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A STUDY OF THE RELATIONSHIP BETWEEN SELECTED PERSONALITY CHARACTERISTICS AND THE REFLECTIVE METHOD

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By

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* * * * * *

The Ohio State University
1968

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CHAPTER I

THE PROBLEM AND ITS SCOPE

The Problem

Many writers have emphasized the reflective method in the teaching of social studies. However, there is little or no information presented by these authors as to the types of students who are enrolled in social studies methods courses and student teaching. The authors appear to make the assumption that with all things being equal a student exposed to the reflective method will be able to learn to use the reflective method. In the processes of learning and using the reflective method there appears to be no concern for the type of prospective social studies college student who will be expected to execute the reflective behaviors described by these authors. Consequently, this study concerns itself with the personality characteristics, needs and educational set of students in methods courses and student teaching and their relationship to learning and using the reflective method.

Specifically, the problem to be studied is this: Are there certain personality characteristics, needs and
and educational sets among students in social studies methods courses and in student teaching that would negate the use of reflective inquiry in social studies classrooms and the use of a reflective approach to teaching?

This study can be classified as an extension of previous studies dealing with personality characteristics, needs and educational set. Many antecedent studies have dealt at length with these three aspects of human behavior and have provided a fairly substantial body of knowledge on which one can build in searching for additional insight and direction needed for a more complete understanding of the prospective social studies teacher.

One major focus of inquiry into the teaching-learning process has been upon the learner. Except in the area of programmed instruction, teachers have been able to make only limited use of the descriptions of processes that have been theorized and to some extent shown to be used by the learner. Recent attempts have been directed at analysis of the behavior of the teacher (Flanders, Withall, Amidon, and Hughes) in an attempt to provide the teacher with more usable information about verbal behavior patterns. Instructional theory and principles of teaching seem to be enjoying the same emphasis that has been given to learning theory and the principles of learning.

It is the purpose of this study to see if students in social studies education have certain personality characteristics, needs and educational sets that would
negate their use of reflective method in social studies classrooms and their use of a reflective approach to teaching. These findings should be helpful to several types of educators. Those concerned with instructional theory should gain more information as to the types of teachers who have particular behaviors. Those involved in selecting candidates for teaching will have additional information as to the capability of certain instruments to identify likely candidates. There are also implications for the content of teacher education courses, especially if it is found that certain students do not have desirable behaviors. It may be that special testing and counseling programs can be developed within the social studies methods courses or the College of Education to make students aware of their personality characteristics, needs and educational sets. The above suggestions would not only imply an attempt to screen but to provide the students with a frame of reference for understanding and using the reflective method.

Definition of Terms

Open and Closed Mindedness—The extent to which a person's belief-disbelief system can receive, evaluate and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside.¹

Manifest Needs—They lead the organism to search for or to avoid encountering or, when encountered, to attend and respond to certain kinds of press.2

(Press—A temporal gestalt or stimuli which usually appears in the guise of a threat of harm or promise of benefit to the organism.3)

Factually Set—A learner who, by definition, is predisposed to learn factual content. He adds units of information to his cognitive structure without being driven to interrelate these elements into any contextual whole. For such a learner, a fact has an integrity of its own.4

Conceptually Set—A learner who, by definition, rejects factual acquisitions except as units of information are clustered and interrelated. He prefers to learn concepts and principles. When confronted by a bit of factual information he either dismisses it as unimportant or subsumes it in a broader conceptual framework.5

Reflective method—There is great emphasis on conceptualization and reflection, and insightful learning of skills and habits, as implied in the newer Gestalt theories of learning and the psychology of Dewey and Bode.6 The process through which one validates empirical or value propositions. The process in the empirical realm involves the application of scientific criteria and rules of logic. Definition, classification, and generalization

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3Ibid., p. 138
5Ibid., p. 1.
are some of the tasks performed in the use of
the scientific method.

Related Literature

This study has its roots in the work of others whose
testing and research have provided a foundation from which
a study such as this can begin. (The research related to
this problem is examined in depth in Chapter II.) Major
sources of influence are those studies stemming from research
in the general area of measurable teacher characteristics
and the studies of the organism to think rigidly or flexi-
ibly.

Rokeach defined the open or closed mind to be the
extent to which a person's system can receive, evaluate
and act on relevant information received from the outside
on its own intrinsic merits, encumbered by irrelevant
factors in the situation arising from within the person
or from the outside. It seems reasonable that a desirable
characteristic of a social studies teacher in learning to
use the reflective method would be the ability to do just
that. This would be illustrated by the kind of person who
is capable of what Rogers refers to in the "non-directive
approach." The forces that are requiring this teacher to

7B.G. Massialas and B. Cox, Inquiry in Social Studies
8Rokeach, op. cit., p. 58.
9C.R. Rogers, "Significant Learning: In Therapy and
in Education," Educational Leadership, XLV (January, 1959),
pp. 115-119.
impose conditions for his acceptance of others at something other than face value are non-existent.

If one accepts the conclusions drawn by Rokeach and Kemp concerning open and closed mindedness (close correlation between high dogmatism and the inability to think critically), there would seem to be considerable doubt as to the ability of persons who possess the characteristics of a relatively closed minded person to perform certain tasks necessary to provide conditions under which effective reflective inquiry can occur. One who distorts stimuli from the outside would have considerable difficulty in handling stimuli that arise out of the complex need structure of the classroom using reflective inquiry. This is especially true if the social studies teacher views this structure as threatening. The resultant effect of the distortion of the stimuli would create behavior in opposition to what the stimuli calls for. The behavior of the teacher would be inappropriate to that particular situation and would therefore have an adverse effect on the classroom climate necessary for reflective inquiry to take place.

Intensive studies of the climate of the classroom

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10Rokeach, op. cit., p. 389.

by R. H. Anderson and others\(^\text{12}\) have examined dominative and integrative contacts in the classroom and their work tended to establish in large measure that the behavior of the teacher sets the classroom climate. Lippitt and White\(^\text{13}\), under the influence of Kurt Lewin, independently arrived at basically the same conclusions as did the above studies by Anderson et al. Their work has been very helpful to educators in terms of a better understanding of the development of dependent relationships in the classroom. The studies by Withall, Flanders, Perkins, and Cogan\(^\text{14}\), further


established the relationship between teacher behavior patterns and the kinds of learning, achievement and growth that take place in the classroom.

The necessary climate for reflective inquiry in the social studies is described by Massialas and Cox:

The climate of the reflective classroom is psychologically open and permissive. All points of view and statements are solicited and accepted as propositions which merit examination...The statements of the students and teacher alike are judged by their relevance to the problem in question and other pertinent criteria.\(^{15}\)

This is further explained by Hunt and Metcalf:

(1) helping students feel and clarify problems and (2) arranging an emotional and intellectual environment in which students may freely explore problems. The permissive type of discussion is a good technique for bringing beliefs to the surface...creating an emotional atmosphere or climate which is conducive to open-mindedness. Students must be helped to become receptive to evidence which may, for the time being, make them feel uncomfortable.\(^{16}\)

**Procedures and Instruments Used**

This study will investigate the relationship between performance on certain personality measures, the Educational Set Scale and the reflective method as espoused by Hunt, Metcalf, Massialas and Cox. The personality characteristics will be measured by (1) the Dogmatism Scale (the relative openness or closedness of the belief-disbelief system),

\(^{15}\)Massialas and Cox, *op. cit.*, p. 112.

\(^{16}\)Hunt and Metcalf, *op. cit.*, p. 111.
(2) the Edwards Personal Preference Schedule (the psychological needs of an individual), and (3) the Educational Set Scale (the factual set or conceptual set learner). The reflective method as characterized by Hunt, Metcalf, Massialas and Cox will be the basis for the criterial of the characteristics needed in using the reflective method.

The procedures used to collect data for this study have also been reported in the literature and will be discussed in detail in Chapter III. The Dogmatism Scale according to Rokeach purports to assess the relative openness and closedness of a subject's belief-disbelief system. It has been extensively tested and has been found to be reliable and discriminates between high and low dogmatic subjects. Since its development it has been used extensively as a source of data in many studies of human behavior.

The Educational Set Scale is a fairly recent instrument developed by Siegel and Siegel in 1964. It claims to measure whether or not a learner is factually set or conceptually set. Furthermore, they claim that the level and quality of student acquisition is affected by the educational set brought by him to the environment of the classroom.17

The Edwards Personal Preference Schedule is designed primarily as an instrument for research and counseling

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17 L. Siegel and L. Siegel, loc. cit.
purposes. It provides quick and convenient measures of a number of relatively independent normal personality variables.

In Chapter IV the total population of this study will be described as to their scores on the Dogmatism Scale, the Edwards Personal Preference Schedule profiles, and their scores on the Educational Set Scale. Each of the types of behavior affecting reflective inquiry can be identified or illustrated by the range, mean, and standard deviation of each instrument from the scores of the students. For example, the scores on the Dogmatism Scale can be used to measure their relationship to the reflective method. This can be determined by the Dogmatism mean score and the range. That is, if the mean score for the subjects involved in this study is 160 on the Dogmatism Scale it will show that these students are higher than the mean in the studies by Rokeach. The mean score and the range of scores on the Scale with their detailed and varied implications can then be compared with the behaviors necessary for using the reflective method.

A mean score, range and standard deviation for each of the types of behavior on the Edwards Personal Preference and a total profile will be calculated. A mean score, range and standard deviation for the Educational Set Scale will also be calculated.

Once the population has been described by their scores and profiles on the three measurement devices it
will be the purpose of this study to determine the degree to which this population would be theoretically expected to perform well in the use of the reflective method in the teaching of the social studies. These conclusions and implications will be treated in Chapter V.

Limitations of the Concepts and Instruments Used

The limitations of this study are hereby enumerated:

(1) The study accepted the social psychological concept of the cognitive processes as a means of understanding the interaction of selected perceiving, remembering, and thinking and its subsequent utilization by an individual in the reflective thought process; (2) The Rokeach Dogmatism Scale (Form E) reveals an individual's tendencies toward dogmatic beliefs; (3) The study does not attempt to measure the teaching behavior of the prospective social studies teacher but only his dogmatism, needs and educational set; (4) The study accepted the Likert-type method of construction of the Dogmatism Scale; (5) The study accepted the forced-choice design of the Edwards Personal Preference Schedule; (6) The study accepted the lack of adequate research on the validity and reliability of the Educational Set Scale; (7) The study accepted the assumption that social studies students who were dogmatic, factually set and possessing personality needs as measured by the Edwards Personal Preference Schedule would not use the
reflective method as held by Hunt, Metcalf, Massialas and Cox; (8) The student score profiles on all three measurement devices and the dogmatism, needs and educational set are no more valid than the degree of concern and sincerity that was displayed by the students while they were taking the tests. The student participation seemed satisfactory (during the five quarter sessions at the Ohio State University and the two semesters and summer session at Capital University as well as the autumn semester at Temple University) with only $9\frac{1}{2}$ per cent of the subjects failing to carry out the instructions correctly or their consistency scores on the E.P.P.S. were too low, thus invalidating their scores; (9) The study was limited by its small population.

**Overview**

The subjects for this study were drawn from sixty-five students in social studies education at Capital University, Columbus, Ohio; 197 students in social studies education at The Ohio State University, Columbus, Ohio; and sixty students in social studies education at Temple University, Philadelphia, Pennsylvania. All subjects were tested on a battery of three tests: the Dogmatism Scale, the Edwards Personal Preference Schedule, and the Educational Set Scale. The three measurement devices were given as follows: at Capital during Autumn, Spring, and Summer Sessions, 1966-1967; at The Ohio State University
during five quarter sessions, 1966-1967; at Temple University during the Autumn Semester, 1967.

