable to each variable dependent on it. A literal subscript is attached to the residuals ($R_a, R_b, R_c, R_d, R_e, R_f$) to indicate that these variables are not directly measured. The subscript p represents the path coefficient.

An analysis of the compound paths in the model employed by the study allowed the decomposition of certain variables into effects of critical thinking and effects of all other unmeasured variables. Other variables were decomposed into the direct effects of any one of the variables preceding it in the path diagram and indirect effects of one variable through another variable. For example, the direct effect of critical thinking on democratic attitude can be determined and the indirect effect of critical thinking through political efficacy can also be measured by obtaining the product of the two paths involved (Land, 1969, p. 27). The correlation between any two variables in the path diagram is equal to the sum of the direct and/or indirect paths (Land, 1969, p. 27). The total indirect effect of any one variable on another variable can be determined (Land, 1969, p. 16).

After the path coefficients have been attained, the accuracy of the model is analyzed. Since path coefficients are rarely zero, the question arises as to what is a "small" or "insignificant" path coefficient. Land (1969) states:

For path models of this type, there are no conditions imposed on the model that can be used to evaluate its accuracy. Rather, any decision to delete a postulated path must be based on a statistical test of significance or an arbitrary criterion of size of the retained paths. (p. 34)

Significance is more likely to be attained for relatively small path coefficients when the sample size is large (Blalock, 1972). This study included data from 118 subjects. Due to the relatively small sample size, a .05 level of significance was used. A more rigorous standard was not chosen, also, because the model depicts interrelationships that have not previously been tested empirically, and it seemed important to avoid Type II error at this stage of investigation.

Findings

Results of the statistical assessment of the model are shown by the path diagram in Figure 2. The path analysis is based on the correlation matrix in Table 1.

The analysis does not support the hypothesis that critical thinking has a significant positive, direct effect on self-esteem ($p = .046$). Critical thinking has a significant positive and direct effect on personal control ($p = .180$) and on political efficacy ($p = .321$). Critical thinking has a significant direct effect on democratic attitude ($p = .311$). Critical thinking does not have a significant direct effect on political participation ($p = .025$), although the correlation between critical thinking and political

Table 1
Zero-Order Correlation Matrix: Critical Thinking, Self-Esteem, Personal Control, Political Efficacy, Democratic Attitude, and Political Participation

Scale	1	2	3	4	5
1. Critical Thinking					
2. Self-esteem	.044				
3. Personal Control	.205*	.592**			
4. Political Efficacy	.418**	.499**	.628**		
5. Democratic Attitude	.423**	.214*	.319**	.425**	
6. Political Participation	.366**	.222*	.306**	.624**	.487**

*Product-moment correlation coefficients significant at the .05 level.

**Product-moment correlation coefficients significant at the .01 level.

participation is significant ($r = .37$). These findings were interesting in two ways: (a) they support theories about the relationship between critical thinking and political participation; and (b) they lead to the question of how critical thinking affects political participation, if not directly. It is this question that is of ultimate concern in this study and which will be answered by further analysis of the model.

The direct and indirect effects of critical thinking on political participation are compared in Table 2. The influence of unspecified variables on

Table 2
Comparison of the Direct Effects of Critical Thinking and the Indirect Effects Through Self-esteem, Personal Control, Political Efficacy, and Democratic Attitude on Political Participation

Direct Effect	Total Indirect Effects	Influence Through Variables	Variable
.025	.341	-.003	Self-Esteem (SE)
		-.024	Personal Control (PC)
		.197	Political Efficacy (PE)
		.007	SE, PC, and PE
		.047	PC and PE
		.085	Democratic Attitude (DA)
		.0004	SE and DA
		.005	PC and DA
		.019	PE and DA
		.0007	SE, PC, PE, and DA
.005	PC, PE, and DA		

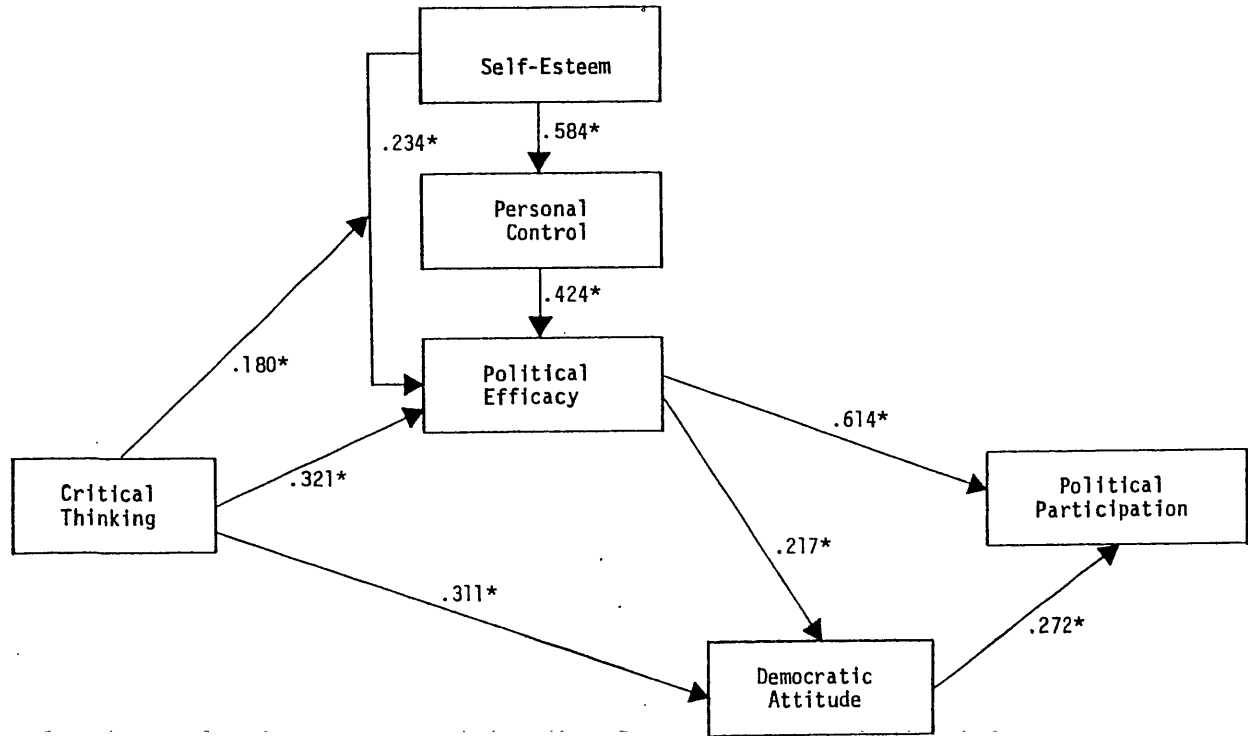
Note. The direct effect is not significant at the .05 level of significance. Significance of indirect effects cannot be determined since they are products of direct paths.

political participation not in the model is represented by the residual term, R_f , which is .75. Thus, the model explains 25 percent of the variance of political participation, and 75 percent of the variance is due to sources without the model. How do the variables in the model affect political participation? Critical thinking does not have a significant direct effect on political participation ($p = .025$). The total indirect effects of critical thinking on political participation are .341, greater by a factor of almost fourteen than the direct effect. Thus, it becomes clear that intervening variables are mediating the effect of critical thinking on political participation in a positive direction. Which variables are important to the relationship? Table 2 shows that the indirect effect of critical thinking through political efficacy (.197) accounts for over one-half of the total indirect effects of critical thinking on political participation. The indirect effect of critical thinking through democratic attitude (.085) accounts for 25 percent of the total indirect effects. The indirect effect of critical thinking on political participation through both political efficacy and democratic attitude accounts for another 6 percent of the total indirect effects. The indirect effect of critical thinking through personal control and political efficacy is .047, thus accounting for over 7 percent of the total indirect effects. Thus, personal control, political efficacy, and democratic attitude are the variable brought into the model that most positively influence the relationship between critical thinking and political participation. Self-esteem or any other combination of the variables has an infinitesimal indirect effect on the relationship. The one exception is the indirect effect of critical thinking through personal control ($-.024$).

Discussion

The path diagram in Figure 3 displays that part of the original model that path analysis demonstrates to be the best representation of direct and indirect effects of critical thinking that account for the relationship between critical thinking and political participation. The path analysis is based on the correlation matrix in Table 1. Following is an explication of how critical thinking affects political participation.

Critical thinking does not have a significant direct effect on political participation. The path diagram in Figure 3 shows that political efficacy and democratic attitude are important mediators in the relationship between critical thinking and political participation. Critical thinking affects political efficacy, which, in turn, has a strong direct effect on political participation. The influences of the other two variables in the model, self-esteem and personal control, are indirect. Self-esteem contributes directly and indirectly through personal control to political efficacy. Critical thinking has a small but significant direct effect on personal control which in turn strongly influences political efficacy. Self-esteem is retained in the model only to show its influence on political efficacy and not as a mediator in the relation-



*Path coefficients significant at .05 level.

Figure 3.
Final Path Diagram Showing The Indirect Effects of Critical Thinking Through Personal Control, Political Efficacy, and Democratic Attitude On Political Participation.

ship between critical thinking and political participation. Personal control is an intervening variable, mainly due to its strong direct effect on political efficacy which is such a powerful mediating factor. Personal control is shown to have a cognitive basis, while self-esteem does not, but personal control does not directly affect political participation.

The nature of the indirect relationship between critical thinking and political participation as depicted in Figure 3 can be stated thusly: Critical thinking skills influence the development of feelings of political efficacy and personal control. Feelings of self-esteem and personal control also contribute to political efficacy. Political efficacy has a positive effect on political participation. Critical thinking abilities also promote the development of democratic attitude, and democratic attitude increases the likelihood of political participation.

The lack of relationship between critical thinking and self-esteem might partially be explained by restricted variability. The greater the variability among observations, the greater the value of r (Hopkins & Glass, 1978, p. 139). The variance of self-esteem was 31.86, 68.4 for political efficacy, 91.34 for personal control, and 45.62 for democratic attitude, although the upper score limits for the variables were the same. The nature of the sample used in the study may be responsible for this phenomenon. College and graduate students may be particularly high in self-esteem due to such factors as being in college and having been successful in school.

