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THE MEASUREMENT OF AFFECT IN UNIT 3 OF
THE HIGH SCHOOL GEOGRAPHY PROJECT

by

Barbara E. Gerken

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
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Barbara E. Gerken

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CHAPTER I

STATEMENT OF THE PROBLEM

The importance of the affective domain as a part of a student's total learning experience is slowly being realized. Classroom geography materials which reflect this increased interest in the affective as well as cognitive domain are those included in the High School Geography Project. Each of the six units, which comprises the Project's materials, contains activities designed to achieve both cognitive and affective goals. Early on in the development of Unit materials brief guidelines for evaluating the cognitive objectives were included. In recent years increased attention has been focused on developing additional cognitive test items for the units. The affective component, however, has been seriously neglected from the beginning. The research described herein attempts to soften that neglect.

Specifically, it is the objective of this paper to develop a reliable and valid instrument which will measure whether a student has attained the affective objectives as stated in Unit 3, "Cultural Geography," of the High School Geography Project, and the level of that attainment. Some key words in this statement are "reliability," "validity," and "affective objectives."

The greater difficulty in establishing the reliability and validity of affective evaluation instruments, in contrast to cognitive measures, has helped contribute to the neglect of such measures. Reliability in any test refers to the consistency with which a set of test scores measure whatever they do measure (Ebel, 1965; Schwartz & Tiedman, 1957). Three major factors contribute to the reliability or unreliability of a set of test scores: (1) the appropriateness and definiteness of the task, (2) the constancy or stability of a student's ability to perform the tasks presented in the test, and (3) the consistency and objectivity of the person who scores the test (Ebel, 1965). Additional factors which influence and increase the reliability of a test are the length and the homogeneity of the test content. Until now, the difficulties encountered in achieving these requirements for reliability while constructing an affective instrument have not been totally solved.

As one of the objectives of the researcher, the above requirements for reliability will be met by designing the instrument as follows: (1) each test item will be based on a specific behavioral objective, thus assuring appropriateness and definiteness of the task, (2) the instrument will consist of only objective items, eliminating possible bias in evaluation, (3) assessment of the appropriateness of the length of the test will be made by the administration

of a pre-test, and (4) only forced-choice attitudinal items will be used, giving homogeneity of the test content.

Relatedly, validity refers to the accuracy with which a set of test scores measure what they ought to measure, or the degree to which they approach infallibility in measuring what they purport to measure (Ebel, 1965). It is axiomatic that a test must first be reliable if it is to be valid. Ideally, validity should be determined directly by a critical analysis of the tests' specifications and content. This can be best accomplished by employing a grid analysis procedure, comparing the individual test items with their corresponding course objectives. It should be kept in mind, however, that validity for this test and all others depends not only on the purposes for which the test is used and the group with which it is used, but also the skill of the teacher in implementing the test (Ebel, 1965).

CHAPTER II

REVIEW OF THE LITERATURE

Affect in Teaching and Learning

What is the affective domain?

Before a discussion of the affective aspect of education is initiated, a distinction between the terms cognitive and affective should be made. Sterling M. McMurrin, former U.S. Commissioner of Education, defines the cognitive and affective function of education as follows:

The cognitive function of instruction is directed to the achievement and communication of knowledge, both the factual knowledge of the sciences and the formal relationships of logic and mathematics--knowledge as both specific data and generalized structure. It is discipline in the ways of knowing, involving perception, the inductive, deductive, and intuitive processes, and the techniques of analysis and generalization. It involves both the immediate grasp of sensory objects and the abstractive processes by which the intellect constructs its ideas and fashions its ideals.

The affective function of instruction pertains to the practical life--to the emotions, the passions, the dispositions, the motives, the moral and esthetic sensibilities, the capacity for feeling concern, attachment or detachment, sympathy, empathy, and appreciation (Weinstein and Fantini, 1970, pp. 23-24).

Thus, affective learning involves the types of human reaction or response to the content, subject matter, problems, or areas of human experience. Affective objectives then, are those which emphasize a feeling tone, an emotion,

or a degree of acceptance of an attitude or idea. Affective objectives range from simple attention to selected phenomena to complex but internally consistent qualities of character and conscience (Krathwohl, Bloom, & Masia, 1964, p. 7).

Why affect has been neglected

Learning experiences in the majority of classrooms today include a heavy emphasis on cognitive learning at the expense of their affective elements. Indeed, there are many who would argue that this is as it should be. This debate concerning the systematic inclusion of affective objectives in the curriculum has never been resolved. This debate seems to stem from three major arguments against the inclusion of affective objectives in the school curriculum: (1) the tradition to solely teach cognitively, (2) the lack of rigor and clarity of affective objectives, and (3) the difficulty in grading student achievement for affective objectives (Kurfman, 1970; Krathwohl, Bloom, & Masia, 1964; Weinstein & Fantini, 1970).

Primarily, the history of education has established the firm tradition to just teach cognitively. This is one of the problems education faces today. As John Goodlad states:

Little effort has been made to determine the ultimate aims of schooling and the respective contribution each discipline can make to them.

Instead, the objectives of schooling have become the composite of the objectives set for each subject. The goals of today's schools do not extend beyond those subjects that have succeeded in establishing themselves in the curriculum (Weinstein & Fantini, 1970, p. 17).

To solve some of these problems, a proper study of today's curriculum should be made, beginning with a statement of educational objectives. There are those who would argue that education in today's society should have a broader human focus, which can be best accomplished by educational objectives reflecting a personal and interpersonal basis and dealing with students' concerns (Weinstein & Fantini, 1970). Although this belief is based on philosophical and moral grounds, it has very practical implications when the price society pays for negative social behavior is considered--crime, tension, discrimination, to state a few. However, many educators and citizens alike do not agree and feel it is impossible or inappropriate for the schools to assume the responsibility for a curriculum with an ultimately humanitarian goal (Weinstein & Fantini, 1970; Cronbach, 1954; Newberg, 1969; Jones, 1970). But the aim of education has been to inculcate society's values into what the student does. How the person behaves depends upon his goals, which rest on his value system, his confidence, and his knowledge and skills. Unless all of these develop so as to fit with society's values, he will not be an effective person, and no matter how successful the educa-

tional system is in teaching the specific cognitive subject matter, the society is likely to decline and decay (Cronbach, 1954; Weinstein & Fantini, 1970).

In addition to this confusion concerning the goals of education, a prevalent feeling that also promotes the cognitive tradition is that it is inappropriate to include affective objectives in the curriculum because the student's beliefs, attitudes, feelings, and concerns are private and should not be dealt with in the schools (Weinstein & Fantini, 1970). As a result, past efforts to combine and balance humanistic and utilitarian approaches to learning have failed. The affective approach is usually viewed as that "romantic stuff" that parents and religious institutions should be providing for students, while the cognitive approach has been legitimized as the rationale for schooling by the business and professional world (Newberg, 1969, p. 24). This leaves a critical action gap between the calls for developing mature citizens, and the existing commitments to teaching the well-established academic disciplines for which the rewards are clear. As it is, educators are not held responsible for increased maturation of their students. They are held responsible, though somewhat indirectly, for the academic gains made by their students (Alschuler, 1969). However, the question should be raised, "Is education life or a preparation for life? Should the students be actively engaged in reshaping

society, or should he be learning and accepting the heritage of his culture?" (Newberg, 1969, p. 21).

Another issue responsible for the neglect of affective objectives in the curriculum is that because the affective domain lacks the rigor and clarity of the cognitive domain, it is less demanding to teach for cognitive than for affective objectives (Kurfman, 1970). The hierarchical, or sequential nature of the cognitive domain is usually readily apparent, and the task of imparting this sequence to the student is accomplished with relative ease. On the other hand, the affective domain involves a human reaction or response to something in the cognitive domain, and a clearcut sequence of the formulation of that reaction is rarely visible at first glance. Even though a taxonomy for the affective domain has been devised (Krathwohl, Bloom, & Masia, 1964), it requires a great deal more effort to develop an affective objective along that taxonomy and expose a student to it, than it does for a cognitive objective. As a result, teachers usually ignore any formal approach to the affective component of the curriculum, and leave the achievement of any affective behavior to chance.

A third explanation for the neglect of the affective domain is that it is less difficult to grade student achievement in the cognitive realm, for the existing measuring instruments for affective learning are more

complex, less reliable, and quite different from the familiar cognitive measurements (Kurfman, 1970; Krathwohl, Bloom, & Masia, 1964; Weinstein & Fantini, 1970; Bloom, Hastings, & Madaus, 1971). The inadequacy of the affective appraisal techniques and the ease with which a student may detect the responses which will be rewarded and the responses which will be penalized is another reason why the affective domain is usually omitted from the curriculum. In contrast, it is assumed that a student who responds in the desirable way on a cognitive measure does indeed possess the competence which is being sampled (Krathwohl, Bloom, & Masia, 1964).

Some of this hesitation in the use of affective measures for grading purposes stems from the fact that characteristics of this kind, unlike cognitive achievement, are considered to be a private rather than a public matter, and should not be incorporated into grading.

Affective learning and its role in education

Although neglected in the past, the affective component of learning does have a place in the classroom. Learning is shown by a change in behavior as a result of experience, that is, by new interpretations and altered responses. The schools cannot form or mold the students, but they do have an obligation to provide the opportunity to grow in all directions. However, they cannot be held responsible

for what the outcome may be, for doing well means being physically, cognitively, and emotionally involved in solving a challenging problem (Alschuler & Thompson, 1969; Bassett, 1972; Cronbach, 1954; Bloom, Hastings, & Madaus, 1971).

"Education of the whole person" can become a hollow slogan, but it can also be a reminder that behavior depends on much more than the acquisition of ideas (Sanford, 1962, p. 36). Education is the transmission of symbols, the main object of which is to implant skills and knowledge respecting civilization, culture, and society. But education in this sense does not necessarily change the developmental status of the individual. Students may acquire a great deal of skill and knowledge without any of this ever becoming wholly integrated and changing their personalities in any important way. Thus, a person who is educated in the narrow sense of this word has been given a set of tools with which to carry out his functions as a person; if he is immature or psychopathic, he is able to use his resources of academic learning to satisfy his ego demands at the expense of the less well educated (Sanford, 1962, p. 37; Weinstein & Fantini, 1970; Newberg, 1969).

Additionally, the concerns, wants, interests, fears, anxieties, joys, and other emotions and reactions to the world contain the seeds of motivation. When a student's inner concerns are dealt with, it is actually recognition

of and respect for him, telling him that he does know something. When a teacher indicates to a child that the experiences he brings with him to the classroom has nothing to do with the "worthwhile" knowledge the school has to offer, he is in effect telling the student he is worthless, for he is his experience (Weinstein & Fantini, 1970, p. 28).

It has often been the case that the schools ignore the affective domain as content and assume that students will be motivated to learn an extrinsic body of content if enough pressure is placed upon them. Although many students make the adjustment to pressure, educators are beginning to question this total lack of affective content. One result is that many learners who adjust to pressure end up thinking of formal education as a system to be tolerated or beaten. Another result has been that the pressure to adjust and succeed often produces emotional tension in students that result in antisocial behavior in adolescence or later in life (Weinstein & Fantini, 1970).

But the inclusion of the affective domain into the curriculum does not happen by chance, for the cognitive and affective components do not develop together automatically. This belief, that if cognitive objectives are developed, there will be a corresponding development of appropriate affective behaviors, has contributed to the lack of affective objectives in the classroom. But, evidence suggests that affective behaviors develop when

appropriate learning experiences are provided for the students, much the same as cognitive behaviors develop from appropriate learning experiences (Krathwohl, Bloom, & Masia, 1964; Simon, 1969; Bloom, Hastings, & Madaus, 1971).

Cognitive orientation does not affect behavior directly because it encourages or requires the student to reconstruct reality symbolically, and therefore is removed from the emotional level of learning. It is also believed that under some conditions, the development of cognitive behaviors may actually destroy certain desired affective behaviors and that, instead of a positive relation between growth in cognitive and affective behavior, there may be an inverse relation between growth in the two domains (Krathwohl, Bloom, & Masia, 1964; Weinstein & Fantini, 1970).

Affective and cognitive behaviors are closely related, and they both have an important affect on motivation and learning. John Dewey stated, "Experience is primarily an active-passive; it is not primarily cognitive" (Dewey, 1964, p. 140). In actuality, there is no fundamental separation between the cognitive and affective areas. Every cognitive behavior has its affective counterpart, though it is much more easily seen in some instances than in others (Krathwohl, Bloom, & Masia, 1964; Weinstein & Fantini, 1970).

There is an urgent need to have both approaches

present in the classroom. A curriculum that helps students cope with their concerns is not neglecting its' responsibility to teach skills that are useful in a traditional education. Cognition and affect can be integrally related in two ways in the classroom. First, changes in the cognitive domain can be used as a means to make changes in the affective. That is, the student can be given information intended to change his attitude. Secondly, an affective goal can be used as a means to achieve a cognitive one. Affective approaches frequently "turn kids on" to learning, and since many students "turn off" or drop out of the learning process, there is also value to this approach (Newberg, 1969; Krathwohl, Bloom, & Masia, 1964; Jones, 1970). For although one can't aid in the development of affective skills without reference to their integral cognitive counterparts, neither can one hope to effectively aid in the development of cognitive skills without reference to their integral emotional and imaginative counterparts.