This study assumed that the relationship between performance on certain personality measures, and the educational set scale and the teaching technique of reflective inquiry as espoused by Hunt, Metcalf, Massialas, and Cox. The personality characteristics were measured by (1) the Dogmatism Scale (their relative openness or closedness of the belief-disbelief system, (2) the Edwards Personal Preference Schedule (the psychological needs of an individual), and (3) the Educational Set Scale (the factual set or conceptual set learner). The methods and techniques of the reflective method as held by Hunt, Metcalf, Massialas and Cox were the basis for the criteria of characteristics in using the reflective method.

Chapter II discusses the relevant theoretical or conceptual models upon which this study was based. Chapter III explains the methods and procedures related to collecting the data, utilizing the testing instruments, establishing the sample, and analyzing the data.

Chapter IV presents the findings and the conclusions related to the hypothesis. Chapter V discusses the implications and general significance of the findings of the study.
CHAPTER II

REVIEW OF RELATED LITERATURE

The relationship of dogmatism, needs, and educational set to reflective inquiry has been discussed in Chapter I. This chapter will discuss the theoretical propositions and the supportive empirical findings that have influenced the development and use of the Dogmatism Scale (Form E), the Edwards Personal Preference Schedule, the Educational Set Scale and their relationship to reflective inquiry as held by Hunt, Metcalf, Massialas and Cox. The related empirical research and theory are closely related to such areas as social psychology, cognitive psychology, personality theory, and general education theory.

The Dogmatism Scale

The Dogmatism Scale has been one of the major instruments used by Rokeach, Kemp and others in their studies of open and closed Belief-Disbelief Systems. Rokeach points out that the "primary purpose of this scale is to measure individual differences in openness or closedness of belief systems ... Because of the way we have defined open and closed ..., the Scale should also serve
to measure general authoritarian and general intolerance."18

All statements on the Dogmatism Scale (Form E) were constructed to "transcend specific ideological positions in order to penetrate to formal and structural characteristics of all positions."19 A total of eighty-nine items were tried out in the initial scale and four successive revisions. The fifth revision, Form E, is the form now being used in research.

The E Scale developed by Rokeach does not have formal standardization but it has been used in research involving a large number of college students and adults of varying geographical location, political and social creed, and religion.

The reliability of the Dogmatism Scale, Form E, is supported by a study by Zagona and Zurcher in which they retested 517 subjects involved in a research project fifteen weeks after the first administration of the Dogmatism Scale. They report reliability coefficients of .697 for the entire N, .51 for the highest third, .19 for the middle third, and .46 for the lowest third. The reliability coefficients are similar to those obtained by Rokeach which ranged from .68 to .93. The results of their study

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18Rokeach, op. cit., pp. 70-71.

19Ibid., p. 72.
indicate that there is no great disparity in reliability when comparing high dogmatics with low dogmatics.\textsuperscript{20} This was further supported by Lehmann in a study which had a reliability coefficient of .76.\textsuperscript{21}

The following is a synthesis of the more important research that has been conducted with the Dogmatism Scale that most directly assess its validity by experimenters other than Rokeach and since the publication of his book in 1960. The studies by Rokeach and associates are summarized in \textit{The Open and Closed Mind}\textsuperscript{22} and they generally show the Scale to differentiate open and closed Belief-Disbelief Systems.

Information evaluating the validity of the Dogmatism Scale comes from two sources, (1) the research studies concerned with the relationships between performance on the Scale and other independently observable facts about the behavior characteristic under consideration and (2) the research studies concerned with actual test-taking


\textsuperscript{22}Rokeach, \textit{op. cit.}
behavior and methodology of administration and scoring.

Zagona and Zurcher studied the behavior of high and low dogmatics in interaction with others of their own kind. They used ratings of experts as the criteria to investigate the degree of correspondence between elicited verbal attitudes (test scores) and action attitudes as they are manifested in a homogeneous social situation. "If it is demonstrated that distinctions made on the basis of verbal responses are confirmed by behavior in specially created social situations, then significant evidence of the validity of the Dogmatism Scale is obtained."²³ The authors tested two hypotheses based on Rokeach's theory concerning the behavior of the High Dogmatic Groups and Low Dogmatic Groups in in-group interaction experiments dealing with controversial material. They tested the hypotheses by administering the Scale to 517 undergraduates enrolled in elementary psychology courses. The thirty highest and the thirty lowest scores were assigned without their knowing they had been assigned to special classrooms. The students' behavior was observed by the authors for the entire semester under various classroom situations. Their research demonstrated that the Dogmatism Scale does differentiate between the high and low dogmatics.

It can be said that virtually every hypothesis suggested by the theory of dogmatism and tested in this investigation has been confirmed. Perhaps

Perhaps for the first time since research has been conducted on Rokeach's theory, groups of high-dogmatic and low-dogmatic individuals, respectively, have been experimentally found. These groups remained as social units for over four months and were observed in a wide variety of situations demonstrating intragroup and intergroup dynamics. Comparisons between the groups on leader orientation, spontaneity and originality, attitudes toward authority, group cohesiveness in the face of challenges from authority figures show important differences and confirm significant aspects of dogmatism theory and the validity of the dogmatism scale.24

Lefcourt hypothesized on the basis of Rokeach's theory that the scores of patients tested and rated by psychologists on a dimension of openness to change should differ significantly if the Dogmatism Scale is valid. A total of 272 drug addicts were classified by psychologists on the basis of tests and personal data upon admission to the hospital into three groups: (A) potential psychotherapy candidates, (B) milieu treatment cases, and (C) possible psychotic cases. The three groups represent a decreasing order of potential for change, i.e., readiness to learn, to shift to develop new values. The inter-rater agreement among the judges reached 90 percent. The three groups were found to differ significantly in their dogmatism scores.25

24 Ibid., p. 260.

Congruence between judges ratings and scores on the Dogmatism Scale are also found in the studies of Kemp and Kohler\textsuperscript{26} and Haiman and Duns.\textsuperscript{27} This procedure has weaknesses, e.g., the validity of the judges ratings, but oftentimes with tests of personality variables this is the best procedure of validation available.

The research of Costin is of considerable importance to this study. He concluded from his study that the Dogmatism Scale "may emphasize a particular kind of dogmatism, one which is especially relevant to controversial social relationships and public behavior."\textsuperscript{28} From Costin's research we can make the assumption that the Dogmatism Scale is quite relevant for studying prospective social studies teachers. Brumbaugh, Hoedt, and Beisel's research further points up the need to study prospective social studies teachers as their research showed that the closed minded students (prospective teachers) were found in mathematics, science, and the social studies. They concluded that the subject and/or professional areas seem


to attract specific personality types. Indeed this is an interesting anomaly for the social studies. Frumkin's study points out that the high dogmatics have difficulty in studying the behavioral sciences (social sciences) because they demand objectivity and critical intelligence.

It is quite apparent that the three aforementioned studies have implications for the social studies methods teacher and his students.

Kemp has conducted numerous research studies using the Dogmatism Scale and most of them are directly or indirectly related to the social studies. In one study he compared open belief and closed belief systems with critical thinking. He used the Dogmatism Scale to measure dogmatism and the Watson-Glaser Critical Thinking Test. He concluded from his study that those who had relatively open belief systems were superior in critical thinking to those with closed belief systems at the .01 level.

Apparently the high dogmatic has difficulty in tolerating ambiguities and is thus impelled toward a 'closure' before full consideration is given to each piece of contributing evidence. This sometimes results in the perceptual distortion of facts and in a conclusion that does not


encompass all elements of the problem. Kemp points out that the highly dogmatic or closed subjects experienced to a significant degree greater difficulty in synthesizing or integrating beliefs. Kemp concludes his study by stating that:

Pure thought is an illusion. Emotion is an integral component of thought and emotional components influence the process and condition the outcomes. Those with closed belief systems are hindered by the pervasive feeling of threat and dependence upon authority. These (subjects) experience great difficulty in the examination of ideas on the basis of intrinsic worth and in the integration of ideas into a new system.

If the closed-minded are provided with hints by an authority, eliminating much of the need for consideration and pointing clearly to the outcomes which follow, they are no longer impeded in the process of synthesis since they rely implicitly on the authority and directions given and do not feel the need to test them as do the open-minded.

According to Kemp, one's self-perception is closely tied to his open-closed belief system. He points out that a person is unable by introspection to determine whether or not he is closed-minded. The open-minded perceive themselves to be more closed-minded, and the closed-minded perceive themselves to be more open-minded.

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The individual's faulty perception of his dogmatic thinking makes it unlikely that he will become open-minded without assistance. In another study, Kemp supports the above view by counseling high dogmatics four times during a quarter with little change in behavior. He concluded the study with these remarks, "high dogmatics have more personal problems than the low dogmatics and need extended counseling."

Kemp later examined the Dogmatism Scale and its influence upon the training of counselors. He summarized his findings in this manner:

Open-minded are better integrated, experience less threat, have less anxiety, and are more permissive in their normal relationships. They respond this way and therefore are more understanding and supportive in their responses in the beginning.

The closed-minded are more inclined to review their responses in the light of the demands of the situation. Therefore they adjust their thinking and responses to the degree that they feel is acceptable and in accordance with the perceived demands of the instructor and the environment.

The more closed-minded we become the more concerned

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we are that our conclusions conform to the demands of authority. As closed-minded individuals we also consider experience less in terms of its intrinsic values and evaluate information and reach decisions in accordance with our early beliefs and disbeliefs in relation to some authority figure(s). Kemp emphasizes that the degree of open-closed mindedness is a learned response and to promote openness the learning environment must contain these factors: safety, self-awareness, and self-evaluation of internal and external stimuli.\textsuperscript{36}

The many studies that have been reviewed show that dogmatism with its many implications is very closely related to the training of prospective social studies teachers in the use of reflective inquiry. The studies reviewed further indicate the need for the social studies methods teacher to know more about the thinking of prospective social studies teachers.

In concluding the discussion of the Dogmatism Scale, it is logical that we now consider the test-taking behavior and methodology of this measurement device. One of the most serious charges against the Dogmatism Scale is its vulnerability to response sets. Response set has been defined by Cronbach as a

"tendency causing a person consistently to give different responses to test items that he would when the same content is presented in different forms."37

Lichenstein, Quinn and Hover in a study of forty adult neurotic patients found measures of acquiescent response sets to correlate positively and significantly with the Dogmatism Scale.38 A significant correlation between insincerity (social desirability and lie scales) and positively worded Dogmatism Scale but not a negatively worded Dogmatism Scale was reported in a study by Stanley and Martin.39

Ziller et al. examined the possibility that response set may be the result of social and psychological environment of the testing situation, rather than a personal behavioral variable. They hypothesized that "the anticipated circulation of the individual's responses among the group members following the completion of a psychological questionnaire influences the responses to the questions systematically and in accordance with the group


The study gave support to their proposal as psychologists checked the "don't know" behavior category on a questionnaire significantly less frequently than trainees under pressure conditions. The questionnaire dealt with the behavior of a person in a movie skit. The differences disappeared when confidentiality was assured.

In summary it can be said that the accumulation of research evaluating the reliability and the validity of the Dogmatism Scale is somewhat promising. The same can be said of its usefulness and validity of Rokeach's theory but a significant question still to be answered is the influence of response set upon the Dogmatism Scale Scores.

The Edwards Personal Preference Schedule

The Edwards Personal Preference Schedule was designed for purposes of counseling and research and to give quick and available measures of fifteen independent normal personality variables. The theory from which E.P.P.S. was developed has its origin in a list of manifest needs presented by H. A. Murray and others.