It also may be that self-esteem has more emotional than cognitive components. Critical thinking skills may not be applied directly to one's evaluation of the self. A person may be a critical thinker yet not think critically when assessing self-worth. The direct effect of critical thinking increases as the nature of the variable becomes less personally oriented. One may be able to assess the political world more objectively and abstractly, thus allowing critical thinking skills to be employed. Subjectivity and emotion are more likely to influence one's feelings of personal control. Nothing is more personal or more dependent on a singular point of view than self-esteem, and it may be that self-esteem is determined more affectively than cognitively. Influences such as family interaction patterns, mental health, and life experiences may be more important to self-esteem and a sense of personal control than are cognitive skills and abilities. The negative, though non-significant, direct effect of self-esteem on political participation suggests that people might participate to gain self-esteem, as Lane (1972) and others have indicated.

Critical thinking has a significant, but small, direct effect on personal control. It seems that cognitive skills influence one's feeling that one can affect those forces that are salient to one's life. Personal control has a negative and substantial but not significant direct effect on political participation. This finding supports Renshon's (1974) view of the relationship between personal control and political participation. He contended that peo-

ple participate politically to gain more control over salient spheres. He finds that those lower in personal control participate more, the same inverse relationship shown by the direct effect of personal control on political participation.

The path diagram shown in Figure 2 raises more questions about the strength of the indirect relationships. As shown in Table 2, the indirect effects of critical thinking through political efficacy are almost eight times greater than the direct effect of critical thinking and account for over one-half of the total indirect effects. The indirect effects of critical thinking through personal control and political efficacy and through political efficacy and democratic attitude are another 20 percent of the total indirect effects, thus, political efficacy is shown to be the most important intervening variable in the second phase of the model. It is not surprising to find that political efficacy has the greatest influence on political participation. The relationship is fairly well established, and political efficacy and political participation are both political variables while self-esteem and personal control are not. The same is true for the much stronger direct effect of political efficacy on democratic attitude; both are political variables.

The particularly interesting aspect of the paths connecting critical thinking and political participation through political efficacy and a combination of political efficacy with other variables is the effect of critical thinking on political efficacy. Why does critical thinking affect self-esteem almost not at all and affect political efficacy almost twice as much as personal control? This finding cannot be explained by the like nature of the variables, because the critical thinking skills measured were general skills and not political thinking capabilities. It may be that emotional components are more important to self-esteem and personal control. Both variables may have cognitive components, but the skills tapped by the *Critical Thinking Appraisal* may not be the crucial ones, and affective rather than cognitive factors may be more influential. Political efficacy, the feeling that one can affect the political world, most clearly requires cognitive abilities such as being able to organize political data, to support hypotheses and knowledge regarding the political world, and to make generalizations about political events. If one has general critical thinking abilities, it is likely one can apply them to political phenomena and thus feel more politically efficacious.

The same general arguments are true for personal control, but personal control encompasses an attitude about a much larger and much less defined sphere of interest. One who is adept at critical thinking may be able to use past experiences, organize information, solve problems better and thus feel more in control over critical aspects of one's life. Yet, the application of critical thinking to personal areas may be obstructed by the subjectivity and emotion inherent in the issues, or the issues may be less amenable to critical thinking skills. As for self-esteem, it has been argued that a person may assess self-worth without applying critical thinking skills. Critical thinking

and self-esteem may operate as two separate spheres. By comparison, political phenomena are less personal and are more likely to command the operation of critical thinking skills, thus forging a relationship.

The second question evoked by the path diagram in Figure 2 is: Why does critical thinking not have a direct effect on political participation as hypothesized? A positive relationship exists between the two variables. Yet, the ability to think critically does not directly affect political participation. Much of the support for the positive effect of critical thinking on political participation presented above is theoretical, and this support does not seem inconsistent with the findings of this study. Path analysis shows that the effects of critical thinking on political participation are mostly indirect through political efficacy and democratic attitude. The perspectives presented above argue mainly that intellectual skills are prerequisite to participation, but they do not necessarily preclude the possibility of an indirect connection. Gillespie and Patrick (1974) claimed that analytic and methodological intellectual skills are “important to the development of political competencies necessary for effectively undertaking a wide range of participants’ roles in society” (p. 21). Several studies supported this statement (Easton & Dennis, 1967; Hess & Torney, 1967, Jennings & Neimi, 1974, chapter 10). They implied that intellectual skills develop political competencies which in turn affect political participation. Patrick (1977) stated that “learning intellectual skills is a key to increasing ability to perceive and cope with one’s political world. In addition, those who have competence to appraise and acquire are supposed to have *more potential* for effective political action than those who lack these skills” (p. 208). The ability to perceive and cope and the potential for effective participation seem to be mediating factors and seem to refer to something akin to political efficacy. Freire (1974), Pranger (1968), and Weissberg (1974) also implied that the knowledge that one can effectively participate is almost as important as actual participatory capability. All of these authors also emphasized the contribution of intellectual skills and abilities to *rational* activism, thus affirming the mediation of democratic attitude.

Implications of The Research

Two major goals of social studies education are the development of critical thinking skills and citizenship education that leads to participatory attitudes and behavior. Critical thinking and political participation often have been treated as separate and distinct components of education, or the relationship between the two variables has been assumed. This study has theoretical implications that apply to these two goals. The findings suggest a relationship between critical thinking and political participation. Critical thinking has indirect positive effects on orientations toward and reported political participation. This study also sheds light on how the relationship

between critical thinking and political participation functions. Correlational studies can establish only that a relationship exists. Path analysis enables the researcher to assess causal paths. Critical thinking positively affects personal control, political efficacy, and democratic attitude. Political efficacy and democratic attitude positively affect political participation. Personal control has a strong direct effect on political efficacy.

The field of personality and politics has been growing in recent years. Studies linking personality variables with political participation, many of which are used to develop the theoretical framework for the model in this study, are abundant. This study adds to the body of research that links both political efficacy and democratic attitude with political participation. It also explores a cognitive basis of personality variables and political participation. One implication of this research is that certain attitudes and behaviors have a cognitive basis that is important to the development of those attitudes and behaviors. This study sets cognitive abilities as the antecedent of all of the attitudes and behaviors and makes assumptions from other studies explicit in the model. Personal control, political efficacy, democratic attitude, and political participation, which includes both attitudes and behavior, are shown to have positive relationships with critical thinking. Path analysis indicates that critical thinking has a positive direct effect on personal control, political efficacy, and democratic attitude, and positive indirect effects on political participation, thus providing empirical support for what was an assumption in other studies. The implication is that many behaviors and attitudes incorporate cognitive components. If one can identify the cognitive antecedents, one can gain more knowledge about how to affect attitudes and behaviors.

Unspecified variables not in the model account for 75% of the variance in political participation. This finding clearly implies that other (and perhaps more important) variables affect participatory attitudes and behavior. Other socialization agencies, particularly the family, may have stronger influences. Research has indicated such a relationship (Fowlkes, 1976). Attention to the media also may be an important factor in political participation. Certainly, historic and personal context will affect one's political participation.

The findings indicate that educators should not rely on a single technique for developing citizens who will participate rationally and effectively in the political process. Thinking skills and processes of participation are at least as important as knowledge about the political system. Even a combination of these and other topics for study may not effectively develop attitudes and skills that lead to participation. Since public schools are undemocratic institutions, and students do not have the right to vote and participate in political decision making, perhaps the schools' ability to exert positive influence on participatory attitudes and behavior is limited.

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A Typology of Social Studies Teaching Processes

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Abstract

This study investigated approaches to teaching social studies in Western Australian high schools. A conceptual scheme for teaching social studies, based on recognized orientations to the subject is presented. Psychometric data on the cognitive demands placed on pupils, by teachers' mediating transactions, were collected and cluster analyzed. A typology of teaching processes was constructed and characterized by pen portraits representative of the preferred approach of teachers observed in the sample. These approaches are presented as median profiles, each of which is related to the teachers' construction of social studies knowledge. The results have implications for teachers, curriculum developers and evaluators in the context of innovation and change processes.

Social studies, is subject to pressures for change because of the rate of social and technological change in contemporary complex societies. It is reasonable to expect these pressures to reflect on the content and processes of social studies as taught in modern classrooms.

The advent of an intellectually rigorous *new social studies* which was part of the intense curriculum activity of the sixties and, in Australia, the seventies, suggests at least a major re-orientation by social studies educators to conceptual and pedagogical components of the subject. Generally, an air of disappointment over the limited pay-off from numerous curriculum projects initiated in this period, is evident in a voluminous curriculum and evaluation research literature.

In particular, researchers investigated the adoption-adaption curriculum decisions of teachers as well as the impact and *take-up* of curriculum materials in the flux of broadly-based curriculum reform. Researchers and evaluators wanted to know if teachers would use the new materials and, if so, would they be used as intended by curriculum developers? With respect to the impact of the new social studies two decades after its genesis, the findings suggest low levels of implementation.

In the USA, the National Science Foundation commissioned a series of

studies, embracing science, mathematics, and social studies to ascertain the effects of extensive curriculum reform. Ponder (1979) in reviewing the social studies report, observed that little has changed since the 1950s. Marsh and Carter (1980) and Marsh (1983) in analyzing the effect of formative diffusion strategies on teachers using packages developed as part of the national Social Education Materials Project (SEMP), were forced to conclude that the impact and take-up of these materials was minimal.

Shaver, Davis, and Helburn (1979) report that the teacher is the key to implementing curriculum change. Presage variables together with knowledge about the available materials, and techniques on how they are assembled for instruction, appear to be crucial influences on adoption-adaption decisions. Hall et al. elaborate on this position:

A basic assumption of our present research is that this variation in use by each individual innovation user must be behaviourally described and systematically accounted for if innovations are to be used with maximum effectiveness. (Hall, Loucks, Rutherford, & Newlove, 1975, p.52)

Hall and Loucks (1977) emphasize again the need to assess each teacher's use of an innovation directly. They point to deficiencies in most experimental and evaluation studies where the presence of the innovation, the treatment, is implicitly assumed and taken more on faith than on the basis of systematic documentation.