A comprehensive theory of instruction should seek to prescribe not only optimal levels of intellectual uncertainty, risk, and relevance, but also optimal levels of emotional involvement and personal curiosity (Jones, 1970). This whole concept of the relatedness of the affective and cognitive domains is best stated by John Dewey who in 1938 wrote :

Perhaps the greatest of all pedagogical fallacies is the notion that a person learns only what he is studying at the time. Collateral learning in way of formation of enduring attitudes, of likes and dislikes, may be and often is much more than the spelling lesson or lesson in geography or history that is learned. For these attitudes are fundamentally what count in the future. The good or harm done by an educational experience can only be judged by considering all the changes in behavior, feelings, and understanding that it produces. The most important thing that can be formed is the desire to go on learning (Cronbach, 1954, pp. 31-32).

Because the affective and cognitive domains are integrally related, the dangers of a curriculum with an entirely cognitive orientation must be reemphasized. As mentioned before, the range of contemporary societal injustices might well be minimized if our present generations could be taught to identify with all human beings and to be aware of the differences that can divide some human beings. The same dangers are also a threat, though, if a curriculum neglects the cognitive domain to the extent the affective domain has been neglected in the past.

Why measure affective learning?

It has been said that in principle, all important outcomes of education are measurable (Ebel, 1965). This would certainly include evaluation of affective learning, for whether desired or not, the classroom promotes affective changes in the students. Kurfman points out three major reasons, which have been discussed previously, for

the necessity of measuring attitudes: (1) the presence of both cognitive and affective objectives in the classroom, (2) the misconception that knowledge about something results in valuing it, and (3) the importance of attitudes in the learning process itself (Kurfman, 1970, pp. 108-109).

If the school has aims in addition to cognitive objectives, then it has the obligation to evaluate the effectiveness of the curriculum in forming those behaviors. If it does not evaluate them, it has nothing on which to base changes of its curriculum and teaching methods (Bloom, Hastings, & Madaus, 1971; Terwilliger, 1971; Schwartz & Tiedman, 1957). Additionally, failure to evaluate leads, as pointed out, to the eventual disregard of the affective aspect of education and an overemphasis on verbal-conceptual instruction. Evaluation should not be equated with assigning a grade or giving an examination, nor does it necessarily mean a prediction of what a student might do. It has broader focus in that it employs a number of techniques to help in decisions about the quality of an individual's or group's performance or the success of a curriculum in relation to stated objectives (Thurstone, 1959; Horrocks & Schoonover, 1968; Bloom, Hastings, & Madaus, 1971). Information on how the group reacts to certain techniques or methods used to modify an attitude can give direction for course improvement. Relatedly, if

contrary to a course objective, a large proportion of a class still holds an undesirable attitude on a social issue at the end of a course, information on the effectiveness of the curriculum is obtained (Trump, 1963; Bloom, Hastings, & Madaus, 1971).

It is also assumed that affective objectives, unlike most cognitive objectives, cannot be attained in the relatively short period of a week, month, semester, or year, and that therefore they cannot be evaluated in the school setting. If this assumption were valid, then it would be difficult to evaluate affective objectives. Granted, while the complexity of the behavior being sought determines the time it takes to bring about an affective behavioral change, this is also true for desired changes in cognitive behavior. But, like some cognitive objectives, many affective objectives can be attained relatively quickly and are therefore able to be evaluated (Bloom, Hastings, & Madaus, 1971, pp. 226-227).

There should be more interest in developing and promoting new types of measuring instruments, even though they may not be as profitable as the "tried and true" cognitive varieties. "Better evaluation is the most important need in improving schools," for it is the weakest link in the educational chain (Trump, 1963, p. 144). It is the one that hinders progress in all other aspects of education.

Attempts to Structure the Affective Domain

Why use a taxonomy for objectives?

Given the need for more affective objectives in the schools and given the need to evaluate the effectiveness of these objectives, the next problem facing educators is how to fulfill this need. It has been shown that effective learning and evaluation results from the use of behavioral objectives in all aspects of the curriculum. A Taxonomy of Educational Objectives for the Cognitive Domain has been developed by Krathwohl, Bloom, and Masia in 1956, and is being used by a large number of teachers to help formulate learning objectives for their students. These authors saw the need for the development of a similar taxonomy for the affective domain and set about that task.

The rationale for using either a cognitive or affective taxonomy in the classroom will be explored. As Krathwohl states, a taxonomy, cognitive or affective, emphasizes student behavior as it is expressed in educational objectives, focusing on the change to be made in student behavior, not in teacher behavior. Additionally, specifically describing student behavior makes it "much easier to choose the kinds of learning experiences that are appropriate to developing the desired behavior and to building evaluation instruments," for the taxonomy is a

concise model for the analysis of educational objectives (Krathwohl, 1970, p. 18).

Curriculum builders often are faced with the nagging thought of leaving out behaviors they would like to include. The taxonomy provides a panorama of objectives, to which the range of the present curriculum and possible outcomes can be compared, possibly suggesting additional goals that should be included. Further, the hierarchy of objectives dealing with the same subject matter concepts suggests a "readiness relationship that exists between those objectives lower in the hierarchy and those higher in it" (Krathwohl, 1970, p. 19). Although this sequential relation of objectives in the cognitive domain is usually noted it has been conspicuously absent from objectives in the affective domain.

Krathwohl argues that a taxonomy can also be useful in better evaluating teaching, since teachers seldom determine the specific objectives contained in standardized tests. By using the taxonomy, a comparison between the teachers' goals and the test can be made to determine the test's relevance. This same comparison and resulting degree of relevance can also be applied to teacher-made tests. Additionally, in this latter type of test, the use of the taxonomy can be of assistance in developing a greater number of test items from which to choose.

The taxonomy can also aid in preventing curricula

trends away from emphasis in the affective area. There is much less emphasis on affective objectives, compared to cognitive ones, even though teachers continue to think affective objectives are important. This affective gap stems from confusion about what objectives are being sought and from a lack of knowledge of how best to obtain these aims, once the confusion is resolved. "The analytic framework which the taxonomy brings to the affective area should aid in the clarification of what goals are being sought" (Krathwohl, 1970, p. 21). Thus, the clarity of the taxonomy will not only facilitate the inclusion of affective objectives in the curriculum, but also aid in the evaluation of these objectives. Further, a comparison between the taxonomy and existing affective instruments shows a concentration on measurement of the most complex behaviors, indicating a need for measuring instruments applicable to lower levels of the affective domain.

Thus the affective taxonomy presents a developmental framework of the way in which affective goals are reached, from simple "receiving" through "characterization." It represents an effective means of fulfilling the need to include more affective emphasis in the curriculum. It focuses the teachers' attention on the development of simple behaviors which are the building blocks out of which the more complex objectives grow--simple behaviors which are rarely now deliberately taught (Krathwohl, 1970, p. 21).

Krathwohl, Bloom, and Masia's work

Having established a rationale for an affective taxonomy, there is a need to carefully examine the development and the structure of this taxonomy.

The most difficult part of the task of building an affective taxonomy was the search for a continuum that would provide a means of ordering and relating the different kinds of affective behavior (Krathwohl, Bloom, & Masia, 1964). The authors assumed that the affective domain, like the cognitive, would be structured in a hierarchical manner such that each category of behavior would assume achievement of the behaviors categorized below it. By analyzing the unique characteristics of affective objectives, the authors hoped to find a structure for an affective continuum. However, the principles of "simple to complex" and "concrete to abstract" would not provide as appropriate a basis for structuring the affective domain as they had for the cognitive domain (Krathwohl, Bloom, & Masia, 1964, p. 24).

As stated previously, affective objectives emphasize a feeling, a tone, an emotion, or a degree of acceptance or rejection. They range from simple attention to selected phenomena to complex but internally consistent qualities of human character and conscience. Thus, while in both the cognitive and affective domains consciousness is a major variable, in the cognitive domain there is a

high level of consciousness at all stages. By contrast, "in the affective domain, consciousness builds up slowly to a high degree of specificity and then falls off in intensity as the process of internalization takes over" (Krathwohl, Bloom, & Masia, 1964, p. 100).

Once this difference in consciousness was discovered, the terms to describe the process of internalization along a continuum were decided upon. The five categories used for the hierarchy of affective objectives are, beginning at the lowest level, receiving, responding, valuing, organization, and characterization by a value complex (Krathwohl, Bloom, & Masia, 1964, p. 37).

Once this continuum was established, the authors considered four additional problems before the affective taxonomy was complete. First, there was the need to define more completely what was meant by the word "internalization" in relation both to some of its previous uses and to similar terms used by psychologists and educators. Next, it was necessary to describe the way internalization appears in the structuring of an affective continuum and the way that continuum can be arbitrarily but meaningfully divided into stages or levels. Thirdly, it was helpful to relate the affective continuum to commonly used affective terms. And last, there was need to test the structure against some research evidence.

A description of the final outcome of their efforts

follows. However, it should be remembered that the taxonomy "does not provide categories for all behavior, but only that which is desirable behavior, such as would be sought in a school curriculum" (Krathwohl, 1970, p. 21).

Internalization refers to the inner growth which takes place as the individual becomes "aware of and then adopts the attitudes, codes, principles, or sanctions that become a part of himself in forming value judgments or in guiding his conduct" (Krathwohl, Bloom, & Masia, 1964, p. 30). At the lowest level of the taxonomy, individuals are aware of the stimuli which initiate the affective behavior and which form the context in which affective behavior occurs. Thus, the lowest category is 1.0 Receiving (see Figure 1). It is subdivided into three categories. At the 1.1 Awareness level, the individual merely has his attention attracted to the stimuli. He develops, for example, some consciousness of the use of shading to portray depth and lighting in a picture. The second subcategory, 1.2 Willingness to receive, describes the state in which he has differentiated the stimuli from others and is willing to give it his attention. Continuing the example, he develops a tolerance for bizarre uses of shading in modern art. At 1.3, Controlled or selected attention, the individual looks for the stimuli. He is on the alert for instances where shading has been used both to create a sense of three-dimensional depth and to indicate the lighting of the

1.0	RECEIVING	1.1	Awareness				
		1.2	Willingness to receive				
		1.3	Controlled or selected attention				
2.0	RESPONDING	2.1	Acquiescence in responding				
		2.2	Willingness to respond				
		2.3	Satisfaction response				
3.0	VALUING	3.1	Acceptance of a value				
		3.2	Preference for a value				
		3.3	Commitment				
4.0	ORGANIZATION	4.1	Conceptualization of a value				
		4.2	Organization of a value system				
5.0	CHARACTERIZATION	5.1	Generalized set				
		5.2	Characterization				

Figure 1. Relation of the affective domain structure to common affective terms. (From D. R. Krathwohl, B. S. Bloom, and B. B. Masia, Taxonomy of Educational Objectives, Handbook II: Affective Domain, 1964, 37.)

picture; or he looks for picturesque words in reading.

At the next level, 2.0 Responding, the individual is perceived as responding regularly to the affective stimuli, though at a very low level of commitment. At the lowest level of responding, 2.1 Acquiescence in responding, he is merely complying with expectations. At the request of his teacher, for example, he hangs reproductions of famous paintings in his dormitory room; he is obedient to traffic rules. At the next higher level, 2.2 Willingness to respond, he responds increasingly to an inner compulsion. He voluntarily looks for instances of good art where shading, perspective, color, and design have been well used. Or he has an interest in social problems broader than those of the local community. At 2.3 Satisfaction in response, he responds emotionally as well, for example, to work with clay, especially on making pottery for personal pleasure. Up to this point he has differentiated the affective stimuli; he has begun to seek them out and to attach emotional significance and value to them.

The next category, 3.0 Valuing, is the only one headed by a term which is in common use among the expressions of objectives by teachers. As the process of internalization unfolds, this level describes increasing internalization as the person's behavior is sufficiently consistent that he comes to hold a value: 3.1 Acceptance of a value, or continuing desire to develop the ability to write effec-

tively and hold it more strongly; 3.2 Preference for a value, or seeks out examples of good art for enjoyment of them to the level where he behaves so as to further this impression actively; and 3.3 Commitment, or faith in the power of reason and the method of experimentation.

As the learner successively internalizes values, he encounters situations for which more than one value is relevant. This necessitates organizing the values into a system, determining the inter-relationships among them, and finding which will be the dominant and pervasive ones, thus 4.0 Organization. Since a prerequisite to inter-relating values is their conceptualization in a form which permits organization, this level is divided into two: 4.1 Conceptualization of a value, or desires to evaluate works of art which are appreciated, or to find out and crystallize the basic assumptions which underlie codes of ethics, and 4.2 Organization of a value system, for example, acceptance of the place of art in one's life as one of the dominant values, or weighs alternative social policies and practices against the standards of public welfare.