This schedule consists of 210 pairs of items and is designed to measure the relative importance of fifteen psychological needs. The Preference Schedule presents the

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relative strength of competing needs rather than the absolute strength of any one need. Items that measure, for example, succorance, are paired twice with each of the remaining fourteen needs. The subjects taking the test are required to choose from each pair of items with the maximum score for any one need being twenty-eight.

The concept of need is explained by Murray:

A need is a construct which stands for a force...in the brain region, a force which organizes perception, apperception, intellec­tion, conation and action in such a way as to transform in a certain direction an existing, unsatisfying situation. A need is sometimes provoked directly by internal processes of a certain kind...but, more frequently by the occurrence of one of a few commonly effective press (environmental forces)...Thus, it manifests itself by leading the organism to search for or to avoid encountering, or when encountered, to attend and respond to certain kinds of press...Each need is characteristically accompanied by a particular feeling or emotion and tends to use certain modes...to further its trend. 41

The E.P.P.S. is also designed in such a manner so that it is difficult for anyone to answer the E.P.P.S. in such a way as to appear better-adjusted than anyone else. Each item on this test contains two statements carefully matched so that neither one is more desirable than the other. Thus it is impossible to get good scores on all fifteen scales on the test.

The E.P.P.S. attempts to minimize the influence of

social desirability in responses to the 210 statements.

Assume that we have two statements representing personality traits. Assume also that these two statements are equal with respect to their social desirability scale values. If one is now asked to choose that statement in the pair that is more characteristic of himself, it may be argued that the factor of social desirability will be of much less importance in determining the response than in the case of a 'Yes-No' type of inventory. That, at least, is a brief and incomplete statement of the theory underlying the development of the form of the items in the E.P.P.S.\(^2\)

Silverman, in a study of two measures of social desirability compared with the E.P.P.S., supported the thesis of Edwards in that social desirability played only a slight role in influencing some of the E.P.P.S. scores.\(^3\) This was further supported by the studies of Katz et al. and Kelleher.\(^4\) Their research can be summarized thus:

"The Edwards test is not highly susceptible to response faking of the social desirability type and it provides reasonably independent scores on different motivational


variables."

A study by Brown concerning the social desirability variable found that it did discriminate to a significant degree, good learning performance from poor learning performance in the female college population, but it failed to separate the male students on the basis of learning performance.

The split-half reliability coefficients of internal consistency and the test-retest reliability or stability coefficients are given in Table 1, page 29. The Internal Consistency Table on the next page is based upon the 1509 subjects tested by Edwards and the coefficient was derived from the test-retest scores of eighty-nine students at the University of Washington.

Caputo's study of the test-retest reliability of the E.P.P.S. supports the evidence presented by Edwards. "Over the long term the E.P.P.S. show acceptable reliability both in regard to measurement on a single scale over all Ss and for a single S over all scales."

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46Kelleher, loc. cit.


49Edwards, loc. cit.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Internal Consistency</th>
<th>Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r_{II}</td>
<td>r_{II}</td>
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<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>1. Achievement</td>
<td>.74</td>
<td>.74</td>
</tr>
<tr>
<td>2. Deference</td>
<td>.70</td>
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<tr>
<td>3. Order</td>
<td>.74</td>
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<td>4. Exhibition</td>
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<td>5. Autonomy</td>
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<td>6. Affiliation</td>
<td>.70</td>
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<td>7. Intraception</td>
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<td>8. Succorance</td>
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<td>.78</td>
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<td>9. Dominance</td>
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<td>10. Abasement</td>
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<td>11. Nurturance</td>
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<td>12. Change</td>
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<tr>
<td>13. Endurance</td>
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<td>14. Heterosexuality</td>
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<tr>
<td>15. Aggression</td>
<td>.84</td>
<td>.78</td>
</tr>
</tbody>
</table>

Consistency Score

| N   | 1509 | 89 |

\( ^a \) Split-half, based on 14 items against 14 items, corrected.

\( ^b \) Test and retest with one week interval. Mean and standard deviations are for first testing.

\( ^{51} \) A. L. Edwards, op. cit., p. 19. (Permission to use Table 1 granted by The Psychology Corporation, February, 1968.)
It is interesting to note that Fiske's study of the E.P.P.S. Profile Stability Coefficients suggests that certain individuals who describe themselves in positive and active terms may be less variable in both their E.P.P.S. test responses and their behavior.\(^5^2\)

The construct validity of the E.P.P.S. was studied by Bernardin and Jessor and their research serves to contribute to the construct validity of the autonomy and deference scales.\(^5^3\) Their study also indicated the possible utility of the E.P.P.S. for research studies in personality. Klatt's study of high school students and their performance on the E.P.P.S. showed that there were significant differences between various groups on E.P.P.S. scores and their results lend considerable face validity to the needs as defined by Edwards. Klatt also examined the stability of the social desirability scale values in the E.P.P.S. and his study stated that there were no crucial differences between sexes or grades.\(^5^4\) This supported the research of A. Edwards which stated that there would be no difference in sex,


Further evidence to support the construct validity of the E.P.P.S. is offered in a study by Izard in which he examines how personality characteristics are associated with resistance to change.

He states that:

...autonomy and dominance correlated positively with resistance to change and abasement correlated negatively. The correlation of deference and resistance to change was not significant but was in the predicted direction for both men and women.

Two of the most serious charges against the E.P.P.S. and its validity are in the areas of the achievement scale and social desirability. Studies by J. G. Bachman and P. W. and C. E. Lunneborg show that the predictive value of the achievement scale of the E.P.P.S. is doubtful in its validity when scores are taken singly. An interesting piece of research in the area of social desirability by Kircher examined the real-life faking

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55 Edwards, op. cit.


on the E.P.P.S. by salesmen. He concluded his research by stating that "(it) tends to suggest the idea that persons more sales oriented both in interests and personality make-up are more likely to distort or fake the E.P.P.S. when it is used for selection purposes." Messick, in his examination of the dimensions of social desirability and the E.P.P.S., argues against the forced-choice method of control because it assumes that "social desirability is a single unidimensional continuum, along which statements may be spaced and in terms of which items may be equated."

There have been numerous studies using the E.P.P.S. in the field of education with the study by Jackson and Guba being the most outstanding. They examined the manifest need structure of 366 teachers and an analysis of their data showed a cluster of needs. The teachers, as a group, scored high on the need for deference—the need to yield to others' judgment and leadership, and to


conform to custom and avoid the unconventional. They also scored high on the need for order—need for order and to avoid change—and endurance—work at task until completed. The teachers scored low on heterosexuality, dominance, exhibitionism, achievement and nurturance.

Guba and Jackson point out that there is a possibility of an occupational syndrome which cuts across sex and teaching level boundaries. It appears that institutional impact forces those who experience a need dissimilar to the pattern found by Guba and Jackson to leave teaching.

If one takes the data of Jackson and Guba at face value and applies it to the problem being examined in this study it appears that reflective inquiry will rarely if ever be used by teachers.

They expand this thesis by stating:

"... the kind of child who will be rewarded by the typical teacher exhibits the qualities of neatness, orderliness, ability to follow directions, disposition to avoid giving trouble or to stray into unchartered areas, and the like... Here may also lie the answer to the question why gifted children often do not rise to their full potential. ... Teacher needs for the full encouragement to develop and mature student aren't there and this may be one of the chief deterrents to creative learning—the teacher."

They conclude their study by stating that "teachers, in general, are not highly motivated by

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a strong interest in social service, nurturant needs
or by a deep interest in children."^3

Merrill's study of education students, successful
science teachers and administrators supports the above
thesis. According to Merrill, the teachers appeared to
be "obsequious, eternally patient, painstakingly demanding
and with less achievement and individual drive than other
professional groups."^4 Merrill found that the needs of
defferece, order and endurance were high and heterosexuality
and exhibition were low. Saltz in his study further supports
the Jackson and Guba thesis when his research found
that the highest needs for teachers were deference, endur­
ance and the lowest needs were exhibition and heter­
osexuality.^5

A modification of the Jackson and Guba thesis is
found in the Cook et.al. study. They discovered that
teachers were "socially uncomfortable, inept, highly
dependent, and conforming, and yet have at the same

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^3Ibid., p. 192.

^4R. M. Merrill, "Comparison of Education Students,
Successful Science Teachers and Education Administrators
on the E.P.P.S.," Journal of Educational Research, LIV
(September, 1960), pp. 38-40.

^5J. W. Saltz, "Teacher Stereotype-Liability in
Recruiting?" School Review, LXVIII (Spring, 1960),
pp. 105-111.
time strong status and authority needs." This study indicates that these needs are met within the protective environment of the school. This study concluded with a warning that great caution must be exercised in generalizing from the data.66

There are many other studies that have used the E.P.P.S. in examining the needs of education students, student teachers, and experienced teachers. Since all of them are very similar to those described above no others will be examined here. However, there is research of interest to this study that emphasizes the E.P.P.S. as a counseling and screening device.

According to Louis Raths there is a great need to explain to teachers their psychological needs and those of others in order to improve their comprehension of the total picture of education and their role in it.67

From a study of principals and counselors, C. G. Kemp concurs with Rath in that educators should be familiar with their need structure. Kemp states that since the principal evaluates student responses and the counselor assists the student to understand himself it is necessary


that their need structure be considered in the selection of applicants for training in each of these areas. It might be added that the same procedure should be used for teachers.68

In concluding this discussion of the E.P.P.S. it can be readily seen that the accumulation of research evaluating the validity and reliability of the Schedule is partially favorable. The needs theory, as developed by Murray, and Edwards' interpretation of it, also appear somewhat promising. However, questions remain in regard to the predictive value of the achievement scale and the social desirability factor.

Educational Set Scale

The Educational Set Scale was developed as a portion of a larger investigation of the instructional Gestalt proceeding under a grant from the United States Office of Education. This scale claims to measure educational set. This set presumes to determine the specific kind of content the learner tends to winnow out from the myriad of his educational experiences. Educational set is a continuum defined at the poles by predispositions to learn factual content on one extreme and conceptual content on the other.

According to Siegel and Siegel, most people are

educationally set somewhere near the middle of the continuum. They define the factually set learner as one who is predisposed to learn factual content. The factually set learner adds information to his cognitive structure without being driven to interrelate these elements into any contextual whole. For this kind of learner, a fact has an integrity of its own. On the other hand, the conceptually set learner rejects factual acquisition except as units of information are clustered and interrelated. This learner prefers to learn concepts and principles and will usually dismiss a bit of factual information or subsumes it in a broader conceptual framework.69

The E.S.S. is a forced-choice, objectively scored group inventory for assessing educational set. It is composed of thirty-one triads using ninety-three statements from the original 291 items and each triad is cast in the form:

Assume you are enrolled in a (insert name) course and are required to learn each of the listed topics. Consider each set of three topics and rank them in terms of your interest. Assign a rank of 1 to the topic that would interest you most; a rank of 2 to the topic in which you have intermediate interest; a rank of 3 to the topic that would interest you least.70


70Ibid., p. 2.
Since the E.S.S. is a recent measurement device there has been no research found by this writer in regard to its reliability and validity other than the efforts of the authors of the scale.