In early classroom observational research, input-output research designs, with classrooms regarded as replicate black boxes, dominated experimental and quasi-experimental studies. In these black box research designs, classroom processes were assumed to be consonant with the recommendations of curriculum developers, rather than being viewed as experimental variables requiring verification.

Herron (1971) provides evidence of a lack of congruence between the declared intentions of a curriculum development project and prescribed teaching-learning methods, whilst Gallagher (1970) and Eggleston (1980) suggest the possibility of dissonance between curriculum developers' intentions and the teaching processes actually employed.

Eggleston points to the crucial link between a curriculum developer's intentions and the outcomes of schooling. He notes that process variables may be dependent variables to such independent variables as curriculum intentions and environmental factors. Whereas, with respect to dependent variables such as pupils' cognitive gains or affective states, they may also be independent variables. It is easy to see how one teacher's preferred approach might be consonant with the aims of curriculum developers and *reinforce* the package, whereas a second teacher might adopt teaching processes which *negate* the intentions of curriculum developers.

From a fidelity perspective, in specific projects it is necessary to establish congruence or inconsistency across project regularities. A problem for the researcher, therefore, is to estimate the extent to which regularities in teacher-pupil behaviors can be identified and characterized as preferred approaches to the teaching of specific subject matter. On one hand, curriculum developers' assumptions that teachers will faithfully replicate intended teaching processes seem unreasonable. On the other hand, Eggleston (1980) points out that teaching behavior is unlikely to be entirely idiosyncratic when he summarizes:

Moreover, it may be that teaching behaviour is not as idiosyncratic in essential features as to deny any attempt at generalizing about teaching methods. (Eggleston, 1980, p. 259)

Two substantial difficulties confront the psychometric research worker interested in cognitive aspects of social studies teaching and learning processes. The first relates to epistemological differences amongst social studies theorists and the second involves the selection of a methodology for obtaining information about teaching processes.

Several orientations, each adopting a particular stance to what constitutes legitimate social studies knowledge, and the goals of social studies instruction, have emerged in the contemporary literature. See for example Barth and Shermis (1970), Barr, Barth and Shermis (1977), Brubaker, Simon, and Williams (1977), Mehlinger (1981), Morrisett and Haas (1982), Social Education Association of Australia (1985), Newmann (1985) and Carter (1987).

In essence these articles represent modifications or extensions of the work of Barr, Barth and Shermis (1977). Whilst subject to criticism, this influential paper orders the complexity and confusion present in the field of social studies curriculum and instruction. The authors' detailed analysis of position papers issued by scholarly societies and teachers' associations, old and recent text books, and reviews of current research on specific classroom behaviors, led them to define three separate and quite distinct, epistemological positions. These they have called *traditions* since evidence for each can be traced historically. Barr, Barth, and Shermis claim each represents a competing and quite distinct philosophical position, in which social studies is taught as Citizenship Transmission, Social Science or Reflective Inquiry.

For Citizenship Transmission, a circumscribed body of content is identified. The presentation of this cultural content is intended to be instrumental to the promotion of good citizenship and loyalty to a conception of an ideal society. Alternatively, educators who view the social studies as deriving from the Social Sciences and cognate disciplines adopt a structure of the disciplines approach. Substantive and syntactical structures comprising concepts, problems, and processes are selected from the social science disci-

plines. This knowledge is translated into a form that will lead pupils to an appreciation of, and skills in using, knowledge of the disciplines. Finally, knowledge emphasized within the Reflective Inquiry approach is not grounded in a singular academic discipline. Rather, it is a problem-centered orientation which does not recognize subject matter boundaries. Content is viewed as potential data to be utilized in pupil-centered inquiry, problem solving, and decision making. Similarly, values are inherently important as data in relation to cognitive processes. Values from this perspective are as fundamental to inquiry as are facts, theories and information-processing skills.

It is apposite to speculate that teachers who identify with a particular tradition will place great emphasis on the cultivation of specific intellectual abilities, congruent with this philosophical standpoint. Epistemological differences between teachers will be reflected in the relative emphasis they place on clusters of intellectual abilities incorporating knowledge, skills and values and this will vary as a function of their preferred orientation. For example, teachers favoring the Citizenship Transmission epistemological position might be expected to place emphasis on the pupils' acquisition of facts and concepts. In contrast, teachers who adopt a Reflective Inquiry approach would be process-oriented and emphasize critical thinking skills together with a rational approach to decision making.

The Social Studies Lesson Observation Schedule (SSLOS), (Carter, 1986; Hacker & Carter, 1987; Carter & Hacker, 1987), can be used to record a broad range of classroom behaviors which subsume the three epistemological stances which have been described. This instrument has the potential to capture different profiles of intellectual abilities being practiced by pupils in the classroom, reflecting, in turn, a teacher's affiliation to a particular orientation or tradition. This instrument is described more fully below.

A basic premise of our research is that serious attempts to account for an unacceptable loss of fidelity, i.e. drastic mutation, between a specific curriculum innovation as developed and as implemented must take into account the preferred approaches of teachers as they mediate curriculum materials to their pupils. This requires systematic observation and documentation of classroom interactions to identify regularities in teaching processes. Emergent typologies of teaching style may then be incorporated into the decision frameworks of curriculum and instructional systems designers to accommodate the preferred approaches of teachers as they implement curricula.

As a first stage, the study reported here aims to examine the extent to which regularities in classroom behaviors can be identified and characterized as distinct approaches to social studies teaching. The study is based on the direct observation of social studies teachers in Western Australian secondary schools and it describes the construction of a typology of preferred approaches to teaching social studies.

Methods

Instrument

A scheme of 13 generic categories of behaviors was developed which encapsulated intellectual abilities, derived from the organizing elements of social studies. These were incorporated into an observation instrument called the Social Studies Lesson Observation Schedule SSLOS (Figure 1).

The SSLOS has been reported elsewhere (Carter, 1986). The development of the instrument was described and each category was defined operationally with examples of specific behaviors. A users' manual, observer training programs and procedures for estimating inter-observer agreement were also delineated (Carter, 1986).

The 13 cognitive behaviors incorporated into the SSLOS were derived from the substantive and process elements of social studies which typically represent the types of intellectual transactions featured in social studies classrooms. These were selected after close examination of numerous live and video-taped social studies lessons. Each category is defined in the users' manual, together with exemplars of the type of cognitive behavior they represent. A close examination of the SSLOS reveals that it can be used to obtain simultaneous measures of interactions along a number of different dimensions. The instrument is designed to be used by trained observers to categorize the cognitive interactions which frequently occur in social studies classrooms.

For each interaction, it is the intellectual demand actually placed on the pupil, rather than the teacher's intent, which forms the basis for classification and encoding. Each behavior is classified according to both its *form* and *function*. The columns of the instrument provide 10 categories for the form, including a variety of verbal and non-verbal behaviors. The rows provide 13 categories for the function, which is the intellectual ability actually being developed or practiced. The latter categories derive considerably from the work of Barr, Barth and Shermis (1977) and include a broad range of intellectual behaviors thought to reflect a variety of epistemological stances in teaching social studies.

When the form and function of the interactions have been assessed, a recording is made in the appropriate cell of the matrix. A sign-system is used to record data whereby each cell of the SSLOS matrix is marked *present* or *absent* during a three-minute time-period. This time-period was empirically determined to reflect a compromise between the need for the most detailed record possible and the speed with which a trained observer is able to perform the sometimes complex tasks of observing, classifying and coding interactions. See Eggleston and Galton (1981) for a comprehensive analysis of the issues raised.

One copy of the SSLOS matrix is completed for each three-minute period of classroom observation.

SOCIAL STUDIES LESSON OBSERVATION SCHEDULE

	VERBAL INTERACTIONS				NON-VERBAL INTERACTIONS With Resources					
	TEACHER — INITIATED				PUPIL — INITIATED		SOCIAL/ ENVIRONMENTAL RESOURCES	MULTI-MEDIA RESOURCES		
	A	B	C	D	E	F	G	H	I	J
	QUESTION answered by:	STATEMENT about:	DIRECTIVE to social/environ-mental resource for purpose of:	DIRECTIVE to multi-media resources for purpose of:	REFERRAL to the teacher for the purpose of:	CONSULTATION with a pupil for the purpose of:	TEACHER interacts for the purpose of:	PUPIL interacts for the purpose of:	TEACHER interacts for the purpose of:	PUPIL interacts for the purpose of:
THE INTELLECTUAL ABILITY BEING PRACTISED:										
1 Recalling, acquiring or confirming specifics	1									
2 Developing and/or applying concepts.	2									
3 Describing or explaining universals.	3									
4 Exemplifying specifics, concepts or universals by manipulation of artifacts, instruments and materials	4									
5 Identifying or describing artifacts, instruments and materials.	5									
6 Identifying problems and/or clarifying social issues.	6									
7 Hypothesizing or speculating.	7									
8 Solving problems by manipulation of artifacts, instruments and materials and/or by observation.	8									
9 Making or describing observations.	9									
10 Interpreting observed or recorded data	10									
11 Inferring from observed or recorded data	11									
12 Analysing and/or clarifying values.	12									
13 Making reasoned value judgments.	13									

Figure 1.
The Social Studies Lesson Observation Schedule

The Sample

Data were collected from 40 teacher-class units selected from metropolitan senior high schools in the public education sector. The schools accepted pupils from grade eight, 13 years, to grade twelve, 17 years.

Participating social studies teachers all taught the subject across grades eight, nine and ten as well as a specialist area of either history, geography, economics or politics in the senior school, grades eleven and twelve. Teachers with less than two years of teaching experience, whose style was considered to be still developing, were excluded from the study. A summary of group characteristics for the sample studied is presented in Table 1.

Pupils' ages ranged from 14 to 15 years, and only co-educational classes were observed. These were generally unstreamed, but where streamed, a class from the middle ability range in social studies was selected for observation.

Procedure

Prior to the collection of data from schools, two weeks of intensive observer training was provided. At the conclusion of this period, observer-agreement trials were conducted. Further observer-agreement trials and periodic retraining sessions were held as required to maintain reliability levels. The two observers selected for the study were recently qualified graduate teachers with a background of studies in the social sciences disciplines as well as curriculum and instruction.