Finally, the internalization and the organization processes reach a point where the individual responds very consistently to value-laden situations with an interrelated set of values, a structure, a view of the world. The Taxonomy category that describes this behavior is 5.0 Characterization by a value or value complex. It includes

the categories 5.1 Generalized set, that is, views all problems in terms of their aesthetic aspects, or readiness to revise judgments and to change behavior in the light of evidence, and 5.2 Characterization, that is, develops a consistent philosophy of life (Kratwohl, Bloom, & Masia, 1964, pp. 34-35).

CHAPTER III

METHODOLOGY

Development of Objectives

Initially, before an evaluation device could be constructed for Unit 3, "Cultural Geography," the affective objectives of the unit itself had to be ascertained. Although the use of objectives in affective instruction and evaluation is questioned by some educators, it is no less important for affective than for cognitive objectives to have clear, operational statements as the first step in instructional planning and evaluation (Bloom, Hastings, & Madaus, 1971; Trump, 1963). For although attitudes cannot be measured directly, they may be approached through behavior believed to be representative of the attitudes that underlie it (Horrocks & Schoonover, 1968). The number of interpretations people can place on affective concepts has led to the neglect of the behavioral specification of these concepts. Additionally, due to the hesitancy to evaluate affective outcomes, the specification of behavioral manifestations of affective concepts is very seldom carried out (Bloom, Hastings, & Madaus, 1971).

This does not mean that affective objectives cannot be stated in behavioral terms. What it does mean is that educators have failed to give thought to the problem of

what specific behaviors will lead them to infer the presence or absence of affective attitudes in the student. If an objective is defined in behavioral terms, and there is reasonable assurance that learning is taking place, then measurement can take place (Schwartz & Tiedeman, 1957; Thorndike & Hagen, 1955). Relatedly, reliable and valid affective measurement cannot take place unless the test items correspond directly to behaviorally stated affective objectives.

Unit 3, "Cultural Geography," of the High School Geography Project was arbitrarily chosen for this study. Each of the four major activities in this Unit includes among its objectives at least one which may be classed as affective. These objectives are:

1. Develops devotion to the idea that all customs and traits are sensible and functional depending on the culture from which they stem;
2. Becomes actively involved in determining diffusion factors for a particular culture or idea;
3. Values the importance of determining many types of culture areas in a region before drawing a boundary;
4. Attempts to determine why a degree of cultural uniformity throughout the world is developing.

Using Krathwohl's Handbook II, The Affective Domain, a range of statements representing each of the four classifications (i.e., receiving, responding, valuing, and organization) was

developed for each of the four affective objectives. The statements, based on the unit's subject matter, reflect the hierarchical order of the affective taxonomy (see Appendix I). Ideally, an instrument should be constructed to cover all levels of the affective taxonomy, thereby necessitating behavioral statements for each objective from the lowest to the highest levels of the hierarchy. However, for the purposes of this research, achievement of the higher levels of the four objectives, i.e., organization and characterization, were not considered to be "testable" in all cases and therefore not included. Similarly, when thinking of the affective taxonomy in general in terms of education and evaluation, it should be remembered that the highest level of the taxonomy, 5.0 Characterization, is also sometimes considered not "testable" for two reasons: (1) this level represents the deeper and more general levels of personality structure, levels to which the formal instructional effort does not address itself directly, and (2) measurement that represents behavior at this level consists of a scale containing a number of items rather than an individual item (Krathwohl, Bloom, & Masia, 1964, p. 72).

The behavioral statements reflecting the affective continuum for each of the four chosen affective objectives in the Unit represented the pool from which the actual test items were selected. In all, 138 items were developed

and used. Care was taken to insure a fairly even distribution of items among the eleven subcategories within the major categories of the taxonomy, receiving, responding, valuing, and organization.

Testing Format

There was a range of attitudinal measurement forms from which to choose, and each was evaluated in order to employ those that would best fit the purposes and outcomes desired in this study. The "forced-choice" attitudinal scale was chosen since measurement of the achievement of the objectives, not assignment of a grade, was desired, and also, this type of measure places minimum pressure on the student for a "desired" response. The four forced-choice attitudinal scales employed were the Likert Scale, the Interest Inventory, the Thurstone Attitude Scale, and the Semantic Differential. They were chosen for their brevity and simplicity, an important aspect of attitudinal measurement, as well as their proven validity and reliability in measurement of this type. Each of the Unit's major affective objectives were included in each part of the test (see Appendix II).

The Likert Scale has proven both valid and reliable and is the most easily constructed and widely used scale presently available for measuring attitudes (Kurfman, 1970, p. 125). An equal number of positive and negative statements

about each objective were included, the statements also being representative of the hierarchical levels of the objectives. The topics selected for the Interest Inventory also covered each of the major objectives and included several reference point subjects. The possible responses were worded in order to indicate the level of attainment of that objective along the affective continuum. The Thurstone attitude scale was chosen for its proven effectiveness in objectively describing the attitudes of an individual or a group toward different nationalities and races (Thurstone, 1959, pp. 264-265). The responses to the evenly gradated statements of opinions represented the intensity of favorable or unfavorable reaction to that objective, thereby measuring the level of attainment of that objective. The use of adjective pairs in the Semantic Differential test assures a reliability and validity of test results not found in all questionnaire measures. The means of the responses for each pair and each objective presents a profile of an individual's or a class' attitude, reflecting the level of achievement of the particular affective objective.

A pre-test was administered in two local eighth grade classrooms, the students in which had no previous exposition to any HSGP materials. The purpose of the pre-test was to assess the length of the instrument and to determine unclear directions or difficulties in using the answer

sheets. The actual testing was done in twenty-one 7-12th grade classrooms located throughout the United States.

Initially, all participants of the 1970, 1971, and 1972 NSF Summer Institutes for HSGP users held at Western Michigan University were contacted to ascertain if and when during the 1972-73 school year they were using Unit 3, "Cultural Geography." The final determination of the twenty-one classes was based on those cooperating teachers using Unit 3 during January and February, 1973, and who returned the completed test answer forms by April, 1973.

All classes were currently using all or part of the High School Geography Project. Unit 3 was the first HSGP unit used by four of the classes, while the other seventeen classes had had previous exposure to at least one other HSGP unit. Two-thirds of the classes had already finished Unit 3 when the test was administered and one-third had not yet begun Unit 3 but had been previously exposed to other HSGP units.

CHAPTER IV

DATA ANALYSIS AND SUMMARY

As stated in the preceeding chapter, the author's objective was to develop a reliable and valid measuring instrument to ascertain whether a student has attained specific affective objectives, and the level of that attainment, in Unit 3 of the HSGP materials. Since the author feels there is a definite need for this type of affective measure, a presentation of the rationale for such a measure has been considered a major portion of the objective of this study. Further, the actual development of an affective measuring instrument for one unit of the HSGP materials is viewed as an attempt to alert educators to one possibility in the domain of affective evaluation. It is necessary, therefore, to substantiate by quantitative analysis of the data collected that the development of a valid and reliable affective measuring device is possible, and that the test instrument itself is a step in the right direction.

Methodology of Analysis

In the attempt to determine whether the original objective of a reliable measure has been reached, the use of qualitative evaluation has been included in addition to

quantitative techniques. At this stage of development of measurements for the affective components of HSGP materials, the author feels descriptive analysis is helpful in ascertaining the reliability of such an attempt.

The test itself is divided into two major parts, Part A consisting of Sections I, II, and III, and Part B consisting of Section V (see Appendix II). Parts A and B have been analyzed separately as have each of the three sections in Part A. Although the same statistical tests could not be used for all of the sections due to the format of the test, equivalent analysis of each section was conducted. Two different Groups of students were tested, each of which was analyzed separately and compared in order to establish reliability. Group I consisted of eleven separate classes totaling 228 students and Group II consisted of 234 students in ten different classes.

Every item in the test was not analyzed. The individual items which were analyzed were selected on the basis of their corresponding objective. Thus a representative analysis of all the objectives and levels included in the test was achieved.

Discussion of Test Results - Part A

Part A of the test consisted of three sections, each based on a different forced-choice attitudinal scale. The results from Section I, the Likert Scale, Section II, the

Interest Inventory Scale, and Section III, the Thurstone Attitudinal Scale, will be analyzed through comparable methods for each of the two Groups tested.

Combined tally analysis

A combined tally of the number of students responding to each of the possible choices for selected items for each Group was tabulated for Section I of the test, the Likert Scale. Because the desired response for the items in Section I is neither "1" nor "5", but a gradation of desired responses, that is "1 or 2" or "4 or 5", depending on the direction in which the item was worded, a table representing the percentage of students responding to the two "desired" and two "not desired" responses was made (see Table 1). A fifth possible choice of response for the Likert Scale, "I am uncertain", was not included in the evaluation. This response was deemed inconclusive in determining whether or not a student had attained an affective objective or the level of that attainment.

The third column of Table 1 represents the difference between the percentage of students making a desired response and those making an undesired response. A negative percent indicates that the particular objective involved was not achieved by the students. Attainment of an objective can be assumed when the difference is between 20% and 100%. Response differences in the 0 to 20% range

TABLE 1
 PERCENTAGE OF STUDENTS MAKING DESIRED
 RESPONSE ON SECTION I, THE LIKERT SCALE

Test Item	Objective and Level	Desired Response ^c	Group I ^a			Group II ^b		
			% 1 or 2	% 4 or 5	% Dif- ference	% 1 or 2	% 4 or 5	% Dif- ference
1	1-1.2	1 or 2	80	4	+76	85	5	+80
3	2-1.3	4 or 5	8	78	+70	4	86	+82
4	2-1.3	4 or 5	18	63	+45	21	64	+43
5	2-1.3	1 or 2	43	32	+11	52	22	+30
9	3-1.3	4 or 5	15	52	+37	12	62	+50
10	3-1.3	1 or 2	30	51	-21	27	54	-27
12	3-3.1	1 or 2	53	12	+41	66	8	+58
13	3-3.1	1 or 2	74	12	+62	70	14	+56
18	4-2.3	4 or 5	16	75	+59	16	70	+54
19	4-3.2	4 or 5	23	56	+33	23	53	+30

a N=227

b N=233

c Response Choices:
 1. I strongly disagree
 2. I disagree
 3. I am uncertain
 4. I agree
 5. I strongly agree

were considered indecisive differences. Though arbitrarily chosen, differences falling into this range indicate an almost equal number of students responding in both the desired and undesired manner. Thus, it is not possible to accurately ascertain whether attainment of that objective has taken place.

As can be seen from Table 1, there is a high degree of correlation between the percentage of students responding "1 or 2" and "4 or 5" for both Groups, indicating a reliable measure. Additionally, the majority of the items show a high difference between the desired and undesired responses, Column 3, and are consistent for both Groups tested, substantiating the reliability of this part of the evaluation device.

Items 3, 4, and 5 are all written to measure attainment of the 1.3 level of Objective 2 of the taxonomy. The results show a large discrepancy between the patterns of response. This indicates that the 1.3 level of attainment of Objective 2 is questionable, and more than likely, that the objective has not been attained by the majority of students. However, since the responses are consistent between the Groups, the discrepancy is hypothesized to be due to the wording of the test or the unit materials themselves. The teaching methods of the twenty-one individual teachers are not considered a factor since it is unlikely that they all presented the materials in the same manner.

The reliability of the items is, however, shown.

Items 9 and 10, both relating to level 1.3 of Objective 3, also show a large with-in group difference and indicate non-attainment of that objective. Again, this is hypothesized to be due to the items themselves or unit materials since there is a high correlation between the two Groups.

Although at a higher level of attainment of Objective 3 than Items 9 and 10, Items 12 and 13 show a consistent response pattern for both items representative of level 3.1, indicating achievement of the objective. Additionally, there is consistency between the responses of each Group, again substantiating this to be a reliable evaluation instrument.

Consistency between Groups, and therefore reliability, is shown by Items 18 and 19, written for levels 2.3 and 3.2 of Objective 4. The responses for Item 19 indicate the majority of students have not obtained a higher level of attainment of Objective 4, although a mediocre level has been reached. This is hypothesized to be a function of the materials themselves and individual teaching methods more than the test format.