Two estimates of reliability have been obtained for the E.S.S. by Siegel and Siegel. The split-test (odd-even) reliability which was corrected for length in a sample of 200 respondents was .94. Their estimate of retest reliability was based on the correlation between test and retest for sixty-six students with the time intervals ranging between one and five days. The correlation between the test and retest was .92.\(^7\)

Siegel and Siegel's research examined the importance of educational set as a determinant of acquisition. They hypothesized that, other things being equal, conceptually set subjects would be more likely than factually set subjects to learn both conceptually oriented content (e.g. principles, generalizations, applications) and factually oriented content. They concluded their study by stating that:

educational set as measured by the E.S.S. probably reflects the learner's broad cognitive style rather than a more narrow perceptual process. A student's placement on the factual-conceptual set continuum is a 'given' with which he enters a course. By the time he is

\(^7\)Ibid., p. 6
an undergraduate, his educational set can be assessed reliably indicating that this is a stable rather than transitory variable. Furthermore, educational set influences the quality of acquisition.\footnote{Ibid., p. 11.}

**Reflective Inquiry**

Since Hunt, Metcalf, Massialas, and Cox have been influenced extensively by John Dewey it is important to examine some of Dewey's thinking. The classic definition of reflection is given by Dewey in these words:

(an) 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...it includes a conscious and voluntary effort to establish belief upon a firm basis of evidence and rationality.\footnote{John Dewey, *How We Think* (Boston: Heath and Co., 1933), p. 9.}

John Dewey felt that the teacher's personality played a very crucial role in the learning situation and set the mood for learning if indeed learning takes place.

Everything the teacher does, as well as the manner in which he does it, incites the child to respond in some way or other, and each response tends to set the child's attitude in some way or other...The teacher is rarely (and even then never entirely) a transparent medium of the access of another mind to a subject...the influence of the teacher's personality is intimately fused with that of the subject; the child does not separate or even distinguish the two.\footnote{Ibid., p. 59}
Hullfish concurs with this view of Dewey when he urges that the climate for learning must be improved.

We are suggesting, simply, the development of a classroom atmosphere in which students may normally anticipate 'a call for evidence', while knowing, at the same time, that they will be given a sporting chance to make good when caught off balance. The atmosphere should be one within which the students view themselves as participants in acts of exploration and discovery, acts that nurture the reflective spirit.75

According to Hullfish, the teacher must be aware of the habits and attitudes he reveals in his classroom because these are decisive elements in promoting or deterring the student's development of reflective inquiry. He points out that leadership for reflective inquiry and thinking must come from the teacher but he cites research from an unpublished dissertation that shows that the prime reason is the teacher's lack of skill in aiding students in the development of reflective inquiry.76

The view presented by Hullfish regarding the coverage of factual information versus reflective inquiry supports the conceptual type of learner (reflective learner) previously described by Siegel and Siegel in this chapter.77


76Ibid., pp. 210-211.
conflict, therefore, it is but elementary educational wisdom to give the right of way to thinking.77

Further support to the Hullfish view is given by Hunt and Metcalf in their discussion of the evaluating techniques of reflective inquiry:

For a social-studies teacher pursuing a reflective approach to teaching, evaluation takes the form of trying to determine how well students are achieving beliefs and behaviors in line with predicted consequences such as those given above. Such a teacher will try to determine the degree to which students are conceptualizing (in contrast to memorizing isolated facts), achieving more consistent and better-grounded beliefs, and learning habitually to tackle problems reflectively.78

Throughout Dewey's How We Think he comments on dogmatism and its effects upon learning and especially reflective thinking. "He(teacher) has to avoid all dogmatism in instruction, for such a course gradually but surely creates the impression that everything important is already settled and nothing remains to be found out."79 Dewey further explains reflective inquiry in terms that are very relevant to the E.P.P.S., E.S.S. and the Dogmatism Scale by stating:

77Ibid., p. 229.
78Hunt and Metcalf, op. cit., p. 397.
...a willingness to hold final appraisal in suspense; willingness to reject the factors entirely or relegate them to a different position in the evidential scheme if other factors yield more solvent suggestions. Alertness, flexibility, curiosity, are the essentials; dogmatism, rigidity, caprice, arising from routine, passion, and flippancy, are fatal. In short, thinking is a continual appraising of both data and ideas. 80

In Chapter Two of his text, The Nature of Educational Method, Frymier presents a process for working toward democratic behavior which gives support to the above thesis of Dewey. For the sake of brevity and summary Frymier's chart of the democratic authoritarian continuum is presented. 81

<table>
<thead>
<tr>
<th>Democratic</th>
<th>Authoritarian</th>
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<tbody>
<tr>
<td>More</td>
<td>Less</td>
</tr>
<tr>
<td>Accurate</td>
<td>Perceptive</td>
</tr>
<tr>
<td>Realistic time</td>
<td>Distorted</td>
</tr>
<tr>
<td>Positive</td>
<td>Negative</td>
</tr>
<tr>
<td>Challenged</td>
<td>Threatened</td>
</tr>
<tr>
<td>Adequate</td>
<td>Inadequate</td>
</tr>
<tr>
<td>Accepting</td>
<td>Rejecting</td>
</tr>
<tr>
<td>Tolerant</td>
<td>Prejudicial</td>
</tr>
<tr>
<td>Loving</td>
<td>Hateful</td>
</tr>
<tr>
<td>Independent</td>
<td>Dependent</td>
</tr>
<tr>
<td>Equalitarian</td>
<td>Dominant-Submissive</td>
</tr>
<tr>
<td>Autonomous</td>
<td>Suggestible</td>
</tr>
<tr>
<td>Listens</td>
<td>Does not listen</td>
</tr>
<tr>
<td>&quot;Gets Thru&quot;</td>
<td>Aroused barriers</td>
</tr>
<tr>
<td>Understands</td>
<td>Does not comprehend</td>
</tr>
<tr>
<td>&quot;Communicative&quot;</td>
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</table>

80 Ibid., pp. 124-125.

Dewey discusses mental inertia and dogmatism and he emphasizes that in our society certain people or classes of people (the establishment) become the accepted protectors and transmitters of established beliefs. He points out that to question their beliefs is to doubt their authority but when one accepts their beliefs it is a sign of loyalty and good citizenship. He concludes by commenting:

What will not fit into the established canons is outlawed; men who make new discoveries are objects of suspicion and even of persecution. Beliefs that perhaps originally were the products of fairly extensive and careful observation are stereotyped into fixed traditions and semi-sacred dogmas, accepted simply upon authority, and are mixed with fantastic conceptions that happen to have won the acceptance of authorities. 82

The process of analysis and synthesis are very vital to Dewey's concept of reflective thinking (experimental or scientific thinking). He shows how analysis is a process of discrimination and disentangling while synthesis is assimilation and identification. According to Dewey, both of these attributes aid the inquirer in his ability to manage the novel and variable and to increase his interest in the possibilities of the future rather than the past.

The change of attitude from conservative reliance upon the past, upon routine and custom, to faith in progress through the intelligent regulation of existing conditions is, of course, the reflex of the scientific method of experimentation. The empirical method says, 'Wait till there

82Dewey, op. cit., p. 194.
is a sufficient number of cases;' the experimental method says, 'Produce the cases.'

Experience, to Dewey, was not rigid and closed, or dominated by the past, by custom and routine. The crux of education is to set the learner free from the limiting influences of the world and to emancipate and expand his experiences by opening new vistas.84

Massialas and Cox support Dewey's thinking when they state that "The student and the teacher must find themselves involved in a systematic and continuous effort to reconstruct their beliefs in the light of unearthed evidence. The concepts or principles of the adult world can only serve as springboards for independent study."85

For example, since the social studies cover a large area of values, attitudes and generalizations it would seem to follow that social studies classes should not be taught with dogmatic and rigid procedures but with reflective inquiry to open new areas of thought through experimentation thus enabling one to break away from ethnocentric thought. B. Bode concisely presents his

83Ibid., p. 199.
84Ibid., p. 201.
85Massialas and Cox, op. cit., p. 54.
view on Dewey's reflective thinking by stating that, "This whole process is called thinking, which may be defined most simply as the finding and testing of meanings." 86

An outstanding social studies text that supports the reflective inquiry method is authored by Hunt and Metcalf. It draws heavily from Dewey, Bode, Hullfish and Gestalt-Field psychology in building a case for reflective inquiry. In one chapter of interest to this study, entitled "The Reflective Method", they discuss reflection and its comparison with two common practices: rationalization and use of common sense. They point out that rationalization avoids use of all relevant data or it is twisted and bent for the user's ends. They state that the rationalizer is dogmatic in that he accepts judgments made without reflection. It is also explained that the rationalizer desires that he will have an advanced guarantee that his conclusions are fixed and accepted. Even though reflective thinking may depend on authority, a person who pursues the reflective inquiry approach is critical of authority and scrutinizes the method by which the authorities have drawn their conclusions. 87


87Hunt and Metcalf, op. cit., p. 62.
One of the important aspects of reflection according to Hunt and Metcalf is that no conclusion can be final until it has been corroborated against the evidence from the world. Whereas the rationalizer accepts empirical evidence without question the reflective thinker challenges accepted premises as true by thoroughly examining empirical data. They also attack the common-sense method because those who use this approach are usually satisfied with a cursory examination of evidence and then make hasty conclusions. "There is also a dogmatic quality to common sense conclusions which is unbecoming to a truly reflective approach."\(^8^8\)

Massialas and Cox support the above statements by Hunt and Metcalf when they claim that "Authoritarianism, rigidity, and dogmatism are generally negatively related to achievement and to abstract thinking."\(^8^9\)

An initial task of the teacher in using the reflective method is the creation of an emotional climate which is conducive to developing open minds. One of the measures of success in inspiring reflective inquiry in regard to vital social issues is dependent upon how open-minded the student can become. Hunt and Metcalf point

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\(^8^8\)Ibid., p. 63.

\(^8^9\)Massialas and Cox, op. cit., p. 42.
out that developing open-minded students is dependent upon the teacher's ability to create an atmosphere in which their students can air personally-felt problems freely "in a give and take atmosphere of a face to face group."  

Massialas and Cox, in discussing the discerning characteristics of the reflective classroom state that one of the most important is the open psychological climate of discussion:

The climate of the reflective classroom is psychologically open and permissive. All points of view and statements are solicited and accepted as propositions which merit examination... The statements of students and teacher are judged by their relevance to the problem in question and other pertinent criteria. All who engage in critical inquiry are given the opportunity to affect its outcome in the open classroom...

It should be kept in mind that the teacher will frequently ask questions that he, himself, cannot answer offhand. However, he does not try to conceal his quandry from the class. He acknowledges the fact that he also engages in reflective inquiry in an attempt to find truth as it finally appears. This attitude on the part of the teacher reinforces the psychological perplexity of the class and reaffirms the reality of the problem under attack.

According to Hunt and Metcalf in order to understand the teacher's role in creating open-mindedness and a desire to change beliefs and behavior, the teacher must understand how emotional blocking prevents a change

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90 Hunt and Metcalf, op. cit., p. 134.
91 Ibid., p. 112.
in beliefs and behaviors. They point out that a failure of perception is a cause of closed minds because the individual's beliefs are not consistent with one another or that his deductions made for these beliefs do not check with the data that is available. They conclude their discussion of perception with these comments:

... if he feels that a cherished belief is under attack, he will read the facts of perception in such a way as to protect and preserve the belief. Failures in perception are most likely to occur in the closed areas of belief and value. Here a person simply does not see facts as data... We can hardly expect a person to incorporate data into his thinking when he remains unaware of their presence or significance... Simply telling a person that data are there is often futile. If his perception does not permit him to see them, we must approach the problem in such a way as to remove the distorting factors.92

The Rogerian approach is cited by Hunt and Metcalf to show that the individual becomes more rigid under threat and relaxes when he is completely free from threat. They assert that the student needs to feel accepted and should feel that he has complete freedom to express his views without danger of criticism.93

Hunt and Metcalf suggest techniques that the teacher may use to enhance conceptual and behavioral change with a minimum of threat. These suggestions are

92Ibid., p. 144.
93Ibid., p. 146.
are quite similar to those studies of teacher behavior presented in Chapter I. They emphasize that the teacher should avoid ridicule, sarcasm, and should not attack or cast doubt upon the intelligence or ideals of students.94

Throughout the whole process the teacher's role is central to the success of reflective inquiry as he must be able to do the following: (1) discover and eliminate unhealthy social situations, (2) encourage free communication among students, (3) aid students in stating opinions and propositions meaningfully, (4) discourage the use of language that is emotional, (5) give all students a chance to be heard and correctly interpreted, and (6) cultivate an accepting congenial interest in all students.95

Massialas and Cox support the thinking of Hunt and Metcalf that has been presented in this study. In fact, they go into greater depth on certain areas that are germane to this investigation. One of these areas is the reliance on fact as evidence in social studies classrooms. To the reflective thinker facts are not an absolute.