For each participating teacher, five lessons, anticipated to represent their teaching patterns and reflect normal use of school social studies facilities and resources were selected. When indirect teaching methods involving small group activities or committee work were used, observers were required to move between groups to ensure the representativeness of the data collected for the whole class.

Observers were also instructed to discard data from classrooms where factors such as ineffectual class management or the teacher allowing an intellectually precocious minority of students to dominate the lesson, were considered to have distorted the patterns of classroom behaviors. In the event, observation data were rarely discarded on these grounds. To guard against any systematic bias, visits to classrooms were randomized.

In addition to the data coded in the SSLOS, observers completed brief supplementary anecdotal records which endeavored to capture specific teaching strategies employed, the subject matter covered and time allocated to a range of both practical and nonpractical classroom activities. These included role plays, mapping and graphing, discussion and interaction with audio-visual material, for example. The framework for collecting these data appears in Figure 2.

A behavioral profile for each classroom visited was computed from the SSLOS data. Cluster-analysis was then employed to group similar profiles from each classroom, thus creating a typology of approaches to the

1. PUPIL

Grade or year level_____

Number in class_____girls_____boys_____

Average age at time of observation_____year_____months

Teachers estimate of groups ability in Social Studies: High Low
5 4 3 2 1**3. MATERIALS**

Subject area being taught _____

Topic _____

Pupil source book _____

Other resources being used _____

_____**1. TEACHER**

Years of teaching experience_____

Main subject area qualifications

History/Geography/Economics/Politics/Other (specify)

4. ACTIVITIES

1. Teacher talk
2. Question/answer/quiz
3. Class discussion/debate
4. Small group discussion
5. Project work
6. Audio-visual presentation
7. Game/simulation/role play
8. Demonstration
9. Model building
10. Field work
11. Lecturettes
12. Individual work/private study

5. ANECDOTAL ACCOUNT OF MAIN LESSON ACTIVITIES

Figure 2. Anecdotal Data Summary Sheet

teaching of social studies. A hierarchical, centroid analysis was selected for this group forming process, with the use of a simple distance coefficient as the measure of similarity between behavioral profiles.

Teacher-class units, identified by their proximity to the group-centroid of the profiles which emerged from the clustering procedures, were selected for further study using qualitative methods. This phase of the research is reported elsewhere (Carter, 1986).

Cluster Analysis

The use of clustering techniques by classroom researchers is a relatively new phenomenon although they have been developed and employed in other areas such as numerical taxonomy in biology (Sokal & Sneath, 1973) and marketing research (Punj & Stewart, 1983) more extensively and over time.

Aitkin, Bennett, and Hesketh (1981) recommend clustering techniques based on probability models as being more statistically valid than the traditional mathematical forms, but methodological difficulties remain. An extant theoretical problem is in deciding the number of clusters which comprise the optimal solution of the clustering problem. Additionally, there are substantial problems associated with sample size requirements.

Aitkin et al. (1981) suggest that probabilistic clustering of as many as 50 teachers and 10 items would be pointless from a statistical perspective, whereas they acknowledge that practical constraints inevitably limit possible sample sizes in observational studies. Therefore, it is clear that probabilistic clustering methods are applicable only to relatively few large-scale observational studies, which possibly explains why the methods have yet to be applied to a true, observational classroom study.

Because of these intractable problems, a decision was made to use a more traditional, hierarchical clustering methodology. Following procedures outlined by Everitt (1980), a hierarchical clustering method, based on iterative relocation using a distance metric (Hacker & Lyne, 1982), was used for the analysis. It must be borne in mind, with respect to cluster interpretation, the main limitations on the latter methodology are its exploratory nature and the lack of an associated distribution theory. This has been recognized by other researchers employing similar methods (see, for example, Galton, Simon, & Croll, 1980). Resolution of the clustering problem is reported in the results sections below.

Results

For each observer and each category of behavior, an inter-observer agreement index (Eggleston, Galton, & Jones, 1975) was calculated. Also, for each category an intra-observer reliability coefficient was calculated (Medley & Mitzel, 1958). Mean values of 0.91 and 0.92 respectively for the inter-observer and intra-observer reliability measures were considered to be very satisfactory.

For each teacher-class unit, the coded SSLOS matrices were summarized as a behavioral profile comprising a set of 23 probabilities, a sub-set of 10 relating to the likelihoods of observing interactions of various forms in that classroom, and a sub-set of 13 relating to the likelihoods of the interactions serving the various functions incorporated into the instrument. This was achieved by taking each row and column of the instrument in turn and computing the proportion of the coded matrices with an entry in that row or column.

The 40 profiles of SSLOS probabilities provided input data for a Fortran IV program "Shufter" (Hacker & Lyne, 1982). This is based on a centroid cluster-analysis which uses a distance coefficient as a measure of association between entities. To correct for the possibility of a poor initial partition which is an inherent disadvantage with hierarchical clustering techniques, Shufter allows for the iterative relocation of individual cases where these have been incorrectly allocated to groups. The Euclidean distance coefficients for resolution of the final cluster solutions are shown in Table 2.

The 40 behavioral profiles for the teachers observed were subject to this clustering process and an optimal configuration of the three groups was derived by inspection of the resultant dendrogram (see Figure 4). The mean profiles of these groups with respect to the frequencies of use of the behaviors incorporated into the observational instrument are shown in Figure 3. Bar lengths indicate the absolute frequencies of occurrence across categories I-13 and A-J, and shading provides a qualitative measure of the relative frequencies of a particular category across the different groups. Selected groups characteristics are found in Table 1.

Discussion

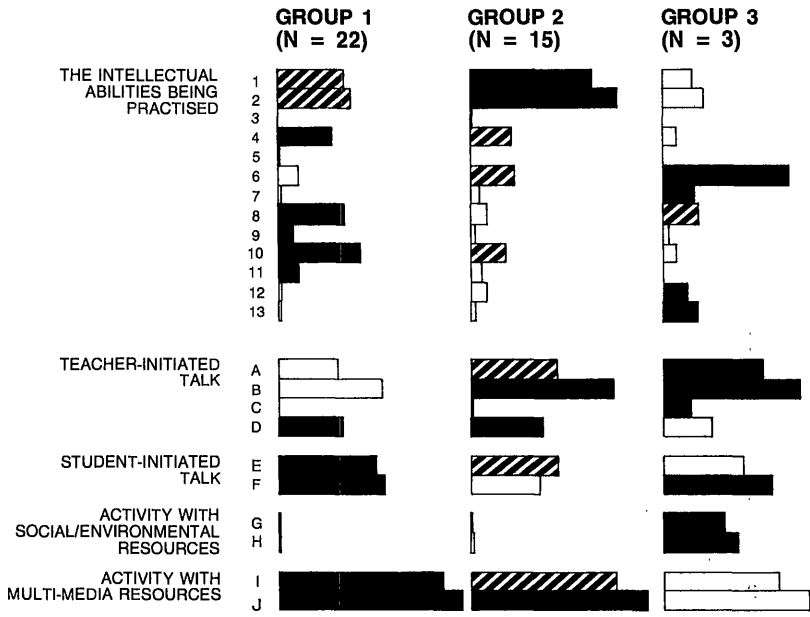
Approaches to Teaching Social Studies

The three approaches to social studies teaching identified by the clustering process can be characterized in terms of the following pen-portraits:

Group 1 (n = 22): The social scientist. Interactions are characterized by a scientific orientation with an emphasis on skills development. The introduction and practice of cognitive skills is functionally related to content

Table 1
Selected Group Characteristics

Style	Proportion Male Teachers	Mean	Class Size	Proportion Of Boys In Class
		Experience (Years)		
Group 1 (N = 22)	.77	11.59	26	.49
Group 2 (N = 15)	.86	7.60	26	.50
Group 3 (N = 3)	.66	14.00	29	.49



KEY

- Categories A-J and 1-13 are defined in Figure 1.
- The bar lengths represent the probabilities of categories occurring in a time-sampling unit according to the scale.
- The bar shadings compare the probabilities of a particular category occurring across the different groups.



Figure 3. Group Median Profiles of Teaching Style

selected from the parent social science disciplines. This is mediated to the pupils who may internalize it as they acquire and refine syntactic elements related to a substantive body of content.

The form of the interaction illustrates the practical involvement of pupils and teacher with resource material. References to the teacher and to other pupils for assistance and/or comment, frequently occur.

The functions of the interactions are principally for the practice and development of cognitive skills, using a number of data forms, (maps, diagrams, graphs, tables and pictures), whilst concurrently acquiring knowledge of social studies facts and concepts.

Group 2 (n = 15): The knowledge transmitter. This is a teacher-centered

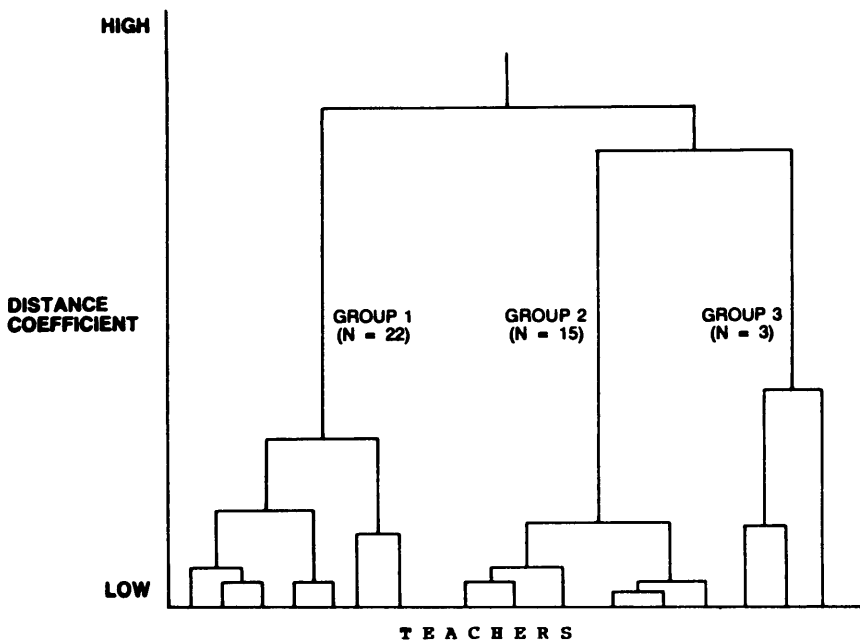


Figure 4.
Section of the Dendrogram Showing the Emergence
of Three Clusters of Teaching Styles

didactic style. Undifferentiated content, with respect to pupil abilities and needs, is presented as material to be learned and understood. Tight structuring and pacing of lesson material affords little opportunity for pupil-initiated questions. When these occur the correct answer is invariably given by the teacher.