A combined tally of the number of students responding to each of the possible choices for selected items for each Group was also tabulated for Section II of the test, the Interest Inventory (see Table 2). Due to the test format,

TABLE 2

COMBINED TALLY OF RESPONSES ON
SECTION II, THE INTEREST INVENTORY

Test Item	Objective	Desired Response	Group I ^a					Group II ^b					
			1	2	3	4 ^c	Blank	1	2	3	4	5 ^d	Blank
21	1	1,2,or 3	6	61	114	41	5	8	49	101	49	25	1
22	1	1,2,or 3	63	94	59	8	3	56	94	57	19	6	1
28	2	1,2,or 3	122	64	26	13	2	117	66	27	16	6	1
29	2	1,2,or 3	11	39	101	66	10	11	28	62	88	44	0
42	3	1,2,or 3	11	52	90	69	5	10	50	81	54	37	1
43	3	1,2,or 3	12	44	106	61	4	8	27	90	76	30	2
55	4	1,2,or 3	26	80	90	27	4	22	68	82	46	14	1
56	4	1,2,or 3	19	49	102	49	8	11	35	83	60	42	2

a N=227

b N=233

c Response Choices:

1. I enjoy participating in, watching, or reading about the topic, and do so every chance I get.
2. I enjoy participating in, watching, or reading about the topic, but I don't do it very often.
3. I know about the topic, but I seldom participate in, watch, or read about it.
4. I don't know about the topic at all.

d Response Choices:

1. I enjoy participating in, watching, or reading about the topic, and do so every chance I get.
2. I enjoy participating in, watching, or reading about the topic, but I don't do it very often.
3. I know about the topic, but I seldom participate in, watch, or read about it.
4. I know about the topic, but I NEVER participate in, watch, or read about it.
5. I don't know about the topic at all.

this combined tally could not be further analyzed by the percentages of students making an acceptable response as had been done with Section I. For Group I, the students had four possible choices for answering the items in Section II of the test, while for Group II, the test was revised and there were five responses from which to choose (see Table 2). However, visual analysis of the table clearly shows a close correlation between the pattern of responses for each Group, substantiating the hypothesis that this portion of the test is a reliable evaluation measure.

Although consistency of the responses is shown, a high level of attainment of each objective has not been achieved by the majority of the students. Objective 1 has probably not been attained by the students for although the responses for Item 22, the vocabulary for which was taken directly from the unit, represents attainment of Objective 1, the responses for Item 21, representing vocabulary not used in the unit, does not show a high level of attainment of the objective. This pattern indicates an awareness of the topic or vocabulary recognition rather than attainment of an objective. It is hypothesized that the results are due to the teaching method used and/or the emphasis given this objective in the materials themselves.

The attainment of Objective 2 is also not evident. Although the vocabulary used in both Items 28 and 29 was

taken directly from the unit, the pattern of response for Item 29 shows a small proportion of the students responding in a desired manner. In addition to the two hypothesized causes of this inconsistent pattern of response mentioned above, a third hypothesis offered is that the objective was not attained at all and the high proportion of desired response for Item 28 is due to the familiar vocabulary used with no correlation to the unit objective desired.

The consistency of responses for Items 42 and 43 indicates reliability, but does not substantiate the attainment of Objective 3, even though the vocabulary was directly from the unit. It is hypothesized that this is directly due to the emphasis given this topic in the unit since a consistent pattern was established for all classes tested. This same hypothesis is also posited as explanation for the low level of attainment of Objective 4, represented by Items 55 and 56. Again a consistent pattern of response resulted from all classes evaluated.

Cross-tabulation analysis

Since the Likert and Interest Inventory Scales, Sections I and II, have no one correct answer, but instead a range of desirable student responses, a matrix of the combined percentages of students responding in a desirable manner for selected cross-tabulated items for each of the Groups test was constructed.

The cross-tabulated items compared were selected to give a random representation of the different objectives and levels on which the items were based. The combined percentages matrix was chosen over Chi^2 due to the nature of the data collected and for the purposes of this study, deemed sufficient to establish reliability between Groups I and II. The Chi^2 test was not operative because the cross-tabulations lacked a minimum of 80% of the cells > 5 .

In Section I, the percentages for the cross-tabulated items showing the greatest variation between Groups were cross-tabulations 1 and 2 (see Appendix III). Since in both cases the low percentage of students responding in a desired manner occurred in Group I, it is hypothesized that the items were representative of the objectives desired and the teaching of the materials in the classes represented in Group I was responsible for the low level of attainment of the objectives.

The other five cross-tabulations from Section I show a relatively close similarity between the responses from each Group, substantiating the reliability of the measuring instrument used. However, cross-tabulations 3 and 4 did not have a majority of students responding in a desirable manner for either Group. For cross-tabulation 3, it is hypothesized that the major factor responsible for the low level of response is the objective level of the two items. Item 4 was written for the 1.3 level of Objective 2, while

Item 7 was for the 3.1 level. This would indicate that the majority of the students have not attained the higher levels of attainment of Objective 2, the exact reason for which cannot be determined by the data collected.

It is also hypothesized that for cross-tabulation 4, though both items were written for the 1.3 level of Objective 3, the low percentage of students with a desired response would indicate they have not attained even this low level of the objective. Or possibly, the wording of either or both of the items did not clearly represent the 1.3 level, and attainment of the objective was achieved by a majority of the students tested.

All eight cross-tabulations from Section II show a strong similarity between Groups, thus substantiating the reliability of this portion of the instrument. However, a majority of the students did not respond in the manner desired for all items evaluated, specifically cross-tabulations 9, 12, and 13. The reasons for these low percentages should be further analyzed.

The vocabulary used for the items in cross-tabulation 9 was taken directly from the unit and both items were written to represent Objective 2. It can be hypothesized, therefore, that the low level of attainment of this objective by all the students is primarily due to the lack of emphasis Objective 2 is given in the unit. However, the instructional methods used by individual teachers must also

be taken into consideration as a possible contributing factor.

Similarly, the items in cross-tabulations 12 and 13 are also vocabulary words directly from the HSGP materials and were written to represent Objective 3. Again, it can be hypothesized that the lack of emphasis of this objective in the unit is responsible for the low level of attainment by the majority of the students from both Groups. These results hint at a general lack of affective emphasis in the HSGP materials, a point which will be further explored later.

Chi² analysis

For Section III of the test, the Thurstone Attitudinal Scale, Chi² is a valid test to use on the cross-tabulations. All items in Section III were based on Objective 1 and the selected cross-tabulations included in the Chi² test are representative of the levels of Objective 1. The null hypothesis is that there is no significant relationship between the response pattern for the two items and is significant at the .05 level where $\chi^2 < 3.84$.

As can be seen from Table 3, the Chi² test indicates a similar response pattern for Groups I and II. However, although all classes have achieved the lowest level of the objective, the variances in the responses at the higher levels indicate that attainment of Objective 1 has not been

TABLE 3
 χ^2 RESULTS ON SELECTED CROSS-TABULATED ITEMS ON
 SECTION III, THE THURSTONE ATTITUDINAL SCALE

Cross- Tabulated Items	Objective 1 Level	Group I			Group II		
		N	χ^2	Decision ^a	N	χ^2	Decision ^a
58/59	1.1	215	0.74	Accept	229	0.64	Accept
60/61	1.2	218	0.94	Accept	231	0.47	Accept
63/64	1.3	217	0.05	Accept	230	1.08	Accept
66/67	2.1-2.2	218	6.51	Reject	230	15.51	Reject
69/70	2.3	218	5.01	Reject	232	0.09	Accept
71/72	3.1	218	7.64	Reject	228	8.75	Reject
75/76	3.2-3.3	217	0.76	Accept	230	4.28	Reject

^a Significant at the 0.05 level.

attained.

Since the majority of the items in Section III are taken directly from the unit, and the Chi² test substantiates consistency between Groups I and II and therefore reliability of the measure, the lack of attainment of this objective by some of the classes can be hypothesized to be due to the emphasis given this objective by the individual teachers.

Discussion of Test Results - Part B

Part B of the test was in the form of the semantic differential, consisting of fifteen polar word pairs for each of the four key words or phrases representative of the four major objectives of Unit 3. These key words or phrases were "FRENCH CANADIANS," "COWS," "SPORTS," and "NATIONALITIES." Since the semantic differential has proven validity when based on the specific objectives desired, the statistical tests on this portion of the test were employed only to prove reliability, and included both qualitative and quantitative measures.

Profile of means analysis

Initially, the mean response from the twenty-one classes included in Groups I and II was tabulated for each of the sixty items. Group I consisted of eleven classes, two of which had not been previously exposed to HSGP

materials, and Group II consisted of ten classes, two of which also had no previous HSGP exposure.

The mean from each of the twenty-one classes for each of the sixty items were then combined, and a composite mean for each Group was graphed. A composite mean for those classes using HSGP materials for the first time for each Group was also graphed.

The means for Objectives 1, 2, 3, and 4 can be seen from Figures 2 thru 9. A visual analysis of these figures shows no major discrepancies in the response patterns from the two Groups for any of the four objectives. Interestingly, there is also no major deviation in the response patterns between those classes having previous exposure to HSGP materials and those classes using an HSGP unit for the first time. Whether or not students have had prior exposure to HSGP materials seems not to influence the attainment of the affective objectives presented in Unit 3. One hypothesis for this similarity in response pattern is that the other HSGP units have little, if any, affective emphasis.

Analysis of discrepancies

An analysis of the initial tally of responses and the mean profiles resulted in an undesirable response pattern for some of the polar word pairs for each of the major objectives. A brief discussion of these discrepancies will

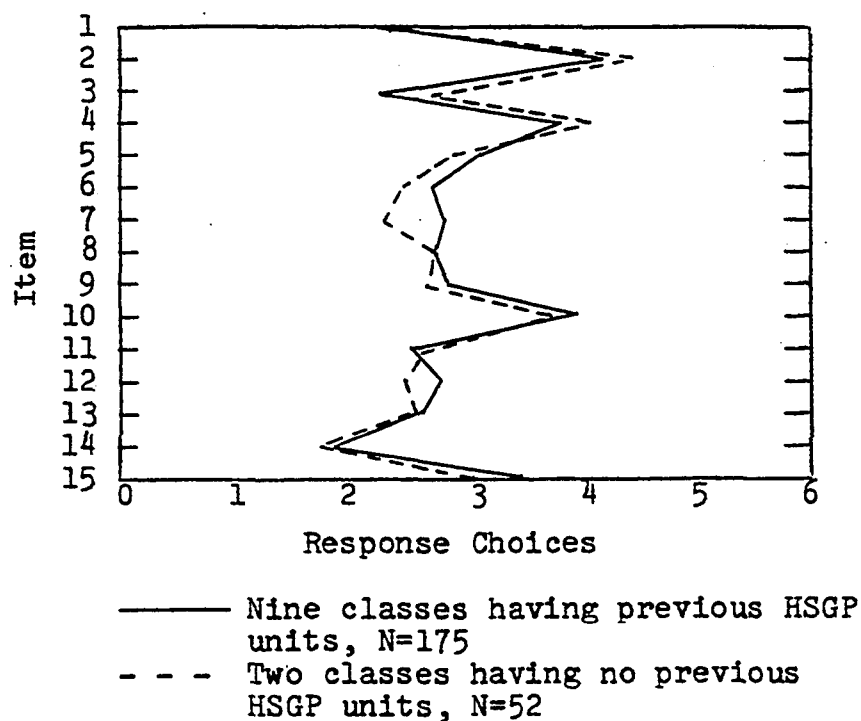


Figure 2. Arithmetic Means of Part B Items 1 thru 15 for Group I.

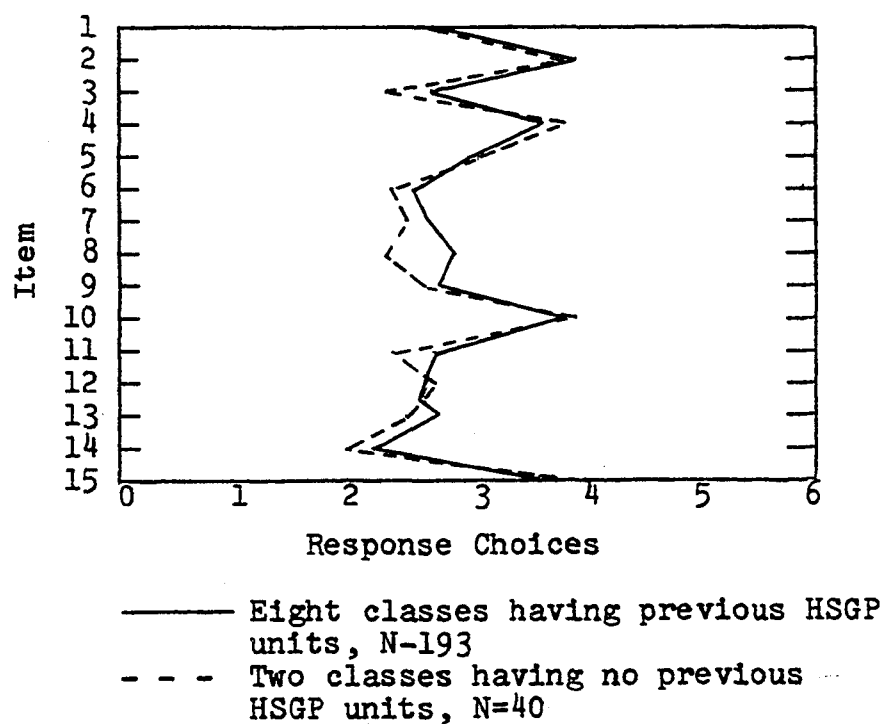


Figure 3. Arithmetic Means of Part B Items 1 thru 15 for Group II.