They are constantly judged relative to their reliability and significance, per se, but they are judged on the basis of their relationship

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94Ibid., p. 148.

95Ibid., p. 149.
to hypotheses about persistent and
data and important human problems. That is
to say that the reflective class is
hypothesis-oriented and that facts are
valued primarily in terms of this contrib-
utation to the focal hypothesis. The data
marshaled in the classroom are offered
as evidence to support, qualify, or
refute the hypothesis under consideration.\textsuperscript{96}

The role of the teacher in reflective inquiry
according to Massialas and Cox is one in which the
teacher does not assume the role of authority in
determining values, e.g. right and wrong, good or bad,
proper and improper. The teacher's role is to search for
and test meanings and to critically examine values instead
of teaching them. The position that Massialas and Cox sup-
port is based on the thesis that if we have a democratic-
oriented community which is pluralistic all students
should have the opportunity to state their ideas and
interpretations on controversial or "closed" social
issues.\textsuperscript{97} They further expand on the teacher's role
by stating:

\begin{quote}
... if he is to function in the roles described
for him in this text as an agent of social
stability and peaceful change, he must confront
his class with factual and value propositions
that are uncertain, unsettled and controversial.
As a matter of principle, his commitment to
inquiry demands that he will face all propositions
in a spirit of intelligent doubt and disbelief.
While he acknowledges the ultimate responsibility
\end{quote}

\textsuperscript{96}Massialas and Cox, \textit{op. cit.}, pp. 114-115.
\textsuperscript{97}\textit{Ibid.}, pp. 174-175.
of establishing warranted belief, he also recognizes the seeming that such belief emerges only from doubt and grounded criticism.98

The teacher must encourage student investigation and probing by refusing to provide a "stock-response answer" and to eliminate the concept of a right or wrong answer. The student has the task of verifying and accepting propositions by a constant check and careful examination of all ideas, hypotheses, and data. A classroom climate that enables the students to live with indecision and to seek a wider range of alternatives to a problem is one of the major features of the reflective inquiry centered classes. Massialas and Cox point out that this climate differs from the traditional social studies class in that the discussion is not tightly-controlled, there are no expressions of conclusions, and the arbitrary assignments covering material for its own sake are eliminated.99

The jurisprudential approach to reflective inquiry suggested by Oliver and Shaver adds depth to the criteria for using reflective inquiry. They emphasize that the teacher must be able to recognize the values in controversies and have a tentative-probabilistic view of knowledge:

98Ibid., p. 292.
99Ibid., pp. 332-334.
The need for an intelligent, open, inquiring, and imaginative mind is obvious ... the teacher must also have a good general background in history and the social sciences if he is to deal with public issues adequately in the classroom and be able to direct students to the proper sources of information.

... He must perceive his students as rational human beings with a right to be involved in decision-making. The teacher must be willing to interact freely with his students in the interchange of ideas, accepting their contributions as valuable and worthwhile to build upon.

In summary, it should be evident at this point in the study that the dogmatic, domineering, factually-set, authoritarian, deferring, aggressive prospective social studies teacher would have difficulty in using the reflective inquiry method. For example, it would seem that a dogmatic, factually-set authoritarian could not create the proper climate for students to use reflective inquiry nor be able to entertain data, ideas, hypotheses, and information that differed from his biases.

In this chapter, a case has been made for the relationship of scores on the Dogmatism Scale, the Edwards Personal Preference Schedule and the Educational Set Scale to the use of reflective inquiry by prospective social studies teachers. The following chapter will discuss the methods and procedures related to the collecting of the data, the utilization of the testing instruments,

the establishing of the sample, and the analyzing of the data.
CHAPTER III

METHODS AND PROCEDURES

Description of the Population

The population of this study was drawn from sixty-five students at Capital University, Columbus, Ohio; 197 from The Ohio State University, Columbus, Ohio; and sixty from Temple University, Philadelphia, Pennsylvania. They were all enrolled in either a social studies methods course or in a student teaching seminar covering the period of time from 1966-1967.

Description of the Testing Session

The data for this study was gathered in two testing sessions of two hours each. These testing sessions were the regular class meetings of the social studies methods courses or the student teaching seminar. They were spaced one week apart.

The classes were informed that they were going to take three measurement devices in order to give us more information about prospective social studies teachers. In order that the identity of the subjects would not be known each of the student's tests were numbered. Thus, no names would appear on any papers.
The students were asked to answer all questions honestly and to do their best on the three measurement devices. They again were reminded that the examiner would not know their identity but would be happy to provide some information about the individual's performance if he cared to reveal his subject number at a later date.

The subjects were given two hours to complete the E.P.P.S. during the first testing session. Most of the subjects completed it before one hour but a small group took the entire two hour session to complete the E.P.P.S. During the second session the subjects completed the Dogmatism Scale (Form E) and the Educational Set Scale in less than one hour.

A pilot study using these three instruments was first used in two teaching seminars at The Ohio State University during the Winter Quarter of 1966 to establish some guidelines for the testing procedures and to see if there was merit in using the three measurement devices discussed above.

The Educational Set Scale and the Dogmatism Scale were hand-scored by the examiner and the standard method of spot-checking the scoring was used to insure accuracy. All subjects taking the Edwards Personal Preference Schedule at Capital University and the Ohio State University had their tests machine-scored with the E.P.P.S. tests from Temple University being hand-scored. Again, it must
Again, it must be pointed out that the standard method of spot-checking the scoring was used with the E.P.P.S. tests at Temple.

**Personality Measures Used**

The Dogmatism Scale (Form E) was selected as a measurement device since it purports to measure the openness or closedness of a person's belief system and therefore an important variable in the use of the reflective method. Since the forty statements on the Dogmatism Scale appear to emphasize a particular type of dogmatism, that is to say, one that is relevant to controversial social issues or closed areas, it became quite germane to the study of prospective social studies teachers and the use of the reflective method. For example, Rokeach proposes that a dynamic reciprocal relationship exists between the way a person thinks and the way a person acts. An understanding of how a person thinks leads us to a better understanding of how he behaves. How a person reasons and rationalizes is said to be his Belief-Disbelief System and this System may be relatively "open" or "closed" depending upon its operational characteristics.

During the course of our investigation we have come more and more to view a given personality as an organization of beliefs or expectancies having a definable and measurable structure. We have also come to conceive of ideology, insofar as it is represented within the psychological structure of the person, in exactly the same way, namely, as an organization of beliefs and expectancies. And, finally we have come to conceive of man's cognitive activities-thinking,
remembering, and perceiving—as processes and changes that take place within a person who has already formed a system of beliefs which we can describe and measure. 

Rokeach explains that there are three types of acceptance and rejection.

The first is classified as a cognitive phenomenon, the second involves the phenomenon of prejudice or intolerance, and the third authoritarianism. Is it not possible, however, that the way we accept or reject ideas, people, and authority all go together? Perhaps they are but different facets of the same thing, related to each other and in a one-to-one fashion within the belief system.

What exactly is a Belief-Disbelief System? Rokeach proposes a set of structural attributes held in common by all Belief Systems and theorizes how these basic elements combine to form systems and subsystems.

The Belief System is conceived to represent all the beliefs, set, expectancies, or hypotheses, conscious or unconscious, that a person at a given time accepts as true of the world he lives in. The Disbelief System is composed of a series of subsystems rather than merely a single one and contains all the disbeliefs, sets, expectancies, conscious or unconscious, that to one degree or another, a person at a given time rejects as false... it is far more than the mere opposite of the belief system.

Rokeach then defines the important structural properties of the Belief-Disbelief Systems. He organized

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101 Rokeach, op. cit., p. 7.
102 Ibid., p. 8.
103 Ibid., p. 33.
the properties into three dimensions: Belief-Disbelief, Central-Peripheral, and Time-Perspective.

Belief-Disbelief. A person's beliefs and disbeliefs are organized into two interdependent systems: a Belief System and a Disbelief System. Each system is composed of variously organized subsystems. The Disbelief System varies in degree of similarity to the Belief System. Further characteristics of the Belief-Disbelief dimension which Rokeach explains in far greater detail are isolation (two related beliefs are not perceived to be related), differentiation (richness or depth of knowledge), and comprehensiveness or narrowness of the system.

Two concepts that are vital to the study of a belief system are central-peripheral. Rokeach explains their role in this manner:

In brief, a central region represents what will be called the person's 'primitive' beliefs. These refer to all the beliefs a person has acquired about the nature of the physical world he lives in, the nature of the 'self' and of the 'generalized other' (G. H. Mead). An intermediate region represents the beliefs a person has in and about the nature of authority and the people who line up with authority, on whom he depends to help him form a picture of the world he lives in. A peripheral region represents the beliefs derived from authority, such beliefs filling in the details of his world map.

104Ibid., p. 50.
Time-Perspective. The last dimension of the belief system is time, i.e., the person's belief about the past, present, and future and the manner in which they are related to each other.

The relative openness or closedness of Belief-Disbelief Systems are described in the following summary by Rokeach.

Definition I: The Defining Characteristics of Open-Closed Systems

A Belief-Disbelief System is Open (Closed)

A. to the extent that, with respect to its organization along the Belief-Disbelief Continuum,
   1. the magnitude of rejection of Disbelief subsystems is relatively low (high) at each point along the continuum;
   2. there is communication (isolation) of parts within and between Belief and Disbelief Systems;
   3. there is relatively little (great) discrepancy in the degree of differentiation between Belief-Disbelief Systems;
   4. there is relatively high (little) differentiation with the Disbelief system;

B. to the extent, with respect to the organization along the Central-Peripheral dimension,
   1. the specific content of primitive beliefs (central region) is to the extent that the world one lives in, or the situation one is in at a particular moment, is a friendly (threatening) one;
   2. the formal content of beliefs about authority and about people who hold systems of authority (intermediate region) is to the effect that authority is not absolute (is absolute) and that people are not to be evaluated (that people are to be accepted and rejected) according to their agreement or disagreement with such authority;
   3. the structure of beliefs and disbeliefs perceived to emanate from authority (peripheral region) is such that its
substructure are in relative communication (isolation) with each other, and finally;

C. to the extent that, with respect to the Time-Perspective dimension there is a;
   1. relatively broad time perspective (relatively narrow, future-oriented time perspective).^105

Rokeach concludes his discussion of the Belief-Disbelief Systems with his last definition:

Definition II:

... This leads us to suggest a basic characteristic that defines the extent to which a person's system is open or closed, namely the extent to which the person can receive, evaluate, and act on relevant information received from the outside on its own intrinsic merits, unencumbered by irrelevant factors in the situation arising from within the person or from the outside.^106

An understanding of a person's manner of thinking leads us to a better understanding of his personality, cognition, and ideology. Rokeach states that the primary purpose of one's Belief-Disbelief System serves the motives of the need to know and understand and the need to ward off threats. He explains this in greater detail:

To the extent that the cognitive need to know is predominant and the need to ward off threat absent, open systems should result. In the service of the cognitive need to know, external pressures and irrational internal drives will often be pushed aside, so that information received from outside will be discriminated, assessed, and acted on according to the objective requirements of the situation. But as

^105 Ibid., pp. 55-56.