The form of the interactions is dominated by teacher-initiated questions and statements. Extensive use is made of multi-media materials either for whole class use or independent self study. The function of the interactions is characterized by an emphasis on the acquisition of facts and development of concepts, together with a restricted range of cognitive skills involving convergent problem solving.

Group 3 (n = 3): The reflective thinker. This is a process orientation which emphasizes intellectual and personal development through the active engagement of teacher and pupils in probing public issues. The learning of social studies content is instrumental to this purpose and provides a basis for decision making.

The form of the interactions involves a high degree of teacher questions and statements as well as the active involvement of pupils with each other as social resources. Teacher questions are mainly divergent to raise issues, help

Table 2
Euclidean distance coefficients between
final cluster centres

CLUSTER	1	2	3
1	0.0		
2	0.98	0.0	
3	1.27	1.09	0.0

pupils clarify underlying problems, and analyze value stances. The teacher adopts a responsive approach to the needs and concerns of pupils with the initiative for lesson development often appearing to be held by the pupils.

The function of the interactions focuses on high order speculative abilities involving both convergent and divergent problem solving. Transactions high on category 13 indicate a highly rational approach to decision making and critical thinking.

References to the typology which emerged from the cluster analysis lends empirical support to the conceptual scheme delineated by Barr, Barth and Shermis (1977).

Group 1, *The Social Scientist*, has clear characteristics in common with a conception of social studies taught as social science. For the same studies, ($n = 22$) the transactions observed indicate the acquisition of a rather restricted range of social science skills from those potentially available within this orientation. Attendant to the development of these was an emphasis on convergent problem solving. Whilst there was an attempt to move pupils towards low-order generalizations, such transactions were spasmodic and too infrequent to register as anything but low, on the median profiles (see Figure 3).

Group 2, the *Knowledge Transmitter Approach*, relates to social studies as consisting of a fixed body of content to be transmitted to make an individual socially literate. The pupils were essentially cast as receivers of a fixed body of content, mediated to them by the teacher in concert with selected curriculum materials.

Group 3, *The Reflective Thinker*, has much in common with Reflective Inquiry with a focus on interactions requiring speculation, decision making and the probing of issues of current concern to pupils and the community. For the sample studied this was the least popular approach.

In summary, didactic teaching characterizes The Knowledge Transmitter, whilst a more even balance between teacher and pupil initiated transactions occur when there is a skills emphasis with The Social Scientist's approach. In the case of The Reflective Thinker, the approach is highly pupil-centered, with transactions focused on learning rather than teaching episodes.

Clearly, more research is needed to correlate these tendencies with teachers' epistemological positions.

Implications for Teachers

For the sample studied it is clear that teachers favored approaches which centered on the acquisition of social studies skills and knowledge, rather than engaging in valuing processes. The dominance of approaches one and two and the low popularity of approach number three show that the full range of abilities are not being developed in pupils.

Such a narrow view of the transmission of the cultural heritage will at best present pupils with a poor image of social studies, whilst attention to a restricted range of syntactical skills does not address the range of skills deemed necessary for individuals to become socially competent in a complex society.

A more serious effort is required to make teachers aware of the range of options and approaches available to them within a social studies rubric.

Implications for Teacher Education

At the pre-service level of teacher education student teachers need to be exposed to, and develop skills in, a wide range of approaches to the teaching of social studies. For the sample studied the general lack of popularity of *The Critical Thinker* approach and the popularity of informational approaches with less experienced teachers (Table 1) reflect more upon the way social studies is implemented, rather than how it is conceived in the Western Australian context. Student teachers need to be aware of the limitations of informational strategies (Carter & Hacker, 1987) and should themselves be taught the techniques of, and required to demonstrate a greater facility in using, inquiry and values strategies.

At both the pre- and in-service level, there is a need to make all teachers aware of the full range of methods that might be used. Variation of approaches should be encouraged so that a broad range of abilities, consonant with the aims of social studies may be developed in pupils.

Implications for Curriculum Development

It is evident that curriculum developers, when integrating strategies, learning opportunities and resources, into the design of packages, must take cognizance of the preferred approaches of teachers towards teaching social studies. For the sample studied, the styles which emerged can be related to recognized epistemological stances. The epistemological base of each of the traditions, previously identified, reflects particular emphases on clusters of intellectual abilities comprising knowledge, skills and values. Extrapolation suggests that teachers who identify with a particular 'tradition' will place great emphasis on the cultivation of specific intellectual abilities congruent with its philosophical assumption. Epistemological differences between social studies teachers, therefore, rest on the relative emphasis placed on these clusters according to each teacher's preferred orientation.

A significant task for curriculum developers is to create curriculum materials which accommodate, or at least reduce, the dissonance between the teaching approaches they embody and the preferred approaches of practicing social studies teachers, or to convince teachers of the appropriateness of their approaches!

Implications for Curriculum Evaluators

Classical evaluation designs, which treated classrooms as replicate black boxes, assumed teaching style to be invariant for a given curriculum package. An assumed homogeneity of teaching style in these studies may explain, in part, why one-way ANOVA designs generally failed to reveal significant differences in pupil attainments using different curriculum packages.

Given an accumulating body of evidence, with respect to preferred teaching approaches or teaching styles, the validity of assumptions which underlie such evaluations is seriously questioned (Hacker, 1984; Eggleston, Galton & Jones, 1976; Bennett & Jordan, 1975; Hacker & Carter, 1987).

Two-way ANOVA evaluation designs, when related to processes by which curriculum materials are mediated to pupils with control for teaching style and curriculum package factors, are more likely to reveal significant differences in improved learning outcomes.

Implications for Curriculum Innovation

Psychometric, together with supplementary anecdotal data gathered in this investigation, show that teachers adopt preferred approaches to teaching social studies commensurate with their epistemological stance. Individually, they ascribe meaning to the patterns of interactions which were observed and recorded (Carter, 1986), but more research is needed to gauge the stability of these approaches. There is evidence to support the conclusion that style is a dominant influence in the stage management of classroom interactions by teachers (Hacker, 1984).

Regardless of the form and function of teaching processes, implied or explicit in social studies curriculum materials, it is likely that curriculum packages will be adapted beyond the point of drastic mutation if they do not recognize, or are not sufficiently flexible to accommodate, the preferred approaches of teachers.

However, further research is needed to establish the influence of style in affecting the adoption-adaption decisions of social studies teachers and the take-up of curriculum materials.

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Effects of Children's Understanding of Time Concepts on Historical Understanding

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Abstract

There are many articles on how children learn clock, calendar, and historical time skills and concepts. Few attempts have been made, however, to explain the relationships between learning time and learning history. Research on children's understanding of time, and three views of how this understanding affects their understanding of history, are presented. It is suggested that each of the three views implies a different conception of effective instruction in history. Finally, an alternative view of how temporal and historical understandings affect the teaching of history called the developmental-historical time view is proposed.

Casual consideration suggests a natural relationship between children's thinking about history and time. History is concerned with change and continuity in human affairs over time and, therefore, historical reasoning requires a temporal framework. But what is the specific nature of this relationship? Can children learn history despite limited temporal understanding and how does immature temporal understanding constrain children's historical reasoning? And, most importantly, what does the relationship between children's understanding of time and history suggest for appropriate instruction in history?

These questions are raised because there is a difference of opinion about when children should be introduced to history. Peel (1965) and Elton (1970), for example, contend that historical reasoning is beyond the ability of children. Others, including Diem (1982), Muir (1985) and Spieseke (1963), maintain that, although history must be simplified for pedagogical purposes, it can be taught successfully to children. At issue, then, is when children are capable of historical reasoning and, for our purposes, what part temporal understanding plays in children's historical reasoning. This has tangible implications for curriculum, instruction, and learning. Con-

sider, for example, thematically-organized curricula that incorporate history: Does the absence of a chronological structure inhibit historical reasoning by the young? Significantly, the social studies literature is largely silent about the relationship between children's understanding of time and how this may affect instruction in history. The present paper is concerned with researchers' findings and opinions about children's development of time and historical understandings, and about what these findings and opinions imply about instruction in history.

This paper includes three sections. First, research on children's understanding of time is examined. Second, three positions are reviewed concerning how children's understanding of time affects their understanding of history, and how this relationship affects the teaching of history. Third, an alternative view of how temporal and historical understandings affect the teaching of history called the developmental-historical time view is proposed.

Children's Understanding of Time

A search of the literature in education, psychology and history revealed more than 250 articles on the topic since the 1920's. Nearly all fall into two major areas. One area of study emphasizes how children perceive the duration and/or speed of time, i.e. physical time. This literature is substantial and is based on Piaget's (1969) early work. W. Friedman (1982) has ably summarized this literature in his edited book, *The Developmental Psychology of Time*. The second time-related category has developed from the empirical tradition of Anglo-American psychology (Zaccaria, 1978). It involves studying children's development of clock, calendar and historical time concepts. This literature is more germane to the focus of the present article. Learning about clock and calendar time in math and/or social studies lessons followed by introductions to historical time language in social studies is a common curriculum sequence in schools. W. Friedman (1982) questions this approach and argues that the focus should be upon the underlying cognitive structures common to the three types of time concepts.

Before reviewing the articles on children's understanding of time, it may be useful to define the three types of time. Clock time involves using numeral notations to estimate or accurately judge units of time on a clock, watch or digital device. Calendar time requires one to use time language involving days, weeks, months, seasons, holidays, and years, as well as numerical digits, to judge units of time on standard calendars. Historical time requires one to depict a person, place, artifact, or event in the past using some form of time language. Placement may vary from simple (though indefinite or general), for example, back then, to the more complex, such as late eighteenth century.