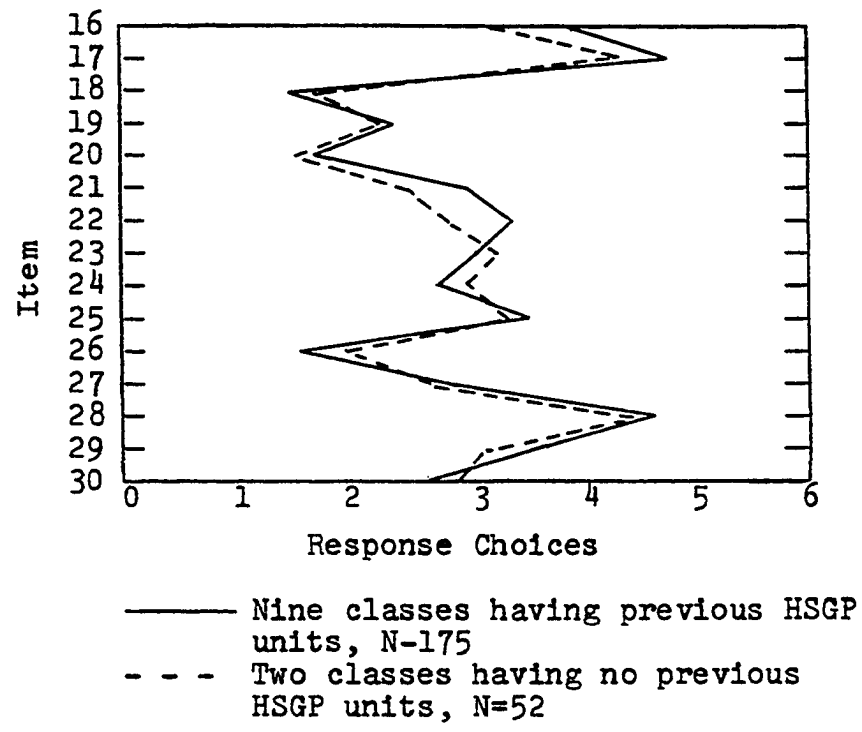


Figure 4. Arithmetic Means of Part B Items 16 thru 30 for Group I.

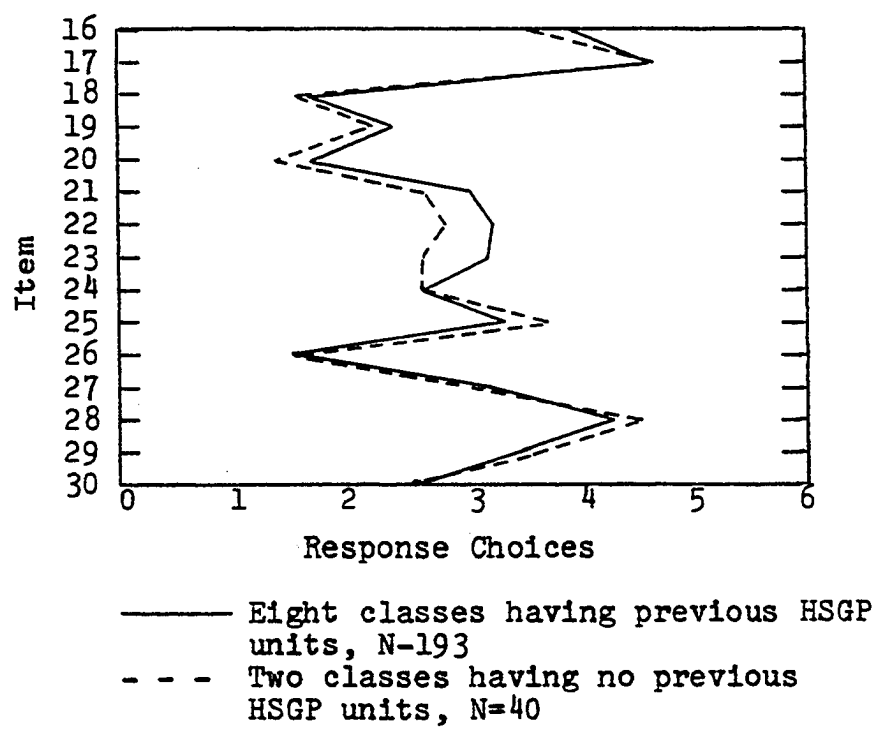


Figure 5. Arithmetic Means of Part B Items 16 thru 30 for Group II.

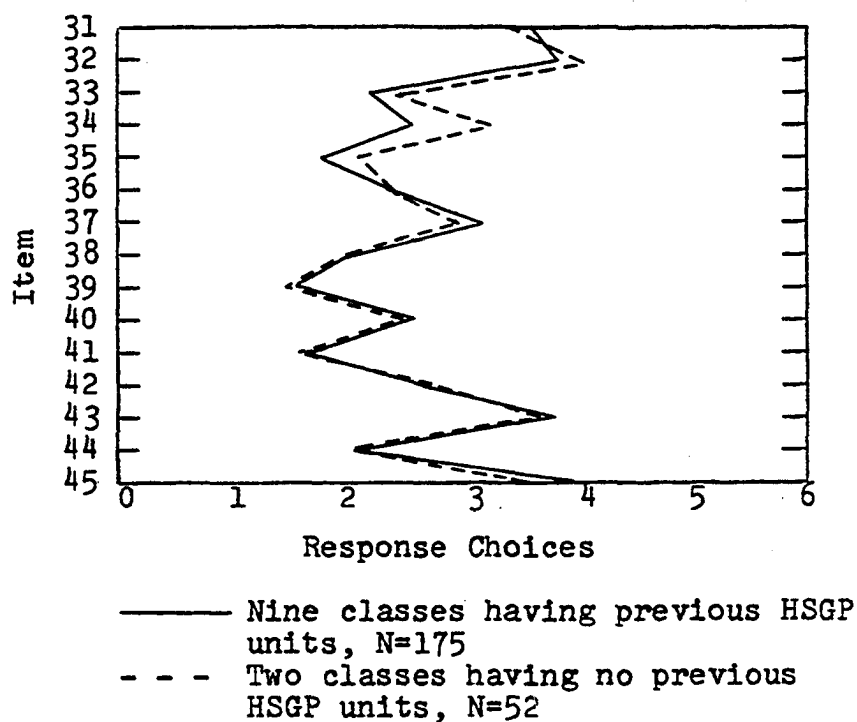


Figure 6. Arithmetic Means of Part B Items 31 thru 45 for Group I.

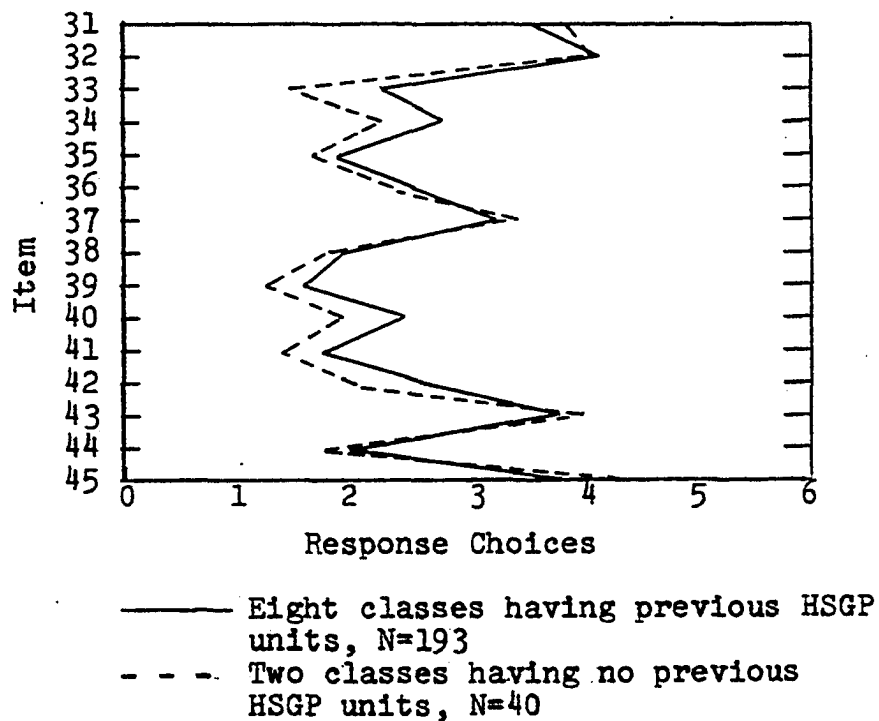


Figure 7. Arithmetic Means of Part B Items 31 thru 45 for Group II.

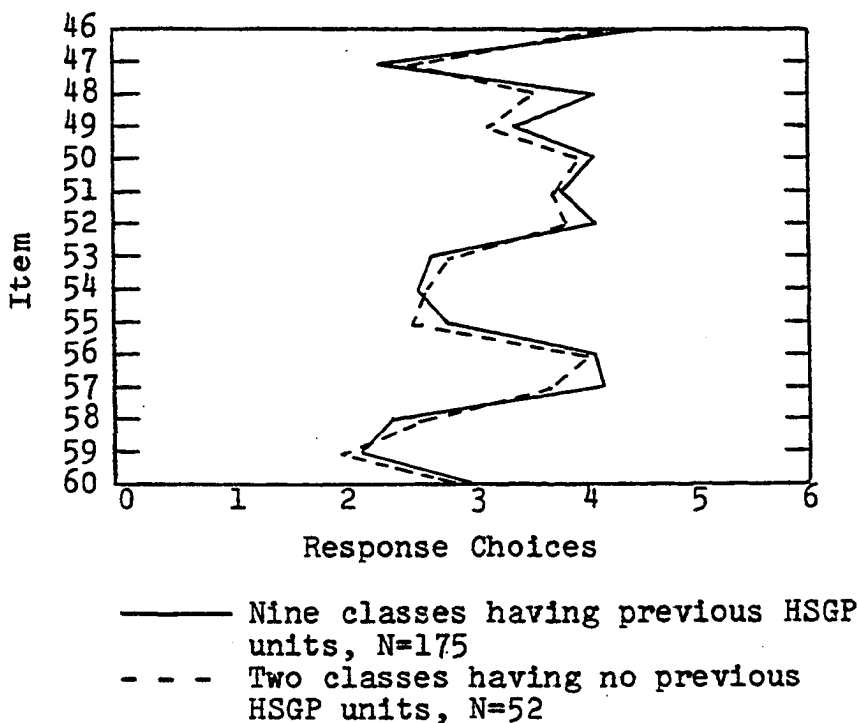


Figure 8. Arithmetic Means of Part B Items 46 thru 60 for Group I.

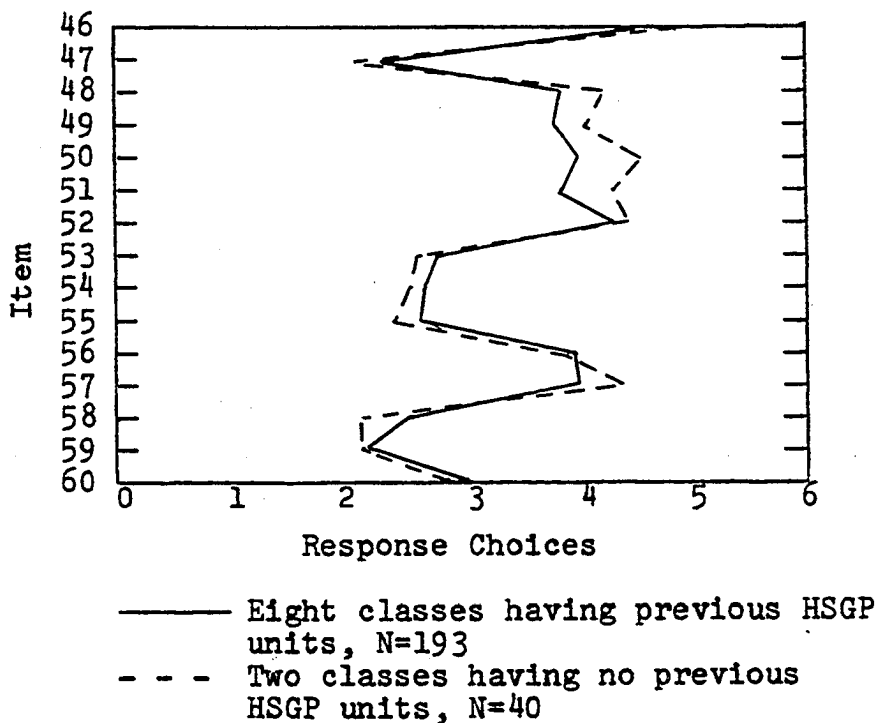


Figure 9. Arithmetic Means of Part B Items 46 thru 60 for Group II.

follow.