^106 Ibid., p. 57.
need to ward off threat becomes stronger, the cognitive need to know should become weaker, resulting in more closed-belief systems. Under threat, information and source should become inseparable and should be evaluated arbitrarily in line with the rewards and punishments meted out by authority.

It is proposed, however, that for most persons in most situations, both sets of needs operate together to one degree or another. A person will be open to information insofar as possible, and will reject it, screen it out, or alter it insofar as necessary.  

Rokeach summarizes that the more closed the Belief-Disbelief System the more it becomes a "tightly woven network of cognitive defenses against anxiety."  

The Edwards Personal Preference Schedule was selected as a measurement device because it is designed for purposes of counseling and research. It was selected for this study primarily because it gives one quick and available measures of fifteen independent normal personality variables and many of these personality variables are relevant to the use of reflective inquiry. 

Edwards explains the manifest needs associated with the fifteen independent personality variables:

1. ach Achievement; To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult

107Ibid., p. 68.  
108Ibid., p. 69.
problems and puzzles, to be able to do things better than others, to write a great novel or play.

2. def Deference: To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

3. ord Order: To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to make plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.

4. exh Exhibition: To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

5. aut Autonomy: To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those positions of authority, to avoid responsibilities and obligations.

6. aff Affiliation: To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.

7. int Intracception: To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze
the motives of others, to predict how others will act,

8. suc Succorance: To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

9. dom Dominance: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

10. aba Abasement: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

11. nur Nurturance: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. chg Change: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.
13. Endurance: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

14. Heterosexuality: To go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

15. Aggression: To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

The statements that comprise the E.P.P.S. and the fifteen variables that these statements purport to measure have their origin in a list of manifest needs presented by H. A. Murray and others. The description and the name of each variable in the E.P.P.S. are the same as the needs developed by H. A. Murray.

The concept of need as developed by H. A. Murray emanated from the individual's immediate past and would be considered a "push from the rear" rather than a "pull from the future." He did, however, concede that the environment could be effective in arousing

this pushing, "... to consciousness the field that lies before its vision or the imagery which seems to anticipate such a field commonly appears in the guise of a pull, positive, incentive or attraction."110

Murray points out that a necessary complement to the need concept is the notion of an attracting or repelling object which he refers to as press. He defines press as the "temporal gestalt stimuli which usually appears in the guise of a threat of harm or promise of benefit to the organism."111

In defining need Murray states that it is a construct which represents a force which systematizes action, perception, conation, intellection, and apperception in such a manner as to change in a certain direction an existing, unsatisfying situation. This need can be provoked directly by internal processes but more frequently by the occurrence of effective press. The need then manifests itself by leading the individual to seek or to avoid encountering or, when experienced, to attend and respond to certain kinds of press. The need is accompanied by a specific emotion or feeling and tends to use sub-needs to promote its trend. It may be momentary or enduring but it persists and creates a certain course of overt behavior. This behavior changes

110Murray, op. cit., p. 68.
111Ibid., p. 748.
the initial circumstance to appear or satisfy the individual. 112

**Educational Set**

The Educational Set Scale became a part of this study since it attempts to measure educational set. This set is a continuum with the factually-set learner on one extreme and the conceptually-set at the other. Since the reflective method relies heavily upon hypothesizing, conceptualizing and generalizing, it is apparent that the degree of educational set, be it factual or conceptual, is pertinent to the study of the use of reflective inquiry. Furthermore, the fact that the thirty-one triads that comprise the Educational Set Scale are overwhelmingly social science questions makes it very relevant to this study of prospective social studies teachers.

**Analyzing the Data**

Out of the total statistical data collected on three measurement devices, thirty-four subject's scores were incomplete or their consistency scores on the E.P.P.S. were too low and therefore their results were questionable. Table 2 represents a tabulation of these cases.

After the removal of the thirty-four subjects,

112Murray, *op. cit.*, p. 69.
322 subjects remained in the study. The three institutions represented in this study are described as to means and standard deviations on the Educational Set Scale, the Dogmatism Scale and for each of the fifteen personality variables on the Edwards Personal Preference Schedule. In order to facilitate comparison among the three groups represented in this study the above procedures were also used to explore differences between male and female students in each group and to examine the differences among the three institutions represented. T scores were also computed to see if significant differences existed among the three institutions when compared with the norms of the three scales.

Table 2

<table>
<thead>
<tr>
<th>TABULATION OF DISCARDED SUBJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Subjects</td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>E.P.P.S. answers incomplete</td>
</tr>
<tr>
<td>E.S.S. answers incomplete</td>
</tr>
<tr>
<td>Dogmatism answers incomplete</td>
</tr>
<tr>
<td>E.P.P.S. scores for consistency too low</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Table 3 shows the distribution and stratification of the 322 subjects used in the statistical analysis.

Table 3
DISTRIBUTION OF THE STUDY

<table>
<thead>
<tr>
<th>Group</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital University</td>
<td>40</td>
<td>25</td>
<td>65</td>
</tr>
<tr>
<td>Ohio State University</td>
<td>148</td>
<td>49</td>
<td>197</td>
</tr>
<tr>
<td>Temple University</td>
<td>37</td>
<td>23</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>225</td>
<td>97</td>
<td>322</td>
</tr>
</tbody>
</table>

In the next chapter, the statistical data derived from the tests from the aforementioned procedures will be presented in tabular form. The differences as they appear in the collected data and in the scores of the groups will be noted. These differences will be evaluated in relation to their bearing on the purposes of the present study as outlined in an earlier chapter.
CHAPTER IV

RESULTS AND THEIR INTERPRETATION

The results of the three measurement devices will be presented in this chapter in the following order: (1) the Dogmatism Scale; (2) the Educational Set Scale; and (3) the Edwards Personal Preference Schedule.

An attempt will be made, following the presentation of the three scales and their results, to formulate theoretical implications based upon the test results and their relationship to the criteria necessary for reflective inquiry as described by Hunt, Metcalf, Massialas and Cox.

The Dogmatism Scale Results

Table 4 presents the means and standard deviations on the Dogmatism Scale (Form E) of the three groups that participated in this study. As may be seen from mean scores for the three groups, those students at Temple University made higher scores than those students at Capital University, just as the latter made higher scores than those students at Ohio State University. There were significant differences in the means and
standard deviations for both Temple University and Capital University students to the .05 level.

TABLE 4
DISTRIBUTION OF THE DOGMATISM SCALE (FORM E)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Range</th>
<th>Median</th>
<th>S.D.</th>
<th>Da</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Univ.</td>
<td>65</td>
<td>119-190</td>
<td>154.31</td>
<td>29.92</td>
<td>S</td>
</tr>
<tr>
<td>Ohio State Univ.</td>
<td>197</td>
<td>87-193</td>
<td>149.74</td>
<td>31.74</td>
<td>NS</td>
</tr>
<tr>
<td>Temple Univ.</td>
<td>60</td>
<td>120-190</td>
<td>154.30</td>
<td>29.72</td>
<td>S</td>
</tr>
<tr>
<td>Total</td>
<td>322</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As determined by t tests
S significant to the .05 level
NS no significance

Since higher scores on the Dogmatism Scale (Form E) are presumed to be indicative of the closedness of a person's belief system it would seem to follow that the most closedness is to be found with the Temple University and Capital University students.

Predicated on the above assumption, students from Ohio State University are less dogmatic than are the students at Capital University and Temple University.

However, when the mean scores of the three groups are compared with the means of the pilot groups used by Rokeach to develop his scale it is apparent that they are higher than those presented in Rokeach's work.
The Educational Set Scale

The results in this case are presented in Table 5. It should be noted that the only published norms for the Educational Set Scale are those appearing in an article by L. Siegel and L. Siegel. One table is given and it is based on 1,335 students with 126 students being enrolled in freshman and sophomore courses and the remainder in upper division courses. A scores of -62 would place one at the factually set end of the educational set continuum and a score of +62 at the conceptually set end of the continuum.

TABLE 5

DISTRIBUTION OF THE EDUCATIONAL SET SCALE

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Range</th>
<th>Median</th>
<th>S.D.</th>
<th>Da</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Univ.</td>
<td>65</td>
<td>-3 to 33</td>
<td>13.32</td>
<td>7.87</td>
<td>VS</td>
</tr>
<tr>
<td>Ohio State Univ.</td>
<td>197</td>
<td>-4 to 44</td>
<td>23.13</td>
<td>3.60</td>
<td>NS</td>
</tr>
<tr>
<td>Temple Univ.</td>
<td>60</td>
<td>-3 to 36</td>
<td>11.95</td>
<td>10.46</td>
<td>VS</td>
</tr>
</tbody>
</table>

Total 322

As determined by t tests
NS no significance
VS very significant to the .01 level

The higher scores (Table 5) on the Educational Set Scale are presumed to be indicative of conceptual acquisition while on the other hand we can infer from the lower scores that they are indicative of factual acquisition. From the above assumptions and the data in Table 5, it is apparent that the Ohio State University students were more conceptually set than the students at Capital and Temple Universities. The mean score for the Ohio State University students was 24.14 while the Temple and Capital University students scored 13.11 and 13.32 respectively, almost a full eleven points below the Ohio State University students. Both the Capital and Temple University students were very significantly below the mean of the E.S.S. The Ohio State University students' norms (24.14) compare with the norms for upper division students established in the Siegel study. However, in the case of the Capital and Temple University students, these scores are much lower than the norms for upper division students.

Edwards Personal Preference Schedule

The results of the Edwards Personal Preference Schedule are presented in Tables 6-22. We shall first consider the results on Achievement, Table 6.

It should be noted that the only published norms for the E.P.P.S. are those appearing in the Manual.\textsuperscript{114}

\textsuperscript{114}Edwards, op. cit.
These norms are expressed in terms of means, standard
deviations, percentiles and T scores. Since this study
concerns itself with means and standard deviation it will
address itself to these two tables. The mean and standard
deviation tables are based on 760 college men and on
749 college women from the Edwards study.

### TABLE 6

DISTRIBUTION OF SCORES ON
THE EDWARDS PERSONAL PREFERENCE SCHEDULE

<table>
<thead>
<tr>
<th>ACHIEVEMENT</th>
<th>Range</th>
<th>Capital</th>
<th>Ohio State</th>
<th>Temple</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25-27</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>22-24</td>
<td>5</td>
<td>11</td>
<td>*</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>19-21</td>
<td>*</td>
<td>18</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>16-18</td>
<td>10</td>
<td>14</td>
<td>15</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>13-15</td>
<td>13</td>
<td>99</td>
<td>19</td>
<td>131</td>
</tr>
<tr>
<td></td>
<td>10-12</td>
<td>12</td>
<td>34</td>
<td>14</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>7-9</td>
<td>20</td>
<td>13</td>
<td>7</td>
<td>40</td>
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<tr>
<td></td>
<td>4-6</td>
<td>5</td>
<td>8</td>
<td>*</td>
<td>13</td>
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<tr>
<td></td>
<td>1-3</td>
<td>**</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>65</td>
<td>197</td>
<td>60</td>
<td>322</td>
</tr>
</tbody>
</table>

Norms
Mean 12.92 13.35 13.25 13.27 14.38
S.D. 4.19 5.74 5.38 5.36 4.36
Difference\(^a\) VS S S \(S\)

\(^a\)As determined by t tests
S significant to the .05 level
VS very significant to the .01 level

Possibly one of the traits measured by the E.P.P.S.
in which prospective teachers would be expected to score
high would be Achievement. However, the means on Achievement for this study show a consistent pattern with only a .43 difference separating the high scores from the low scores. There is a significant difference in the total scores of the three groups (13.27) when compared with the norms of the E.P.P.S. (15.66) to the .05 level. The Capital University students had a very significant difference to the .01 level.