A Developmental Sequence

The approximate ages at which children acquire various clock, calendar and historical concepts and skills are shown in Table 1. Clock and calendar concepts have been combined in the table for purposes of contrast with historical concepts. It should be noted that acquisition of a time concept, as is true with most developmental concepts, is more appropriately associated with an age span. With exceptional youngsters, the handicapped or the gifted, the age span of acquisition may be considerable. Yet, it is assumed that the order in which the skills are acquired remains basically unchanged.

Using Table 1 as a referent, what is known about children's acquisition of historical time concepts? Between ages four and seven three kinds of time emerge. First, awareness of personal time begins. Time concepts understood by children are largely specific to themselves, and to persons and events in the immediate surrounding. Initially, the past and present are differentiated with time terms including before, after, now, and then. However, as Harner (1982) notes, children's understanding of these terms is dependent on the linguistic forms used to express the temporal reference. To understand clearly the pastness of an event that is being described, for example, an English-speaking child needs to understand the varied linguistic structures of simple past tense, present perfect tense, past perfect tense, past progressive tense, the adverbs yesterday, before, already, last week, and so on (Harner, 1982, p. 163). It is not until the end of the middle years of childhood (ten to eleven years) that children master the varied linguistic structures of temporal distinctions. A second time distinction made by the four to six year old youngster involves analyzing daily events cyclically. When asked, "What do you do in a day?", the child can include an orderly chronology of behaviors starting with getting up in the morning and ending with going to bed at night. Third, by ages six and seven, rudimentary discrimination of clock and calendar skills begin to appear. Clock time skills seem to develop from larger to small units, that is hour to minute to second. Calendar time seems to work in reverse. First, days are identifiable, then weeks and finally months. Many researchers believe that the development of historical time depends on the prerequisite skills of personal, calendar, and clock time. This seems reasonable in that the ability to sequence days, weeks, months, and arrange events cyclically, requires separating time from distance in one's immediate surroundings. Eventually this provides the framework for doing the same in one's community, state, nation and the world.

Between the ages of eight and eleven, children's temporal understanding develops markedly. By ages eight and nine, children accurately employ the terms past, present and future and are able to correctly associate people and events with these terms. According to Harner (1982), understanding of future, probably the most abstract of the three terms, is the last to develop.

Table 1
Acquisition of Time Related Concepts or Skills

Age	Clock and Calendar	Historical	Researcher
4-5	Describes the sequence of a day's activities.		Friedman, W., 1978
	Uses terms before and after, now and then.		Harner, 1982
	Uses past and future verb tense.		Harrison, Harner, 1934; 1982
6	Labels blocks of time as lunchtime, playtime, naptime.		Harrison, 1934
	Reads clock hour time correctly.		Elkind, 1960
	Recognizes time and distance as two different dimensions.		Elkind, 1960
7	Recognizes hours as being the same length of time.		Elkind, 1960
	Recites days of week, months, and seasons in order.		Friedman, W., 1978
		Places family members (self, parents grandparents) in correct age sequence.	Jahoda, 1963
8	Names recent holidays.	Uses year dates but cannot accurately match year to person or event.	Oakden & Sturt, 1922
	Uses terms like night, tomorrow, morning to describe a point in time.	Given the dates 1750, 1850, and 1950, or 1970, 1980, and 1960, correctly orders them.	Friedman, K., 1944

	Names months, weeks, days.	Begins to match dates to significant persons or events.	Oakden & Sturt, 1922
9	Orders the holidays in a calendar year.	Uses general terms such as a long time ago, way back when, once upon a time. Uses a specific number of years, for example, about 100 years ago, as a time referent. Matches significant people with events.	Friedman, W., 1978 Bradley, 1947 Oakden & Sturt, 1922
10	Realizes that second, minutes, hours are the same length everywhere.	Labels periods of time, for example Colonial times, the Civil War years.	Oakden & Sturt, 1922
11	Demonstrates mastery of clock and calendar time.		Bullock & Gellman, 1979, Friedman, W., 1978
12		Matches dates with appropriate historical event, person, or period.	Oakden & Sturt, 1922
13			
14		Uses adult time vocabulary and concepts, for example, century, generation, Pilgrim forefathers.	Friedman, W., 1978, Harner, 1982
15		Distinguishes between parts of centuries.	
16		Uses the sixteenth century and the 1500's interchangeably.	

Also at ages eight and nine, children are beginning to master historical dates. They are able to estimate how long ago events took place, to place events in sequence, and to associate dates with particular people and events. These kinds of historical skills are normally mastered by age eleven (Oakden & Sturt, 1922; Bullock & Gelman, 1979). And finally, from nine to eleven, children begin to label periods of time (e.g., the Colonial era).

Thus far the examples provided of the development of temporal understanding in childhood seem straightforward. But this may be misleading. Consider, for instance, general or indefinite time terms. W. Friedman (1978) found that most nine year olds use general time terms such as a long time ago, way back when, and the proverbial once upon a time. Nine year olds' use of these terms involves little more than recognition that the events happened sometime in the past. This contrasts with eleven year olds' usage. The older children often use general time terms as a substitute for a date or for a specific period of time, e.g., the middle of the eighteenth century. In other words, a nine year old's use of a general time term may be in lieu of specific time understanding. For an eleven year old, though, using the same term may represent an adult-like reference to a broad period whose relationship to earlier and later periods is appreciated (Levstik & Pappas, in press).

From twelve to sixteen, the young adolescent's temporal understanding begins to approximate adult understanding. Clock and calendar time skills have been mastered (Bullock & Gelman, 1979; W. Friedman, 1982). Similarly, it is during this age span that dates can be matched to persons and events with consistency and time periods are recognized accurately. Time language encountered in childhood, by early adolescence, is fully internalized and becomes more comfortably a part of the youngster's everyday language.

Increasingly, the new time terms learned in early adolescence are derived from the subject matter of history. This suggests that their development is crucially dependent upon instruction. For example, specific time words such as generation and epoch are commonly learned in early adolescence. A more generalizable, and thus more important, skill is the young adolescent's ability to discriminate the vocabulary of centuries. This includes not only straightforward tasks such as understanding 100 years equals one century but also that the eighteenth century refers to the period between 1701 and 1800. Because the latter example is poorly understood by some adults, it seems likely that such specialized time language will sometimes not be mastered unless it is specifically taught. The same could be said for terms such as the first quarter of the eighteenth century. Moreover, one can conceive of multiple ways of describing the same period. For instance, the period 1701-1725 is often referred to as the William and Mary period among students of the decorative arts. It could also be referred to as the first quarter of the eighteenth century, or simply by its beginning and ending dates. It is not clear if such multiple ways of describing the same time period are generally confounding or clarifying for most young adolescents.

In summary, youngsters' understanding of time is developmental. As our example of nine and eleven year old children's use of general or indefinite time terms suggests, temporal understanding of a concept may be qualitatively different for different age groups. It appears temporal development is normally sequential, although, as with any generalization, there are likely to be individual variations. Nevertheless, it seems that from the research reviewed and summarized in Table 1, youngsters gradually make more systematic and sequential time distinctions as they mature. Therefore, it may be useful to speak of age spans in temporal development.

The data presented in Table 1 suggest that the age spans of six-eight years, nine-eleven, and twelve-fourteen have distinctive characteristics in terms of what youngsters can normally understand about time. For example, most nine year olds understand dates and chronologies of the remote past, though this is beyond the abilities of most eight year olds. Furthermore, starting at age nine, children seem to be able to distinguish different periods instead of lumping events, persons, and objects into an undifferentiated past. Thus, it appears that the time language appropriate for nine years olds is inappropriate for eight year olds. Similarly, at about age twelve, children enter a stage in which their temporal understanding is approaching an adult's understanding of clock, calendar and historical time concepts. The age spans we have identified, it seems, have significant implications for grouping, for instruction, and for suitable curriculum content.

Relationship Between Understanding Time and Learning History

Although we noted that learning some of the more abstract time terms may be dependent on instruction, to this point we have not explicitly addressed the relationship between temporal understandings and historical learning. This requires examination of a second, albeit smaller, literature that deals with how children's understanding of time concepts affects their understanding of history, and to some extent, with what this relationship means for the teaching of history. A review of this literature reveals that three authors have discussed the time/history interdependency to a much greater extent than their colleagues. In effect, their writings fashion rather distinctive perspectives on how the young learn history.

View 1: The developmental cognitive view. The British scholar, Hallam, is one of the leading researchers on how youngsters learn history. Hallam (1970) portrays the growth of temporal and historical understanding as a function of overall cognitive development. Following from the work of Inhelder and Piaget (1958) on the development of logical reasoning, Hallam hypothesized that, prior to arriving at the stage of formal operations, children are incapable of some kinds of historical reasoning. This is the result of the complexities of temporal and historical information. Hallam's findings about the developmental constraints on temporal and historical understanding were generated by asking students of various ages the follow-

ing types of questions: “Can you tell me some people who lived in Ancient Greece?” “Why aren’t the boys in your class trained like Spartan boys?” (Hallam, 1979, pp. 18–19). In both cases, children at the preoperational level answered these questions in predictable but, Hallam argues, inadequate ways. Significantly, the inadequacy of their answers appears linked to their immature temporal understanding. For example, Hallam observes of preoperational children that the answers to the first question exhibited “a lack of *reversibility of thought* [his emphasis] so that events are judged from the standpoint of the present day” (Hallam, 1979, p. 19). A typical answer by preoperational children to the second question is illustrative:

Why aren’t the boys in your class trained like the Spartan boys? Too young.

The Spartan boys were young as well. We don’t battle anybody in fights.

Would the boys today be trained like the Spartans if we did fight? Now-a-days you have different things to learn, shooting and all sorts of different things. (Hallam, 1979, p. 19)

This interchange, Hallam argues, shows “an inability to regard the data from a viewpoint contemporaneous with the events” (Hallam, 1979, p. 19). Although Hallam does not present directly comparable data, responses to the same question, from children in the concrete operational stage, he provides evidence that suggests that the older children can make judgments that are independent of the present (Hallam, 1979, p. 21). Hallam’s findings, therefore, suggest that temporal understanding is an integral part of the development of logical reasoning. Therefore, what children can learn about time and history is subject to developmental constraints.