For Objective 1, represented by the key phrase "FRENCH CANADIANS," both Items 5 and 7 had an opposite response pattern from that which was desired. It can be hypothesized that the majority of students chose the words "calm" and "happy" over "excitable" and "sad" due to the present situation in Canada and therefore did not have a complete grasp of the objective.

The majority of students in both Groups failed to achieve Objective 2, shown by results of Items 16 thru 30 under the key word "COWS." The profiles of means indicate that Items 16, 19, 22, 23, 24, 25, and 27 were not answered in the desired manner. It can be hypothesized that the students were thinking of cows in terms of their own daily lives and not in relation to the unit they were studying. The obvious conclusion is that this affective objective was not achieved.

Similarly, Items 31, 34, 36, 40, and 43 under the key word "SPORTS," representative of Objective 3, were not answered in the desired manner. Failure to achieve this objective could again be attributed to the students thinking of sports in general and not in the context of the unit.

Results for Items 46, 48, and 50, representative of Objective 4 under the key word "NATIONALITIES," revealed an undesired response pattern which might also reflect the problem of the student thinking in terms of his daily

experiences and not the unit. These discrepancies point to the likelihood that affective emphasis is lacking in this HSGP unit, although affective objectives are stated as goals of the unit.

Correlation coefficients

Correlation coefficients between means for selected classes and items for Groups I and II were calculated (see Tables 4, 5, 6, and 7). Six classes from each Group were chosen. Included in each Group were the two classes with no previous exposure to HSGP units; the remaining four classes were randomly selected. The items under "FRENCH CANADIANS" and "SPORTS", representing Objectives 1 and 3 respectively, were chosen as a representative index of the classes and to eliminate a male or female bias due to the choice of key words chosen to represent each objective.

Tables 4, 5, 6, and 7 indicate a close correlation between Groups I and II for the selected items and, therefore, again prove the reliability of this affective measure. Similarly, the classes not having previous exposure to HSGP units also show a close correlation to the other classes, again suggesting a lack of affective emphasis in other HSGP units.

TABLE 4

CORRELATION COEFFICIENTS OF SIX SELECTED CLASSES
FOR PART B ITEMS 1 THRU 15 FOR GROUP Ia

<u>Class</u>	<u>2</u>	<u>4</u>	<u>7</u>	<u>10</u>	<u>6^b</u>	<u>8^b</u>
2	1.00					
4	0.90	1.00				
7	0.91	0.81	1.00			
10	0.76	0.73	0.77	1.00		
6	0.90	0.85	0.81	0.85	1.00	
8	0.90	0.83	0.87	0.75	0.89	1.00

a N=125

b Class having no previous HSGP unit.

TABLE 5

CORRELATION COEFFICIENTS OF SIX SELECTED CLASSES
FOR PART B ITEMS 1 THRU 15 FOR GROUP IIa

<u>Class</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>	<u>4^b</u>	<u>5^b</u>
6	1.00					
7	0.88	1.00				
8	0.84	0.88	1.00			
10	0.93	0.81	0.84	1.00		
4	0.91	0.91	0.79	0.90	1.00	
5	0.90	0.90	0.89	0.89	0.89	1.00

a N=144

b Class having no previous HSGP unit.

TABLE 6

CORRELATION COEFFICIENTS OF SIX SELECTED CLASSES
FOR PART B ITEMS 31 THRU 45 FOR GROUP Ia

<u>Class</u>	<u>2</u>	<u>4</u>	<u>7</u>	<u>10</u>	<u>6^b</u>	<u>8^b</u>
2	1.00					
4	0.91	1.00				
7	0.89	0.87	1.00			
10	0.91	0.86	0.91	1.00		
6	0.88	0.94	0.86	0.88	1.00	
8	0.89	0.89	0.83	0.89	0.92	1.00

a N=125

b Class having no previous HSGP unit.

TABLE 7

CORRELATION COEFFICIENTS OF SIX SELECTED CLASSES
FOR PART B ITEMS 31 THRU 45 FOR GROUP Iia

<u>Class</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>10</u>	<u>4^b</u>	<u>5^b</u>
6	1.00					
7	0.97	1.00				
8	0.90	0.91	1.00			
10	0.92	0.91	0.88	1.00		
4	0.93	0.94	0.97	0.89	1.00	
5	0.90	0.90	0.90	0.94	0.91	1.00

a N=144

b Class having no previous HSGP unit.

Data Summary

Instrument design

Although problems with evaluating any affective measurement and with the particular format used in this study were present, analysis of the data obtained nevertheless yields several significant results.

As stated in Chapter II, validity of any type of test refers to the accuracy with which a set of test scores measure what they ought to measure. Validity is best determined by a critical analysis of the tests' specifications and content, that is, by comparing the individual test items with their corresponding course objectives. The 138 items used in this research were fairly evenly distributed among the four chosen affective objectives and the eleven subcategories of each objective (see Appendix I). Therefore, it can be said that the affective evaluation instrument devised possesses validity.

The second major component of any affective measurement is reliability, or the consistency with which a set of test scores measure what they purport to measure. As previously stated, consistency of responses between classes in both Groups was achieved for all parts of the test. Consistency of responses between items written for particular objectives was not achieved for all objectives. This is hypothesized to be due to the items themselves

since the patterns were consistent between Groups. However, since consistency is shown between Groups and the number of students for Groups I and II were equivalent, 228 and 234 students respectively, this affective evaluation instrument also possesses reliability.

Objective attainment

Some conclusions relating to the attainment of the affective objectives can be drawn.

Whether or not the vocabulary used in specific items is taken directly from the unit does not influence either the attainment or non-attainment of an affective objective, or the level of that attainment, as shown by Table 2 and cross-tabulations 8, 9, 11, 12, and 13.

Secondly, there is consistent attainment of the four affective objectives included in this test, but only at the lower levels of those objectives. Thus students appear to be functioning at the receiving and responding levels, but not at the valuing and organization levels. This pattern is substantiated by Tables 1, 2, and 3, and cross-tabulations 1 thru 5.

Some salient facts concerning the HSGP material used were also noted. Of the twenty-one classes tested, four had had no previous exposure to any HSGP materials. Interestingly, the response patterns from these four classes were not significantly different from those classes previ-

ously exposed to HSGP units. It can be hypothesized that the pedagogic methods used by the majority of teachers in the classes tested were strongly cognitive in nature and their lack of affective emphasis was responsible for some of the variances in test results. It could also be hypothesized that while several of the major objectives of Unit 3, "Cultural Geography," and also the entire HSGP are affective in nature, the results of this study did not show increased affective objective attainment on the part of students using the materials. This is perhaps due to the small proportion of the individual activities or guidelines in the materials themselves which are devoted to the affective domain.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Difficulties in Affective Evaluation

Although evaluation of affective behavior in the classroom is advantageous to both the teacher and the student, several inherent components of any affective measure hinder its effectiveness and widespread use in formal education. The most critical point here is that if a student feels his affective behavior is subject to either criticism or grading, there is a possibility that he will fake the desired behavior (Bloom, Hastings, & Madaus, 1971). Relatedly, students are aware of the biases of their teachers and may alter their responses in a certain direction dependent upon the teachers' personalities rather than upon their personal convictions (Bloom, Hastings, & Madaus, 1971, p. 488).

Another difficulty in using measures of attitudes is that verbal and written expressions of attitudes are not infallible indicators of the actual existence of that attitude in the person being measured (Horrocks & Schoonover, 1968, p. 490). On the one hand, a superficial change may occur in the attitude of a student based on some inspiring experience and could easily vanish within a short period of time (Bloom, Hastings, & Madaus, 1971). Also, a gener-

ally favorable attitude toward the educational objective desired at the close of a unit may change considerably within a year or two. Similarly, verbal changes on the part of students do not necessarily imply that other and more subtle forms of behavior have been modified. That is, measurement of attitudes expressed by a man's opinion do not necessarily provide the basis for an accurate prediction of what he will do (Thurstone, 1959; Bloom, Hastings, & Madaus, 1971).

Attitude scales, therefore, are instruments that must be constructed as carefully, if not more carefully, than cognitive achievement tests. Similarly the results of affective measurements must be especially carefully interpreted.

Evaluation of Test Devised

When evaluating affective behavior, a measure that can be quantitatively analyzed has proven most effective when data collection is the goal, whether in terms of curriculum improvement and/or student achievement (Terwilliger, 1971; Thurstone, 1959; Osgood, Suci, & Tannenbaum, 1967). Consequently, the instrument devised for this research was objective in format. The value of this pioneer effort is that the data obtained now enables the establishment of at least a partial baseline for affective measurement.

Test format

On the basis of the data collected, evaluation of the test format can be made. The printed directions for each section of the test did not seem to hinder or adversely alter the response marking of any of the students. The number of possible choices for Sections I, II, and V of the test corresponded to the number of response choices on the answer sheets provided. No noticeable difficulty resulted. However, the number of choices for Part III of the test did not correspond to the number of choices on the answer sheets, and mis-marking occurred. A revision of the answer sheets should be made if further testing is undertaken. As could be determined by the answer sheets and written comments from approximately one half of the teachers involved, the length of the entire test was appropriate to the material covered and age groups tested.

As far as could be ascertained, the forced-choice attitudinal scales chosen for this instrument were appropriate for the affective objectives being measured and provided a valid format for this research. Additional research would be necessary to determine if any other types of forced-choice attitudinal scales would be more suitable for similar tasks.

Methods of data analysis

Some limitations in the type of data collected and

methods of analysis are recognized by the author. Section IV of the test, which consisted of information on the sex of each student and their grade level, was not included in the final analysis. It was felt that analysis of these data was not of primary importance at this first stage of development of an affective evaluation instrument. It could, however, be included if a refined measure were devised.

The author feels that in using HSGP materials the size of the class influences the amount of student-teacher interaction which takes place. A small class could tend toward suppression of individual student ideas, while a large class could leave the student with too little direction. It is felt that either of these extremes could influence the students' level of attainment of affective objectives. In this study, the size of the classes was not controlled and might have influenced the data collected. However, in reality the class size is not always controllable and HSGP materials are undoubtedly being used and measured in classes of varying sizes.

Discrepancies in answering items written for the same objective level were noted in the data collected. There were also discrepancies in the response pattern for items placed in different sections of the test which represented the same objective level. Data on some of the factors responsible for these discrepancies, such as the proportion

of slow readers tested, the background of the children themselves, the misuse of the materials, the training of the individual teachers, the question/answer patterns in the classroom, and so forth, could be collected and used in the analysis of affective evaluation instruments. Again, however, it would appear that the stage of development of this particular measure did not warrant the collection of data of this type.

Suggestions on Use of Results

In addition to a final assessment of the affective evaluation instrument devised for this research, consideration should be given to the use of the results from any affective measure. It is important to remember that affective evaluation should not be equated with assigning a grade or giving an examination. It has a much broader significance in that it employs numerous evidence-gathering techniques to help in decisions about the success of a curriculum or the quality of an individual's or a group's performance in relation to stated objectives (Bloom, Hastings, & Madaus, 1971; Schwartz & Tiedman, 1957).

Evaluation of a curriculum which includes affective outcomes is necessary to provide an assessment of its progress toward and success, if any, in fostering these outcomes. If a school does not evaluate these, it has no evidence on which to base modifications of its curriculum

and pedagogic methods. Information on how the group reacts to certain techniques or methods used in the hope of modifying an attitude can give direction for course improvement. Additionally, if a large proportion of the class, contrary to the course objective, have not attained the desired objective level at the end of the course, information on the effectiveness of one aspect of the curriculum is gained (Bloom, Hastings, & Madaus, 1971, p. 227). For curriculum decisions such as these, group data on affective behavior are all that is required (Terwilliger, 1971; Schwartz & Tiedman, 1957; Bloom, Hastings, & Madaus, 1971).

On the other hand, although it may not be good practice to assign a grade for affective behavior, it is often desirable to measure an individual student's affective behavior (Bloom, Hastings, & Madaus, 1971; Thurstone, 1959; Terwilliger, 1971; Schwartz & Tiedman, 1957). Once teachers realize that measurement of affective outcomes need not infringe upon a student's right to privacy or involve the assignment of a grade, much valuable information can be derived. One purpose of formal measurement of a student's affective behavior should be to provide feedback to the student (Bloom, Hastings, & Madaus, 1971, p. 227). This type of evaluation is diagnostic in that it can indicate to the student his progress toward the attainment of such outcomes. It can also be informational when

he is given a profile of his academic and vocational interest patterns (Bloom, Hastings, & Madaus, 1971, p. 227).

To be beneficial, however, the student must be assured that his performance will not be criticized or marked, and that the results will be treated in a confidential and unthreatening manner.

Recommendations for Further Research

The need for the inclusion of and evaluation of affective objectives in the curriculum has been demonstrated. One instrument to measure affective learning has been constructed and analyzed. As a result of the research described herein, several suggestions concerning further research along these lines can be made.