**TABLE 7**

**DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE**

<table>
<thead>
<tr>
<th>Range</th>
<th>Capital</th>
<th>Ohio State</th>
<th>Temple</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-27</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>22-24</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>19-21</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>16-18</td>
<td>4</td>
<td>5</td>
<td>8</td>
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aAs determined by t tests
S significant to the .05 level
Table 7 on Deference shows no consistent pattern and there are very significant differences between the group norm and the E.P.P.S. norm to the .01 level. There is a very significant difference (.01 level) between the Ohio State University score and the Capital University group score. Means in this case range from 13.30 (Capital University) to 9.62 (Ohio State University). When compared with the means of the E.P.P.S. manual the total score for deference (10.48) is below the E.P.P.S. norm (11.80).

One area that many educators would feel that prospective teachers should achieve a high score is that of Order. The distribution of scores, as determined by the E.P.P.S., are shown in Table 8.

Here again, as in the case of Deference, a significant difference (.05) is apparent on the score of the three groups and the E.P.P.S. norm. The range of mean scores is 6.98 (Ohio State University) to 11.04 (Capital University). Compared to the E.P.P.S. norms for college students, these means would be below the norms established by Edwards.

The means for Exhibition for this study (14.88) compare quite closely with the E.P.P.S. norms (14.34) as seen in Table 9. There are no significant differences for the means or standard deviation and the means ranged from 14.06 (Temple University) to 15.07 (Ohio State Univ.).
### TABLE 8

**DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE**

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*As determined by t tests
S significant to the .05 level
NS no significance
Table 9 shows that the means for Autonomy do differ significantly between the Capital University students (18.42) and the Ohio State University and Temple University students, 14.81 and 14.78 respectively. Likewise, the mean and standard deviation for their total scores do differ very significantly from the E.P.P.S. norm.
### TABLE 10

**DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE**

**AUTONOMY**

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**Means**

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**Difference**

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*aAs determined by t tests
VS very significant to the .01 level*
Here again, we see that the means for Affiliation, Table 11, do differ significantly between the Capital University students (18.18) and the Ohio State University students (15.39). But, once more it is apparent that the total scores do not differ significantly from the E.P.P.S. norm except in the case of the Capital University students to the .01 level.
TABLE 12
DISTRIBUTION OF SCORES ON
THE EDWARDS PERSONAL PREFERENCE SCHEDULE

INTRACEPTION

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<td>NS</td>
<td>S</td>
<td>NS</td>
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</table>

aAs determined by t tests
S significant to the .05 level
NS no significance
VS very significant to the .01 level

Table 12, Intraception, reflects the same picture again with Capital University students (19.65) differing from the Temple University students (15.76). However, the total norms do not differ significantly from those of the E.P.P.S. norm except those of Capital (.01 level) and Temple (.05 level).

The table on Succorance, Table 13, for this study
shows no consistent pattern. There are significant differences in the scores of different groups; Ohio State University .01 level, Temple University .05 level. The highest mean score was 12.83 (Temple University) and the lowest 10.14 (Ohio State University).

TABLE 13

DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE

<table>
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Means 12.33 10.14 12.83 11.08 11.63
S.D. 4.37 5.65 3.21 4.91 4.65
Difference\(^a\) NS VS S NS

\(^a\)As determined by t tests
S significant to the .05 level
NS no significance
VS very significant to the .01 level

There is the likelihood that one of the traits measured by the E.P.P.S. in which prospective teachers should be expected to score high would be Dominance.
Table 14 presents the means for Dominance with a very significant difference between the Ohio State University students (17.28) and the E.P.P.S. norms (15.83). When one compares the total group with the E.P.P.S. mean there is no significant difference; in fact, their scores are just above the norms for college students.

TABLE 14
DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE

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</table>

Totals 65 197 60 322
Means 16.38 17.28 14.98 16.61 15.83
S.D. 4.12 5.91 6.51 5.67 5.02
Difference\textsuperscript{a} NS VS NS NS

\textsuperscript{a}As determined by t tests
NS no significance
VS very significant to \( \theta \)1 level

Abasement is presented in Table 15 and for this study there appears to be no consistent pattern. The scores for
the different groups and the total group scores when compared with the college norms show no significant difference with the exception of Capital University to the .01 level. Means in this case range from 11.56 (Capital University) to 13.24 (Ohio State University) with the total means of 12.82 as compared to the E.P.P.S. norm of 13.66.

TABLE 15
DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE

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</table>

Means 11.56 13.24 12.98 12.82 13.66
S.D. 5.12 5.29 3.48 4.49 5.14
Differencea VS NS NS NS

aAs determined by t tests
NS no significance
VS very significant to .01 level
Perhaps one of the most critical features of a teacher's personality, at least as seen by the Hughes, Flanders, Amidon school of thought, is that of Nurturance. The means for Nurturance show considerable consistency with a variation of only .10 among the three groups (Capital University 15.21; Ohio State University 15.28; Temple University 15.31) in Table 16. The comparison of the total group means with the college norms show

TABLE 16

DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE

NURTURANCE

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Totals 65 197 60 322

Means 15.21 15.28 15.31 15.07 15.22

S.D. 5.05 4.24 3.31 4.21 4.76

Differencea NS NS NS NS NS

aAs determined by t tests

NS no significance
that the total group is above the E.P.P.S. norm, 15.27 to 15.22 respectively. Thus, there are no significant differences.

An area in which many educators would like to have greater success with the teaching profession is that of Change. Table 17 shows no consistent pattern except that all three groups are higher than the college norm. There is a significant difference between the total group

**TABLE 17**

**DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE**

<table>
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<td>NS</td>
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*aAs determined by t tests*  
NS no significance  
VS very significant to the .01 level  
S significant to the .05 level
norm and the college norm to the .05 level. A very significant difference is found between the E.P.P.S. norm and the Capital University students (.01 level).

The means for Endurance, Table 18, show a lack of consistency among the three groups with a very significant difference between Capital University (15.85) and Ohio State University (10.07). The total group when compared with the E.P.P.S. norms has a very significant difference

### TABLE 18

**DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE**

**ENDURANCE**

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| Totals | 65   | 197  | 60  | 322  |
| Means  | 15.85| 10.07| 11.56| 11.48| 12.65|
| S.D.   | 2.67 | 4.47 | 3.09| 3.77 | 5.25 |
| Differencea | VS | VS | VS | VS |

aAs determined by t tests
VS very significant to the .01 level
to the .01 level.

Once again, we see that the means for Heterosexuality, Table 19, show a lack of consistency but show a significant difference between the Temple students (19.53) and the Ohio State students (16.32). The total means (17.46) do differ very significantly from the E.P.P.S. norms (16.01) to the .01 level.

**TABLE 19**

**DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE**

**HETEROSEXUALITY**

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**Means**

- Capital: 17.72
- Ohio State: 16.32
- Temple: 19.53
- Totals: 17.46

**Norm**

- 16.01

**S.D.**

- Capital: 4.63
- Ohio State: 6.16
- Temple: 6.88
- Totals: 5.81

**Difference**

- As determined by t tests
- **VS** very significant to the .01 level
- **NS** no significance

---

\(^a\)As determined by t tests

VS very significant to the .01 level

NS no significance
Turning now to the last of the personality traits measured by the E.P.P.S., Aggression, we find that the scores, Table 20, again fail to show a consistent pattern with the means ranging from 12.23 to 14.78. However, there is very significant difference between the total mean 14.02 and the E.P.P.S. mean of 11.70 to the .01 level.

TABLE 20

DISTRIBUTION OF SCORES ON THE EDWARDS PERSONAL PREFERENCE SCHEDULE

AGGRESSION

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<sup>a</sup>As determined by t tests
NS no significance
VS very significant to the .01 level

Tables 21 and 22 present the total E.P.P.S. scores for the total male and female students. Table 21 shows that the Capital University male students scored significant-
### TABLE 21
MEANS AND STANDARD DEVIATIONS FOR THE EDWARDS PERSONAL PREFERENCE SCHEDULE ACHIEVED BY MALE STUDENTS

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SL: Significance level; S significant .05 level; VS very significant .01 level; NS no significance.
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<td>4.47</td>
<td>2.67</td>
<td>5.19</td>
</tr>
<tr>
<td>Heterosexuality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>19.13</td>
<td>15.57 NS</td>
<td>20.25</td>
<td>14.34</td>
</tr>
<tr>
<td>SD</td>
<td>6.88</td>
<td>6.16</td>
<td>4.63</td>
<td>5.39</td>
</tr>
<tr>
<td>Aggression</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>14.08</td>
<td>11.29 VS</td>
<td>9.40</td>
<td>10.59</td>
</tr>
<tr>
<td>SD</td>
<td>3.89</td>
<td>3.14</td>
<td>3.19</td>
<td>4.61</td>
</tr>
</tbody>
</table>

SL: Significance level; S significant .05 level; VS very significant .01 level; NS no significance.
ly higher than the college norms on the following personality traits: Deference, Order, Exhibition, Autonomy, Affiliation, Succorance, Dominance, Nurturance, Intraception, Change, Endurance and Aggression. The Ohio State University male students scored significantly higher on Aggression, Exhibition and significantly lower on Achievement, Order, Heterosexuality, Endurance, Affiliation, and Deference. The male students at Temple University scored significantly higher on Heterosexuality and Autonomy and lower on Achievement, Deference, Change and Endurance.

The total female scores indicate that the Temple University students scored significantly lower than the college norms on Achievement, Deference, and Dominance (Table 22). They scored significantly higher in Order, Change, Succorance, Heterosexuality and Aggression. Scoring significantly above the college norms were the Ohio State female students in Change, Autonomy, Affiliation, and Aggression and significantly below the college norms in Order, Deference, Intraception, Succorance, and Endurance. The Capital University female students scored significantly higher in Autonomy, Change, Endurance, and Heterosexuality with significant scores below the college norms in Achievement, Dominance, Order, Exhibition, Intraception, Abasement, Aggression.

A composite of scores, novice and veteran male teachers from the Jackson and Guba study, and the scores
from this study are presented in Figure 1. The students from this study scored significantly lower than the novice and veteran teacher in the following personality traits; Order, Endurance, Deference, and Achievement (.05 level). However, they scored significantly higher on Change, Abasement, Exhibition, Aggression, Intracement and Autonomy (.05 level).

Figure 2 presents the composite of novice, veteran and prospective students from the three institutions represented in this study. The female subjects of this study scored lower in Deference, Order, Achievement, Abasement, Succorance and Intracement than the novice or veteran teacher (.05 level). Their scores in Aggression, Change, Autonomy, and Heterosexuality were quite high when compared with the Jackson and Guba study to the .05 level.

**Interpretation of the Results**

The results obtained provide information which bears upon the problem stated in Chapter I. The interpretation will be organized around this problem.

(1) Are there certain personality characteristics (dogmatism) among students in social studies methods courses and student teaching that would negate the use of the reflective method in social studies classrooms and their using a reflective approach to teaching?

The information presented in Table 4 indicates that
Figure 1. - The need profiles of prospective, novice and veteran male teachers.

--- Prospective teachers
++++ Novice Teachers
—— Veteran Teachers
Figure 1. - The need profiles of prospective, novice and veteran female teachers.