View 2: The psychosocial/developmental view. The American researcher, Sleeper, like Hallam, argues that full understanding of historical time is dependent upon reaching the stage of formal operations. Sleeper’s view, however, places temporal understanding at the heart of historical understanding: “The most basic element in an individual’s interaction with history is his understanding of time” (Sleeper, 1975, p. 96). The emergence of historical consciousness in children, Sleeper contends, parallels their temporal development. Time is not only part of the development of historical thinking but also of the broader process by which one gains adulthood.

Even though Sleeper believes children’s experiences with time and history play a major role in their development, it is in adolescence that history assumes its greatest developmental importance. Following Erickson’s observations on psychosocial development, Sleeper believes the task of

adolescence is identity formation during which time a person places his or her life in context with the community (Sleeper, 1975, pp. 102–105). During this identity process the adolescent turns to his or her past and makes judgments about what was, how these past events affect the present, and eventually, will shape the future. Sleeper contends the search for identity can only occur when a youngster can think hypothetically or, in other words, be at the formal operations stage.

The most significant consequence of the properties of formal thought for the analysis of history is that the adolescent, unlike the child, is no longer bound to the reality of the past. The reformulated relationship between reality and possibility means that in history the adolescent can understand that what happened did not necessarily have to happen. The young child has an overwhelming sense of the inevitability of historical events. What happened, for the child, had to happen because it did happen. The adolescent can imagine alternatives, construct different possibilities, and contemplate their outcome. He can interact with the past on a speculative level which is beyond the child, pondering what might have been and continually reminding himself that history—as it has been presented to him—is only that one set of circumstances that did come into being Recognizing this distinction enables the youth to establish an identity which incorporates the influence of his past and anticipations of his future. (Sleeper, 1975, pp. 102–103)

View 3: The organic curriculum view. Unlike the two previous views, the organic curriculum view is only incidentally concerned with developmental theories. Rather it begins with practical questions of curriculum and instruction in the social studies: Since time concepts are an integral and inseparable part of the content of history, how can they be best taught?

Spieseke's (1963) position, which preceded much of the research available today, illustrates this view. Reflecting a problem-centered conception of curriculum that owes much to Dewey, Spieseke argues time is mastered in the contexts of "social problems that have meaning and purpose for [children]" (Spieseke, 1963, p. 174). Spieseke and others adopting a related stance (e.g., Diem, 1982) are reluctant to believe that history or time are learned as a course of study in their own right or that they occur in a lock-step sequence.

As one might expect, Spieseke's practical brief leads her to many concrete suggestions on appropriate curriculum scope and sequence. Moreover, this problem-centered approach is inclined to the view that given appropriate tasks about "the past that interests" children (Spieseke, 1963, p. 182) important time and history learning is possible even in the lower elementary grades.

Developmental Historical Time and its Implications

At the beginning of the paper, the authors forwarded the hypothesis that the understanding of time and history are interdependent. No author surveyed for this paper has disputed the observation. On the contrary, each author dealing with children's understanding of time and history has restated in some form, the initial hypothesis. Hallam and Sleeper suggest the understanding of time and history develops as a function of overall cognitive development which means temporal and historical concepts develop together and one may enhance or delimit the understanding of the other. As previously noted, Sleeper has further stated, "the most basic element in an individual's interaction with history is his understanding of time" (Sleeper, 1975, p. 96). Like Hallam, Sleeper suggests there is an interaction and a contiguous development of children's understanding of time and history. Spieseke similarly contends that time skills are an integral and inseparable part of the content of history.

What have these authors, with their widely differing focuses, told us about the teaching of history and the role that time plays in youngsters understanding history? Hallam and Sleeper strongly suggest that, prior to adolescence, children are incapable of understanding certain kinds of history and historical time. Both agree, though, that some level of understanding is possible for children and that the level is a function of the child's developmental level (Hallam, 1970, p. 170; Sleeper, 1975, p. 97). Their discussion of how children's understanding of time and history are interrelated, however, is so brief that the reader is left unclear as to the specifics of what children can learn. Only Spieseke provides suggestions about how time and historical concepts should be taught when she indicates that temporal and historical learnings are best acquired in the context of meaningful social problems. Beyond these suggestions, the research literature is largely silent about how children's understanding of time and history interact and how this interaction might affect instruction (Jahoda, 1963, p. 102). The authors believe a fourth position on teaching history, using the literature summarized in Table 1 and the observations about the teaching of history suggested in this paper, is possible.

The following position is a distillation of views about how the understanding of time and history interact and what the result suggests for the teaching of history. The position is called the developmental historical time viewpoint to acknowledge the importance of historical time as a major component in historical reasoning. There are four points forwarded in this view.

First, it seems that learning time is most likely tied to the learner's current developmental structure. Several authors referenced in Table 1, as well as Hallam and Sleeper, contend that children's ability to understand time corresponds closely to their cognitive development. This means that certain historical time and history concepts are within the limits of children as young as six and that each concept should be taught systematically and

reasonably sequentially as one would teach math, reading, or language arts. In essence, there is nothing more peculiar or more complex about historical and time concepts than concepts in other standard curriculum areas. It is also important for history instruction to consider time concepts from the standpoint of the difference between understanding and use. Young children may recite abstract time terms in history lessons, but the evidence suggests dates and some time terms have little meaning for some youngsters.

Second, time understandings should be a major consideration in how historical topics are introduced (Vukelich, 1984). Table 1 clearly shows that there is a time language that accompanies the development of the child and it can be described and specifically detailed. Time language used properly may simplify or bring persons and events of the past into historical focus. Therefore, what we say about the past should be considered from the standpoint of the child's understanding of the time language. For example, the past-present dichotomy can be introduced any time after four years of age and most children by age five or six can be introduced to the cyclical nature of events by starting with those in their immediate life. For the most part, persons or events of the past should be introduced and discussed without dates prior to age nine.

Third, historical time concepts should be taught in conjunction with history just as clock and calendar time concepts are taught in conjunction with math. Historical time language should be taught in social studies courses as carefully as historical information. Indeed, we question if time and history *can* be separated. Consider, for example, Franklin D. Roosevelt's war message to Congress: The President referred to December 7, 1941 as a "date which will live in infamy." The date (a time concept) and its significance (its historical meaning) cannot be neatly separated. It follows that each should be taught with consideration of the other.

Some may argue that historical time concepts are already taught in social studies through the use of the time line. But it is unclear what impact the time line has on children's understanding of historical time. Many social studies educators assert that a time line assists in sequencing skills or in ordering events and persons in time. Yet few articles dealing with time lines are available, and none, to our knowledge, are empirically based. Little can be confidently claimed about the effects of time lines on children's understandings. What is clear, however, is that time concepts are often haphazardly introduced with historical concepts and this may lead to unfounded conclusions about history's complexity for children (Diem, 1982).

Fourth, time and history are no more or less complex than algebra and trigonometry in math or the great works in literature. It seems peculiar to the present authors that researchers like Hallam and Sleeper dwell upon the fact that students do not fully understand time and historical concepts until the age of 14 or older. Table 1 shows a progression of time concepts over ages that is much like one used to depict mathematical understanding. It seems unlikely mathematics educators would use a similar chart to proclaim

that understanding of math begins at 14 or older. Furthermore, there is some question about Hallam's and Sleeper's heavy reliance on Piaget's theories concerning when children can deal with certain kinds of abstractions. Donaldson (1978, pp. 18-19) argues that children's understanding of many abstractions depends crucially on how the learning task is organized. It may be, in other words, that if the learning task is organized appropriately, then younger children can deal with more complex modes of thought than Piaget believed. In the case of children's historical understanding, Levstik and Pappas (in press) contend that elementary school children are capable of much more complex reasoning than Hallam suggests. The developmental historical view assumes some concepts are mastered, others are added and old concepts may generate new meaning later in life. So it is with understanding time and history. There are multiple layers of learning and complexity, some of which are of import only to the ten year old and others for much older persons.

Finally, consideration of historical time leads to a more general point—the need for a clearer understanding of how children learn history (Thornton, 1987). In fields such as language and mathematics, there has been close scrutiny of the developmental constraints on children's learning. There have been few comparable efforts regarding history. We presently know little about how the young come to understand history (Kennedy, 1980, p. 30). The importance of this lack is only underscored by the growing body of evidence that suggests there are significant facets of learning that are subject-specific (e.g., Shulman, 1974, pp. 328-329). Just what distinctive contributions does history make to children's cognitive development? What part do these play in children's overall progress toward cognitive maturity? What does this suggest for appropriate curriculum and instruction? Although this review article is not the place to try and answer such questions, they are questions that require clearer answers than we have had to date.

In closing, it is apparent that the considerable body of research on time understanding is relevant to teaching history. This is the case because time appears to be an integral component of historical reasoning. The focus of most research on understanding time, however, appears only marginally related to history. Although richly suggestive, the literature on children's understanding of time requires reconceptualization if it is to help us explain how children come to think historically.

Endnote

This paper is an expanded and modified version of the authors' "Research on Historical Time" which was presented to the College and University Faculty Assembly at the annual meeting of the National Council for the Social Studies, New York, November 1986.

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The Role of Internal Factors in the Teaching of Current Events

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Abstract

This study examines the role of internal factors in curricular decisions of elementary teachers regarding current events instruction. A sample of elementary teachers answered survey questions that included items measuring their attention to current events. A construct called news awareness was developed. Additional items in the survey had teachers report on how frequently they taught about current events. A Chi-square analysis indicated that the frequency of teaching current events increases as the level of news awareness increases. The causes of poor teacher news awareness are discussed. Recommendations include efforts in the areas of teacher training, testing, and recruitment, and the mandating of current events instruction.

Citizenship education is often considered to be the principal goal of the social studies. Some would go so far as to say that it is the principal goal of our educational system (Butts, 1983). An important aspect of citizenship education is the study of current events (Michaelis, 1985). Yet, there are reports that neither citizenship, in general, nor current events, in particular, are taught in elementary school classrooms (Susskind, 1984).