It would be desirable to have more information concerning both the teachers and the classes tested. One suggestion is to include a questionnaire for each teacher covering such topics as the amount of affective emphasis given the unit, teaching methods used, and previous experience with HSGP. Other questions concerning the students themselves, such as proportion of slow or fast readers, general seriousness of the class, amount of participation, general home and economic environments, etc., should also be included. This information would aid in the evaluation of the affective instrument used.

More definite conclusions could also be drawn from the

data collected by a more rigorous analysis of the discrepancies in response patterns between questions based on the same objective and level, and of the differences between grade level and male/female responses. More detailed analysis of the correlation between class size and pattern of response could also be made. However, more detailed analysis would not be significant until a refined affective instrument is developed.

Most importantly, however, the greatest need is simply for more evaluation of affective objectives. Refinement and increased reliability of affective measuring instruments will result only when increased attention and use is given this type of evaluation.

APPENDIX I

TAXONOMY OF AFFECTIVE OBJECTIVES IN
UNIT 3, "CULTURAL GEOGRAPHY"

OBJECTIVE 1: Develops devotion to the idea that all customs and traits are sensible and functional depending on the culture from which they stem.

Level

- 1.1 Develops awareness of customs and traits in various cultures which are different from his own.
For example, when asked to mention uses of cattle throughout the world, he includes such things as labor, recreation, and religious symbolism.
- 1.2 Tolerates culture traits different from his own.
For example, when presented with an unusual custom, he will not react negatively toward it.
- 1.3 Appreciates different customs which contribute toward the particular culture to which they belong.
For example, when asked to describe the use of cattle in Spain, she will include the Spaniard's enjoyment of bullfighting as an important part of their culture.
- 2.1 Completes all assignments on customs and traits belonging to different cultures.
For example, the student will listen when his classmates present a report on the different religions in India.
- 2.2 Seeks information voluntarily about customs and traits different from his own.
For example, the student will be willing to determine some of the customs of Africans and share this information with her classmates.
- 2.3 Enjoys receiving information about different cultures.
For example, the student will have the desire to learn about the important holidays of the French people.

- 3.1 Accepts culture traits different from his own as sensible and functional in light of the total cultures of the people involved.
For example, when an unusual custom of another culture is described, the student responds in terms of the functions it serves in its own setting rather than in terms of his setting.
- 3.2 Associates when possible with people whose customs and traits differ from his own.
For example, when picking a baseball team, he will not exclude classmates who are of a different nationality than his own.
- 3.3 Develops devotion to the idea that all customs and traits are sensible and functional depending on the culture from which they stem.
For example, after first learning that cattle blood is drunk in some countries, the student will want to discover how this custom relates to the entire culture.

OBJECTIVE 2: Becomes actively involved in determining diffusion factors for a particular culture or idea.

Level

- 1.1 Recognizes that there may be more than one factor which influences the diffusion of a culture or idea.
For example, when looking at the spread of Islam, he recognizes that trade, means of transportation, physical barriers, and religious zeal are all factors which influenced its' diffusion.
- 1.2 Accepts different reasons for the diffusion of a particular culture or idea.
For example, when asked the reasons why swimming is a popular sport in this country, the student will agree that many factors could be responsible for its diffusion.
- 1.3 Achieves alertness toward factors influencing diffusion of cultures and ideas.
For example, when discussing the spread of German Christmas customs into her city, she recognizes national heritage and immigration as possible diffusion factors.

- 2.1 Participates when asked to do so in discussions about diffusion factors of a culture.
For example, during a class discussion about the diffusion of Italian foods, the student will be able to give some reasons why there are many Italian restaurants in this country.
- 2.2 Looks for factors voluntarily which cause the diffusion of a culture or idea.
For example, after an activity on China, he will voluntarily look for factors which caused diffusion of the Chinese culture to the United States.
- 2.3 Enjoys reading about the origins of sports and customs in his area.
For example, the student will desire to learn about the diffusion factors which caused the existence of different nationalities in her town.
- 3.1 Recognizes the necessity of considering many factors before stating the causes of the diffusion of a culture or idea.
For example, when asked to explain the spread of hockey, he will consider such things as time, space, barriers, and similar sports in the area before arriving at the causes for its diffusion.
- 3.2 Develops willingness to ascertain diffusion factors when considering a culture or idea.
For example, during an activity on Japan, the student will want to discover the factors which have caused the diffusion of Japanese customs to this country.
- 3.3 Becomes actively involved in determining diffusion factors in a particular culture or idea.
For example, the student will have the desire to determine the major factors responsible for the great number of different nationalities in most large cities in this country.
- 4.1 Attempts to identify the diffusion factors connected with his favorite sport or his ethnic background.
For example, after ascertaining his parents' nationality(ies), the student will desire to determine the factors which caused the diffusion of that nationality(ies) into his town.

OBJECTIVE 3: Values the importance of determining many types of culture areas in a region before drawing a boundary.

Level

- 1.1 Develops awareness of cultural indicators in any area which could determine a culture region.
For example, when asked to indicate some culture traits which could distinguish different areas, she would mention such things as religion, race, nationality, sex, age, language, and values.
- 1.2 Appreciates a culturally determined geographical region.
For example, when looking at the distribution of nationalities in his city, the student will be willing to look at the cultural factors which distinguish the different neighborhoods.
- 1.3 Becomes alert toward cultural indicators in an area.
For example, when looking at his town, he will want to look for the predominant cultural traits which are present.
- 2.1 Performs all assigned activities on different cultural regions.
For example, when given the assignment, she will read about the French and English in Canada.
- 2.2 Participates actively in discussions about prominent cultural features in an area.
For example, the student will want to look at his classmates and try to determine which culture traits he could use if he wished to draw boundaries in his classroom.
- 2.3 Looks for cultural indicators in his classroom from which he could form regions.
For example, he will enjoy drawing a boundary in his classroom determined by religious preferences.
- 3.1 Accepts that, depending on the cultural indicators used, more than one boundary can be drawn for any region.
For example, when asked to evaluate several proposed boundaries of a culture region, the

student should be prepared to consider which cultural indicator or combination of cultural indicators leads to the best possible boundary.

- 3.2 Examines many cultural indicators deliberately before drawing a boundary for a cultural region. For example, before drawing a cultural boundary in his own town, he will look at all cultural indicators he can find before deciding on the best boundary.
- 3.3 Values the importance of determining many types of culture areas in a region before drawing a boundary. For example, during a discussion about determining regions in his town, he will mention that many culture traits must be looked at before a boundary can be drawn.
- 4.1 Attempts to determine cultural indicators in an area. For example, when given mapped data on the ethnic origins present in his town, the student will designate the streets which could form boundaries for the different cultures.

OBJECTIVE 4: Attempts to determine why a degree of cultural uniformity throughout the world is developing.

Level

- 1.1 Develops an awareness that there is some uniformity among different cultures of the world. For example, when asked if and how cultures are becoming more alike, the student says that they are and gives as an example of increasing similarity in the Western style of commercial buildings in many cities.
- 1.2 Appreciates (recognizes) the uniformity of different cultures. For example, the student will be attentive when shown slides of modern cities from around the world which look similar.
- 1.3 Becomes sensitive to culture traits which are uniform throughout many parts of the world. For example, when learning about sports, the student will be able to recognize baseball as a sport which is similar in many countries.

- 2.1 Achieves a willingness to learn about culturally similar areas.
For example, during a discussion about different languages in the world, the student, when asked to do so, will give examples of other English-speaking countries.
- 2.2 Displays an interest in actively participating in activities determining cultural similarities between areas.
For example, when the class is learning about customs in Japan and China, he will be willing to work in a group to discover the similarities between the two cultures.
- 2.3 Develops a keen interest in finding things around her which are similar in many different cultures.
For example, she enjoys comparing customs and traits in her town to a similar size town in England.
- 3.1 Possesses a continuing desire to determine areas of culture which are similar throughout the world.
For example, when learning about the farming practices on the Great Plains, the student will realize that other parts of the world include similar farming methods.
- 3.2 Desires, when looking at a culture, to determine which traits are similar to other cultures he is familiar with.
For example, the student will have the desire to compare the shops in his own neighborhood to those in another section of town and discover their similarities and differences.
- 3.3 Forms a commitment to the idea that there is some uniformity among cultures.
For example, when asked to explain different cultures throughout the world, the student will mention that there are actually a great number of similar traits in all cultures.
- 4.1 Attempts to identify the major cultural similarities between cultures.
For example, when presented with information about English and French people, she will, on her own, look for similarities between the two cultures.

- 4.2 Attempts to determine why a degree of cultural uniformity throughout the world is developing. For example, when explaining why cultures are becoming more alike, he should mention such factors as increases in the speed of communication and transportation, as well as the increase in the number of people involved in cross-cultural travel.

APPENDIX II

TEST 2
HIGH SCHOOL GEOGRAPHY PROJECT
UNIT 3 - CULTURAL GEOGRAPHY

DIRECTIONS:

On the top left corner of the answer sheet, under "Instructor", fill in your own teacher's name. Under "Test Form", put "Test 2".

On your answer sheet there are five spaces after each question:

	1	2	3	4	5
1.	=	=	=	=	=
2.	=	=	=	=	=

For Question #1, if your answer is number 3, you will blacken in the space like this:

	1	2	3	4	5
1.	=	=	■	=	=

Use only a PENCIL. Be sure you fill the answer space completely. Do NOT make any other marks on the answer sheet. Fill in only ONE answer for each question. Make sure you answer EVERY question.

If you erase your answer, be sure to erase completely.

This test covers the material you have studied in the Unit on Cultural Geography. There are 5 parts to this test. Read the directions for each part carefully before you begin that section. The number of possible answer choices is DIFFERENT for EACH section, so watch closely.

SECTION I

Directions: Indicate how you feel about each of the following statements by blackening in the appropriate number on your answer sheet. There are no right or wrong answers.

- 1 - I strongly disagree
- 2 - I disagree
- 3 - I am uncertain
- 4 - I agree
- 5 - I strongly agree

1. The people of the world who use cattle in the proper way generally use them for entertainment.
2. It is acceptable to drink cattle blood.
3. When one change is brought into a culture it oftentimes brings about other changes.
4. A new sport will be more rapidly accepted in a country when that country does not already have a similar sport.
5. An idea must be changed in some way before it can spread.
6. It is uninteresting to find out why many people play baseball in the United States.
7. It is easy to find out where a sport originated.
8. It would be interesting to find out why there are not many Italians in our city.
9. Common characteristics in an area can be used to distinguish a region.
10. Nationalities should not be used as a basis to draw culture boundaries in a country.
11. It is dumb to study about culture traits in my town.
12. Only one boundary to separate cultural regions can be drawn in an area.
13. Culture characteristics in an area are unimportant.
14. I always consider many culture traits before I draw boundaries for a region in an area.

15. Buildings used for religious purposes are similar throughout the world.
16. It is easy to tell differences among many modern cities in the world.
17. Some American customs were borrowed from other countries.
18. It is interesting to compare the cultures of different countries.
19. I would like to find out in which other countries there are families who have the same customs that my family has.
20. New means of communication and transportation have influenced changes in cities around the world.

Directions: Please indicate your feelings about each topic by placing the appropriate number on the answer sheet in the following manner:

- 1 - I enjoy participating in, watching, or reading about the topic, and do so every chance I get.
- 2 - I enjoy participating in, watching, or reading about the topic, but I don't do it very often.
- 3 - I know about the topic, but I seldom participate in, watch, or read about it.
- 4 - I know about the topic, but I NEVER participate in, watch, or read about it.
- 5 - I don't know about the topic at all.

- | | |
|----------------------|------------------------------|
| 21. Spain | 39. Cultural differences |
| 22. American customs | 40. Parents' nationality |
| 23. Japan | 41. Religion |
| 24. Roman Catholics | 42. A language barrier |
| 25. Negroes | 43. Spread of a culture |
| 26. China | 44. Mountains as a barrier |
| 27. Geography | 45. French people |
| 28. Swimming | 46. Culture regions |
| 29. Bullfighting | 47. Different languages |
| 30. Culture change | 48. A river barrier |
| 31. Football | 49. Germans |
| 32. Basketball | 50. Cities |
| 33. Ancient sports | 51. Methods of communication |
| 34. Islam | 52. Church buildings |
| 35. Baseball | 53. A Chinese city |
| 36. Sports | 54. Business districts |
| 37. Soccer | 55. Customs |
| 38. Sport rules | 56. Immigration |

SECTION III

Directions: In Section III, you are asked how you feel about each statement. Mark the appropriate number, either 1 or 2 ONLY, on your answer sheet. Again, there are no right or wrong answers.

- 1 - I agree with the statement
- 2 - I disagree with the statement

- 57. People in India have customs that are different from American customs.
- 58. The use of cattle varies greatly from culture to culture.
- 59. Americans depend on cattle less than do poorer people in other countries.
- 60. Bullfighting is an acceptable type of entertainment.
- 61. The blood of cattle can be used for food.
- 62. It is all right to go to church on Saturdays instead of Sundays.
- 63. Tractors are not always better to use for cultivating land than are cattle.
- 64. Animals can be used to turn water wheels.
- 65. Taking your shoes off before entering a house is not a bad idea.
- 66. I don't mind looking at pictures of religious celebrations in other countries.
- 67. I wish there were more books on different customs around the world.
- 68. I listen when my friends tell me about their favorite Christmas customs.
- 69. Reading about the customs of Africans is interesting.
- 70. It is fun to learn about the holidays celebrated in different countries.
- 71. It is appropriate to worship cattle.
- 72. Requiring women to wear veils at all times is not dumb.