--- Prospective Teachers
--- Novice Teachers
--- Veteran Teachers
all three groups scored above the means of the Dogmatism Scale (Form E). Thus, we may assume that a greater degree of closedness of a person's belief system exists among the three groups than the Rokeach pilot studies. Since the forty items on the scale emphasize controversial social and political issues or "closed areas" which are germane to the reflective method, it further indicates that this degree of closedness of a person's belief system would negate the use of the reflective method in social studies classrooms by the prospective social studies teachers. Therefore, it is assumed in this study that the reflective method would suffer severely with prospective social studies teachers who were dogmatic with closed belief systems. Support for this assumption comes from the previous discussions in Chapter II from the works of Dewey, Hullfish, Hunt, Metcalf, Massialas and Cox.

(2) Is there a certain educational set among student teachers in social studies methods courses and student teaching that would negate the use of the reflective method in social studies classrooms and their using a reflective approach to teaching?

The data that is presented in Table 5 offers evidence to the effect that the Capital University and Temple University students are very significantly (.01 level) below the norm of 21.50 for upper division
students in the Siegel and Siegel study of Educational Set. We can infer from this data that the Capital and Temple University students are more factually-oriented than the Ohio State University students and therefore they would have greater difficulty in using the reflective method effectively or using it at all. Conversely, the Ohio State University students would be assumed to be more conceptually-oriented and therefore they would have less difficulty in using the reflective method effectively.

The corroboration for the above assumptions rests with the pronouncements of Dewey and especially the work of Hunt and Metcalf and others in regard to the basic criteria for the reflective approach to teaching. In order to get social studies students to hypothesize, generalize and to find and test meanings it would seem to be quite necessary for the prospective teacher to be conceptually-set.

(3) Are there certain needs among student teachers in social studies methods courses and student teaching that would negate the use of the reflective method in social studies classrooms and their using a reflective approach to teaching?

According to the data in Table 6, it would appear from the low scores in Achievement that the reflective method would suffer considerably since the proponents of the reflective method argue for a scholarly or
erudite approach by the teacher in the reflective arena.

The scores on the Deference table, Table 7, seem to indicate that the role expectation of the teacher has not been experienced long enough to change his needs. It also appears that the same can be said of Table 8, Order.

One of the areas that would support the use of the reflective method is the scores in Table 10, Autonomy. Since Hunt and Metcalf insist that values and attitudes must be challenged in the closed areas the Autonomy scores according to the E.P.P.S. Manual would appear to indicate the following: "... to be independent of others in making decisions ... to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority ...". 115

Table 16, Nurturance, presents information to the effect that this group would somewhat present a positive climate for the reflective method. However, when one examines Table 20, Aggression, it would seem that the scores indicate that a negative climate would be developed by these prospective teachers. This dichotomy can be explained by the data in Tables 21 and 22, with the high

115Edwards, op. cit., p. 11.
scores by the Ohio State University male students who scored 3.16 above the mean and the Temple University female students who scored 3.49 above the mean in Aggression.

The data presented in Table 17, Change, appears to show that this population would be able to do the following according to the E.P.P.S. Manual: "to do new and different things ... to experience novelty and change in daily routine, to experiment and try new things ...".116 If the above pattern as described in the E.P.P.S. Manual would be consistent rather than electic experiences, it would seem to follow that this population would be able to use the reflective method to some degree of effectiveness.

The data in Tables 21 and 22 shows the differences among the male and female populations as well as the three institutions represented in this study. For example, in Table 21 it is quite apparent that the Capital University male students scored well above the norms while the Ohio State University male students scored low in only one area, Order. Both the Ohio State and Temple students scored significantly higher in one area, Aggression and Heterosexuality respectively.

Table 22 presents data to show that the Capital

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116Edwards, op. cit., p. 11.
University female students scored significantly above the E.P.P.S. norms in four areas; Autonomy, Change, Endurance and Heterosexuality. But, they scored significantly below the norms in Achievement, Intraception, Dominance, and Abasement. The Ohio State University female students scored higher in Affiliation, Autonomy, Change and Aggression but scored significantly below the E.P.P.S. norms in Order, Intraception, Succorance and Endurance. Temple University female students scored significantly above the norms in Succorance, Change, Heterosexuality and Aggression while they were significantly below the E.P.P.S. norms in Achievement, Deference and Dominance.

A composite of both Tables 21 and 22 shows that the Capital University students scored significantly higher in Autonomy, Change and Endurance. The Ohio State University students scored significantly lower in only one area, Order. The Temple University students scored higher in only one area, Heterosexuality. It is apparent from the comparison of the male and female students and the three institutions represented in this study that there are no definite patterns for any one of the fifteen personality needs measured by the E.P.P.S. Thus, we can infer that sex, geographical location of the institution, and the type of institution represented in this study did not significantly affect the results of the E.P.P.S. scores, except in the aforementioned cases.
The data presented in Figure 1 shows that the male students' needs in the study are significantly different from those of the novice and veteran teacher in ten of the fifteen needs represented in the E.P.P.S. The same can be said of Figure 2 and thereby presents some interesting implications. If the experience gained by a teacher in the public schools will change his needs pattern then there is much to be accomplished in the areas of programs in the professional schools, in-service programs, administrator-teacher relationships, curriculum changes, and a great number of related areas. In the fifteen areas in Figure 1 the scores ranged from the lowest for the prospective teacher with the novice and veteran teacher following in that order in the areas of Order, Endurance, and Deference. Here again, it must be stated that the teacher's role in the institution may bring about a change in these needs as one's teaching experience increases. Conversely, the prospective teachers ranged from the highest with the novice and veteran ranking second and third respectively in Succorance, Abasement, Exhibition, Aggression, Intraception and Autonomy.

Figure 2 presents similar patterns for the female prospective teachers scoring higher in the areas of Heterosexuality, Dominance, Exhibition, Autonomy, and Change. They scored lower in the areas of Deference, Order and Endurance.
CHAPTER V

SUMMARY AND CONCLUSIONS

The main objectives of this study were: (1) to see if there were certain personality characteristics, needs, and educational set among prospective social studies teachers, and (2) to find if these three areas as measured by the Dogmatism Scale (Form E), the Edwards Personal Preference Schedule, and the Educational Set Scale would negate the use of the reflective method as a teaching approach in social studies classrooms when the data is compared with the theoretical framework of Dewey, Hunt, Metcalf, Massialas and Cox.

This investigation differs from other studies of related problems in both size and in design. Most previous studies have involved a smaller number of subjects and have not used the combination of dogmatism, educational set and needs.

A total of 322 prospective social studies teachers, ninety-seven female, and 225 male, participated in this study. Capital University, Temple University and Ohio State University were the institutions represented in this study.
study. The students were selected from the social studies methods courses or student teaching seminars at the above institutions.

There were two testing seminars and the procedure at the sessions was as follows: Session I--the E.P.P.S., Session II--the Dogmatism Scale (Form E) and the Educational Set Scale.

The identity of the subjects scores were unknown, and all tests and personality measures were scored before the results were analyzed. The mean and standard deviation were the principal statistical techniques employed.

Findings

The following represent the principal specific findings of the present study:

1. All three student populations achieved means above the norms established by Rokeach in his studies on the Dogmatism Scale (Form E). The Capital and Temple University students scored significantly above the means at the .05 level.

2. Capital University and Temple University students scored very significantly below the upper division norms on the Educational Set Scale at the .01 level.

3. The Ohio State University students scored significantly above the upper division norms on the Educational Set Scale at the .05 level.

4. All three student populations scored significant-
ly below the means on the E.P.P.S. in the area of Achievement at the .05 level.

5. In the areas of Autonomy (.01 level), Endurance (.01 level), Heterosexuality (.01 level), and Change (.05 level) on the E.P.P.S. all three student populations scored significantly above the means.

6. In the area of Aggression on the E.P.P.S. all three student populations scored above the norms with the Ohio State and Temple students scoring very significantly above the means (.01 level).

7. The scores of the prospective teachers on the E.P.P.S. when compared with the Jackson and Guba study showed definite patterns in ten of the fifteen need areas for both male and female.

Conclusions

On the basis of the above and other findings presented in this study the following statements would appear to be justified:

1. The Dogmatism scores achieved by all three populations are a definite indication that they would encounter many problems in the use of the reflective method as an approach to teaching social studies in the classroom. As stated earlier, the Dogmatism Scale (Form E) is composed of controversial political and social issues which are closely related to "closed areas" and, thus, it becomes evident that a score presenting evidence of
closedness of a person's belief system would make it quite difficult to use the reflective approach to teaching of the social studies in the "closed areas."

2. The low Educational Set Scale scores achieved by the Capital University and Temple University students lean heavily toward the factually-set continuum for upper division students. This gives us some evidence that the reflective method would not be used effectively as an approach to the teaching of the social studies. It would be quite difficult for a student to test hypotheses, to conceptualize, to generalize and to develop hypotheses with a factually set.

3. The high Educational Set scores achieved by the Ohio State University students are indicative of conceptually-set learners for upper division students. Therefore we can infer that the Ohio State students should have some measure of success in developing and testing hypotheses, conceptualizing, generalizing and consequently would be expected to have similar success in these areas using the reflective method.

4. The low scores on the E.P.P.S. in the area of Achievement by all three populations indicate that the reflective method would not be used effectively due to the fact that the classroom teacher does not desire to pursue a scholarly or erudite position.

5. All three student populations scored above the means on the E.P.P.S. in the areas of Autonomy, Change,
and Endurance. Consequently, we can infer from the data that these personality characteristics would support the use of the reflective method as a teaching approach in social studies classrooms.

6. The scores above the means on the E.P.P.S. in the area of Aggression by all three populations gives us evidence to the effect that the reflective method would not be very effective from the possible negative climate that would be developed by this need.

7. The comparison of the prospective teachers with the novice and veteran teachers on the Jackson and Guba study showed that both male and female teachers had definite patterns in the fifteen need areas, based on the longevity of service. Hence, we can state from these patterns that Deference, Endurance and Order will increase with teaching experience and conversely, Heterosexuality, Exhibition, Autonomy, Change, Nurturance will decrease. The personality needs of Deference, Order, Change, Nurturance, and Autonomy and their respective changes brought about by experience, it would appear to indicate that the reflective method if developed in prospective teachers to any degree would lose its effectiveness as the teacher's experience increased.

8. There are no specific patterns for the three measurement devices for all three student populations. In fact, in some areas they have attributes for the use of
the reflective method while in others they indicate that they would not be very effective. But, when all three measurement devices are used to present a total picture it appears that both the Capital University and Temple University students would not be able to use the reflective method effectively. The same cannot be said of the Ohio State University students due to their scores on the Educational Set Scale and thus any conclusions we may draw regarding the Ohio State University students ability to use the reflective method will contain this reservation.

**Implications for Further Research**

The results of this study indicated the need for further research on:

1. The use of the Dogmatism Scale, E.P.P.S., and Educational Set Scale on a test-retest basis in a social studies methods course emphasizing the reflective method to see if there are any significant changes in behavior as a result of the methods course.

2. The use of the Dogmatism Scale, E.P.P.S., and Educational Set Scale on a test-retest basis in a student teaching supervision seminar emphasizing the reflective method to see if there are any significant changes in behavior as a result of the teaching experience and the supervision seminar.

3. The use of Interaction Analysis and similar devices to examine the type of climate created by prospective teachers in their classes and the climate's
relationship to dogmatism, needs and educational set.


5. The effects of counseling and screening devices in the selection of prospective social studies teachers in the use of the reflective method and compare them with those who are not counseled and screened.

6. A larger population representing liberal arts and education students in all areas of the United States.

7. The tenability of the reflective method as a social studies method must be examined in light of the rewards offered by our institutions, namely the public school system.
SELECTED BIBLIOGRAPHY

Books


Periodicals