Though long recognized as a major goal of the schools, a revival of civic education is now underway (Rich, 1983). One leader of this movement is R. Freeman Butts (1980), who believes that:

The goal of civic education for American schools is to deal with all students in such a way as to motivate them and enable them to play their parts as informed, responsible, committed, and effective members of a modern, democratic political system. This can be achieved in a number of different specific ways but should include the three basic aspects; political values, political knowledge, and the skills of political participation needed for making deliberate choices among real alternatives. (p. 123)

Potential benefits of current events in the elementary school may include the development of thinking and study skills, focus on the future, relation

of social studies content to life, and the inclusion of attitudes and values in the curriculum (Michaelis, 1985). It is especially important to consider current issues in the elementary school so students can begin the habit of keeping informed.

Failing to include current event study in the elementary curriculum may have serious effects. Merelman (1971) observes that, "It is unsound . . . to delay the consideration of social problems. Otherwise, the child will, in all likelihood, come to disassociate the social studies from their seminal concerns."

An observer of elementary schools might note that when social studies is taught, civic education and current events are only occasionally considered. However, in some classrooms, the daily news and its civic implications are an integral part of the curriculum. How does one account for the variation?

A Theoretical Explanation

Schmidt and Buchmann (1983) propose the concept of external and internal factors to account for the discrepancies in curriculum emphases at the classroom level. They see external factors as institutional and social influences on teachers' content choices. Included in this realm would be district policies, the principal, and public opinion.

As first proposed by Sarason (1971), internal factors can explain differences in the curricular emphasis of teachers in the same school or district. Presumably under similar sets of external factors, teacher colleagues are apt to stress different topics with similar amounts of frequency. Internal factors (e.g., teacher sense of competence, teacher beliefs and attitudes) may explain the variations in curriculum and time allocations. Research by Schmidt and Buchmann (1983) supports this hypothesis at the elementary school level.

By focussing on certain influential internal factors, we can clarify our understanding of teacher curricular decisions concerning social studies and their subsequent effects on children. Is the teaching of citizenship and current events related to specific internal factors? If so, what are they and what can we do about it?

Methods

Sample

The assistant superintendents of three school districts agreed to cooperate in the study. In two of the districts, all of the elementary schools were included in the sample. In the third district, half the schools were randomly assigned to participate. Questionnaires were delivered, through prior arrangement with building principals, to the mailbox of every regular teacher in each participating school except for those involved in departmental or team teaching situations. Questionnaires were sent to 350 elementary school teachers in 24 schools. In each district there were no centralized policies

concerning the teaching of current events or citizenship; teachers were free to decide whether and how much they would teach those topics. Of the 350 questionnaires, 248 were returned by sealed envelope addressed to the researcher, resulting in a return rate of seventy-one percent.

Instrument

A questionnaire was developed to investigate two issues: (a) how teachers spend their leisure time and (b) how teachers organize their curriculums. The questionnaire required the subjects to indicate on a Likert-type scale whether they participated in certain activities often, occasionally, or seldom. Included in the wide-ranging questionnaire (covering such items as interest in reading mystery novels, watching soap operas, and attending church activities) were special items designed to determine the subject's news awareness (i.e., amount of newspaper reading, what newspaper sections are read regularly, amount of news magazine reading, how often television news is watched, etc.). News awareness may be considered an internal factor representing teacher interest in current events.

For the purposes of this study, teachers with high news awareness were those who reported that they (a) read newspapers often, (b) read news magazines often, (c) usually read local, national, and world news in their newspaper, (d) usually watch news programs on television. The criteria for high news awareness may be considered strict in that one can be quite aware of current events without meeting all of the criteria; the intent was to isolate those who were extreme in their news-awareness. Teachers who did not meet the four criteria were considered to have low news awareness.

The second part of the questionnaire investigated teachers' self-reported frequency in teaching various topics (i.e., sex education, creative writing, current events, metrics, cursive writing, career education, and astronomy). The teachers were divided into three groups according to the frequency with which they taught current events (regularly, occasionally, or seldom).

It was predicted that teachers who have high news awareness were more likely to teach current events than those who had low news awareness.

Analysis of Data

To analyze the data, 3 x 2 contingency tables were developed, Kendall's Tau and Chi-square were calculated. Table 1 shows the frequency distribution and percentages of level of self-reported news-awareness and self-reported teaching of current events.

In looking at the distribution, 62.5% of those teachers who claimed to teach current events on a regular basis were high in self-reported news-awareness, compared to 49.2% who taught it occasionally and 33.3% who seldom taught current events. The Kendall's Tau coefficient for this relationship is .33. Chi-square value was significant at the .01 level. It was concluded that as the level of news-awareness increases the frequency of teaching current events tends to increase.

Table 1
The Relationship Between News-Awareness and the
Frequency of Teaching Current Events

Level of News Awareness	Frequency of Teaching Current Events					
	Regularly		Occasionally		Seldom	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
High	50	62.5	64	49.2	12	33.3
Low	30	37.5	68	50.8	24	66.6
Total	80	100	132	100	36	100

Discussion

The results indicate that individual teachers' internal factors, in this case news-awareness, are related to curricular decision making. Teachers who keep up with the news on a regular basis seem more likely to use the knowledge gained from that activity in the classroom than teachers who are not so aware of current affairs. Of course, the direction of causation may be reverse; teaching current events might increase news awareness.

These findings support the work of Bethel (1982) who found that elementary teachers who are not well versed in scientific knowledge do not spend much time on the subject. A teacher who feels incompetent in, say, meteorology is unlikely to initiate in-depth discussions of the weather. In the social studies, teachers who are unsure about the differences between Nicaragua and El Salvador are not likely to launch a discussion of U.S. policy in Central America.

One can understand the reasoning of teachers with low news awareness who do not teach current events, but one must also recognize the implications of their decisions. The choices these teachers make affect the very nature of our society. Time-on-task studies have indicated that spending more time on certain subject matter is related to student achievement in that area (Wyne & Stuck, 1982). Time spent on current events can differ by as much as two and a half hours a week; thus, a student in the classroom of an elementary teacher with high news awareness may receive as much as one-hundred more hours of instructional time in citizenship and current events than students not in those classrooms. The implication for the latter group is that they may be poorly prepared for the demands of citizenship.

In the early days of our republic, James Madison cautioned, "A people who mean to be their own governors must arm themselves with the power knowledge brings." Teachers who fail to provide the skills and content that are necessary for the development of self-governing abilities are opening the door to an ignorant citizenry, one that may be unable to make the wise decisions that "our democratic public deserves and that it must have if it is to prosper politically and economically" (Adler, 1983).

Our society expects its teachers to be informed. The 23rd Yearbook of the National Council for the Social Studies, devoted to characteristics of social studies teachers, includes numerous assertions of that basic expectation: "The social studies teacher should be well enough informed on local, state, and national affairs to speak with intelligence on social problems and issues" (McClendon, 1952, p. 173). The teacher "must know enough about current issues to have intelligent opinions thereon. He must be a citizen, active and respected" (Drummond, 1952, p. 52). "The social studies teacher who reads not at all, or reads only one or two books a year . . . is not worthy of the name of teacher of the social studies. He should seek employment in some field where his intellectual capacities are not particularly taxed" (Carr & Risinger, 1952, p. 181). Parker and Jarolimek (1984), in a more recent bulletin, encourage teachers to be active in community affairs because "engaging in the process gives them the experiential base from which they communicate with their students and colleagues, develop programs that cultivate democratic citizens, and promote the social studies curriculum to the public" (p. 36).

How did our system get in the position of having teachers who do not keep up with current affairs and who are unlikely to teach current events and citizenship? Blame is shared by the teacher education institution, the nature of elementary school teaching, and the relative isolation of teachers.

An easy target of blame is the teacher education institution. Recent reports on the status of education have criticized teacher education programs for their concentration on pedagogy and skimpy requirements in the sciences and humanities (Adler, 1982). The American Association of Colleges of Teacher Education has challenged the validity of those criticisms by showing how many teacher training programs require numerous general study courses. However, it would be wiser to debate the quality of the courses outside the education department, rather than the quantity.

General studies courses in the social sciences are most often survey courses with a heavy emphasis on the past, much like their high school counterparts. College teachers often do not spend enough class time on issues of the present and the future. Thus, college students may miss out on the opportunity to apply knowledge and skills in civic education to the issues of the day. Colleagues tell me that they try to discuss current affairs, but too many students are unfamiliar with such issues. The result is a vicious circle where we accept our students' ignorance, then train them to be teachers so they may pass on their ignorant ways to a new generation. Somewhere, that circle must be broken.

The poor news-awareness of elementary school teachers may be due to the nature of the elementary school. The ability of elementary teachers to analyze contemporary issues is seldom a consideration in their hiring and retention (Merelman, 1971). Besides, as soon as they begin to teach, they are so overloaded with paperwork and lesson planning that any study of the news may be set aside. The curricular emphasis on the so-called basics also

contributes to teacher ignorance of current events. Teachers are unlikely to feel pressure from parents and administrators to teach about contemporary issues and will, therefore, work to improve other curricular areas.

A third possible explanation for the lack of teacher news awareness is the relative isolation of elementary school teachers. Spending all day in the company of children is rewarding, but unlikely to lead to growth in political sophistication. After all, children tend to stay away from deep discussions of the daily news. The awareness that comes with collegial discussion of current issues is lacking for many elementary teachers whose lengthiest adult contact may be a twenty minute coffee break.

Recommendations

A number of actions may be necessary to return civic education to its rightful place in the elementary curriculum:

First, the teaching of current events and citizenship should be a required subject in the school day. That there are already too many mandated topics is not a sufficient counter-argument. Civic education is at least as important as the so-called basics. Perhaps it is time for elementary school teachers to begin combining school subjects. For example; Passe (1984) and Susskind (1984) suggested methods of combining social studies with other subjects. With a demand by administrators to teach civic education (and, presumably, to teach it well) teachers may be encouraged to improve their knowledge in this area.

A second recommendation is for states to require current events awareness as a teacher education competency. A few items on one of the new competency tests may encourage future teachers to attend to this crucial area of study. Colleges of education could be expected to help their teachers develop habits and skills in understanding and explaining contemporary issues.

Finally, school system personnel directors and principals should include current events questions and inquiries about applicants' reading habits when conducting job interviews. They should make it clear that news awareness is part of the elementary teacher's job description.

Finally, the research reported here is suggestive. Other studies need to be conducted which do not rely on self-reports. If possible, experiments and quasi-experiments are needed to establish causal relation between news awareness and teaching of current events.

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