73. It is silly to think that American uses of cattle are the best in the world.
74. Schools should have children of many different types of nationalities.
75. Nobody should ever make fun of customs of different people.
76. The different way some Negroes wear their hair is not ridiculous.

SECTION IV

Mark your answer sheet as follows:

77. 1 - Male 2 - Female
78. 1 - Grade 7 or 8 2 - Grade 9 3 - Grade 10
4 - Grade 11 5 - Grade 12

Directions :

NOW USE YOUR SECOND ANSWER SHEET. In Section V, we want to find out how you describe different things. As in Sections I, II, and III, there are no right or wrong answers. You will find a word printed like this:

CITIES

Look at the word; get an idea (picture) of it in your own mind. Below the word you will find a number of words which describe CITIES. These words are put in pairs that have opposite meaning, like this:

- | | | | | | | | | | |
|----|-------|---|---|---|---|---|---|---|-------|
| 1. | Clean | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Dirty |
| 2. | Quiet | 0 | 1 | 2 | 3 | 4 | 5 | 6 | Noisy |

Between the words with opposite meaning are seven numbers, 0 - 6. You are asked to fill in the number on the answer sheet that you feel best describes CITIES. For example, for Question #1 under CITIES, if you feel CITIES are neither "clean" nor "dirty", you would blacken in the middle number, 3, on your answer sheet like this:

- | | | | | | | | |
|----|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | = | = | = | ■ | = | = | = |

If you feel that the meaning of CITIES is a little more clean than dirty, you would mark your answer sheet like this:

- | | | | | | | | |
|----|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | = | = | ■ | = | = | = | = |

If you feel CITIES are very clean, then you would mark your answer sheet like this:

- | | | | | | | | |
|----|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | ■ | = | = | = | = | = | = |

FRENCH CANADIANS

1. Smart	0	1	2	3	4	5	6	Stupid
2. Atheist	0	1	2	3	4	5	6	Religious
3. Loyal	0	1	2	3	4	5	6	Disloyal
4. Bad	0	1	2	3	4	5	6	Good
5. Excitable	0	1	2	3	4	5	6	Calm
6. Important	0	1	2	3	4	5	6	Unimportant
7. Happy	0	1	2	3	4	5	6	Sad
8. Fair	0	1	2	3	4	5	6	Unfair
9. High	0	1	2	3	4	5	6	Low
10. Worthless	0	1	2	3	4	5	6	Valuable
11. Educated	0	1	2	3	4	5	6	Uneducated
12. Interesting	0	1	2	3	4	5	6	Uninteresting
13. Brave	0	1	2	3	4	5	6	Cowardly
14. Proud	0	1	2	3	4	5	6	Ashamed
15. Illogical	0	1	2	3	4	5	6	Logical

COWS

16.	Clean	0	1	2	3	4	5	6	Dirty
17.	Weak	0	1	2	3	4	5	6	Strong
18.	Valuable	0	1	2	3	4	5	6	Worthless
19.	Unholy	0	1	2	3	4	5	6	Holy
20.	Important	0	1	2	3	4	5	6	Unimportant
21.	Nice	0	1	2	3	4	5	6	Awful
22.	Pleasant	0	1	2	3	4	5	6	Unpleasant
23.	Lazy	0	1	2	3	4	5	6	Industrious
24.	Ugly	0	1	2	3	4	5	6	Beautiful
25.	Active	0	1	2	3	4	5	6	Passive
26.	Useful	0	1	2	3	4	5	6	Useless
27.	Interesting	0	1	2	3	4	5	6	Uninteresting
28.	Unproductive	0	1	2	3	4	5	6	Productive
29.	Alike	0	1	2	3	4	5	6	Different
30.	Efficient	0	1	2	3	4	5	6	Inefficient

SPORTS

31.	Similar	0	1	2	3	4	5	6	Dissimilar
32.	New	0	1	2	3	4	5	6	Old
33.	Changeable	0	1	2	3	4	5	6	Changeless
34.	Near	0	1	2	3	4	5	6	Far
35.	Important	0	1	2	3	4	5	6	Unimportant
36.	Stable	0	1	2	3	4	5	6	Unstable
37.	Simple	0	1	2	3	4	5	6	Complex
38.	Valuable	0	1	2	3	4	5	6	Worthless
39.	Interesting	0	1	2	3	4	5	6	Uninteresting
40.	Diverse	0	1	2	3	4	5	6	Identical
41.	Good	0	1	2	3	4	5	6	Bad
42.	Modifiable	0	1	2	3	4	5	6	Unmodifiable
43.	Alike	0	1	2	3	4	5	6	Different
44.	Useful	0	1	2	3	4	5	6	Useless
45.	Concentrated	0	1	2	3	4	5	6	Spread out

NATIONALITIES

46.	Alike	0	1	2	3	4	5	6	Different
47.	Good	0	1	2	3	4	5	6	Bad
48.	Similar	0	1	2	3	4	5	6	Dissimilar
49.	Changeless	0	1	2	3	4	5	6	Active
50.	Identical	0	1	2	3	4	5	6	Diverse
51.	Simple	0	1	2	3	4	5	6	Complex
52.	Concentrated	0	1	2	3	4	5	6	Spread out
53.	Expanding	0	1	2	3	4	5	6	Contracting
54.	Smart	0	1	2	3	4	5	6	Stupid
55.	Growing	0	1	2	3	4	5	6	Declining
56.	Uninteresting	0	1	2	3	4	5	6	Interesting
57.	Young	0	1	2	3	4	5	6	Old
58.	Important	0	1	2	3	4	5	6	Unimportant
59.	Valuable	0	1	2	3	4	5	6	Worthless
60.	Appearing	0	1	2	3	4	5	6	Disappearing

APPENDIX III

CROSS-TABULATION 1
 Section I (Likert Scale)
 Objective 1
 Levels 1.2 and 1.3

Desired Responses	Item 2					
	3		4		5	
	GP I ^a	GP II ^b	GP I	GP II	GP I	GP II
Item 1						
1	1%	6%	15%	15%	0%	1%
2	12%	13%	10%	22%	1%	3%
3			0%	2%	1/2%	1/2%

a N=208, Total Desired Responses=39 1/2%

b N=233, Total Desired Responses=62 1/2%

CROSS-TABULATION 2
 Section I (Likert Scale)
 Objective 2
 Levels 1.3 and 3.1

Desired Responses	Item 5					
	1		2		3	
	GP I ^a	GP II ^b	GP I	GP II	GP I	GP II
Item 3						
3	2%	1%	1%	2%		
4	4%	5%	24%	23%	6%	14%
5	2%	4%	6%	15%	4%	7%

a N=217, Total Desired Responses=49%

b N=234, Total Desired Responses=71%

CROSS-TABULATION 3
 Section I (Likert Scale)
 Objective 2
 Levels 1.3 and 3.1

<u>Desired Responses</u>	<u>Item 7</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 4</u>						
3	0%	1%	6%	7%		
4	4%	7%	17%	16%	1%	7%
5	1%	5%	8%	9%	7%	4%

^a N=212, Total Desired Responses=44%

^b N=232, Total Desired Responses=56%

CROSS-TABULATION 4
 Section I (Likert Scale)
 Objective 3
 Levels 1.3 and 1.3

<u>Desired Responses</u>	<u>Item 10</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 9</u>						
3	6%	3%	2%	5%		
4	7%	3%	14%	7%	8%	11%
5	1%	2%	0%	2%	0%	1%

^a N=212, Total Desired Responses=38%

^b N=233, Total Desired Responses=34%

CROSS-TABULATION 5
 Section I (Likert Scale)
 Objective 3
 Levels 1.3 and 3.1

<u>Desired Responses</u>	<u>Item 12</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 9</u>						
3	0%	6%	8%	8%		
4	13%	12%	28%	24%	13%	14%
5	3%	5%	0%	3%	3%	2%

^a N=216, Total Desired Responses=68%

^b N=233, Total Desired Responses=74%

CROSS-TABULATION 6
 Section I (Likert Scale)
 Objective 4
 Levels 1.1 and 1.3

<u>Desired Responses</u>	<u>Item 17</u>					
	<u>3</u>		<u>4</u>		<u>5</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 15</u>						
1	1%	1/2%	6%	10%	6%	11%
2	7%	2%	16%	14%	6%	14%
3			7%	10%	3%	4%

^a N=221, Total Desired Responses=52%

^b N=231, Total Desired Responses=65 1/2%

CROSS-TABULATION 7
 Section I (Likert Scale)
 Objective 4
 Levels 1.2 and 4.2

<u>Desired Responses</u>	<u>Item 20</u>					
	<u>3</u>		<u>4</u>		<u>5</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 16</u>						
1	0%	1/2%	6%	3%	13%	10%
2	1%	1%	3%	15%	12%	24%
3			1%	4%	7%	4%

^a N=217, Total Desired Responses=43%

^b N=231, Total Desired Responses=61 1/2%

CROSS-TABULATION 8
 Section II (Interest Inventory)
 Objective 1

<u>Desired Responses</u>	<u>Item 25</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 22</u>						
1	6%	6%	2%	8%	11%	8%
2	12%	3%	7%	12%	27%	15%
3	5%	2%	4%	7%	12%	9%

^a N=213, Total Desired Responses=86%

^b N=232, Total Desired Responses=70%

CROSS-TABULATION 9
 Section II (Interest Inventory)
 Objective 2

<u>Desired Responses</u>	<u>Item 30</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 29</u>						
1	0%	1%	0%	3%	3%	1%
2	4%	1%	4%	3%	4%	5%
3	2%	1%	13%	6%	17%	14%

^a N=210, Total Desired Responses=47%

^b N=232, Total Desired Responses=35%

CROSS-TABULATION 10
 Section II (Interest Inventory)
 Objective 2

<u>Desired Responses</u>	<u>Item 37</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 33</u>						
1	8%	5%	5%	3%	0%	2%
2	4%	6%	15%	8%	10%	6%
3	3%	4%	8%	7%	10%	10%

^a N=205, Total Desired Responses=63%

^b N=223, Total Desired Responses=51%

CROSS-TABULATION 11
Section II (Interest Inventory)
Objective 3

Desired Responses	Item 43					
	1		2		3	
	GP I ^a	GP II ^b	GP I	GP II	GP I	GP II
Item 39						
1	3%	1%	0%	2%	4%	1/2%
2	1/2%	2%	3%	7%	8%	4%
3	4%	1/2%	9%	2%	27%	26%

a N=204, Total Desired Responses=58 1/2%

b N=231, Total Desired Responses=45%

CROSS-TABULATION 12
Section II (Interest Inventory)
Objective 3

Desired Responses	Item 46					
	1		2		3	
	GP I ^a	GP II ^b	GP I	GP II	GP I	GP II
Item 39						
1	1%	2%	2%	1%	2%	1/2%
2	1/2%	0%	2%	3%	10%	7%
3	1/2%	1%	2%	3%	29%	25%

a N=207, Total Desired Responses=49%

b N=233, Total Desired Responses=42 1/2%

CROSS-TABULATION 13
 Section II (Interest Inventory)
 Objective 3

<u>Desired Responses</u>	<u>Item 43</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 42</u>						
1	1%	1/2%	1%	1%	0%	1%
2	2%	1%	4%	6%	12%	7%
3	4%	1%	1%	3%	16%	18%

^a N=197, Total Desired Responses=41%

^b N=231, Total Desired Responses=38 1/2%

CROSS-TABULATION 14
 Section II (Interest Inventory)
 Objective 4

<u>Desired Responses</u>	<u>Item 51</u>					
	<u>1</u>		<u>2</u>		<u>3</u>	
	<u>GP I^a</u>	<u>GP II^b</u>	<u>GP I</u>	<u>GP II</u>	<u>GP I</u>	<u>GP II</u>
<u>Item 50</u>						
1	8%	4%	9%	3%	3%	1%
2	13%	5%	19%	19%	17%	9%
3	1/2%	3%	5%	13%	12%	18%

^a N=211, Total Desired Responses=86 1/2%

^b N=232, Total Desired Responses=75%

CROSS-TABULATION 15
 Section II (Interest Inventory)
 Objective 4

Desired Responses	Item 55					
	1		2		3	
	GP I ^a	GP II ^b	GP I	GP II	GP I	GP II
Item 51						
1	5%	4%	4%	6%	12%	2%
2	3%	3%	7%	16%	22%	14%
3	1/2%	2%	9%	7%	21%	16%

^a N=204, Total Desired Responses=83 1/2%

^b N=232, Total Desired Responses=70%

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