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A comparison of the impact of selected individualized curriculum organizations on faculty perceptions, student attitudes, and student achievement

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A COMPARISON OF THE IMPACT OF SELECTED INDIVIDUALIZED
CURRICULUM ORGANIZATIONS ON FACULTY PERCEPTIONS,
STUDENT ATTITUDES, AND STUDENT ACHIEVEMENT

A Dissertation

Presented to

the Faculty of the School of Education
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In Partial Fulfillment

of the Requirements for the Degree
Doctor of Education

by

Michael T. McCormick

December 1976

A COMPARISON OF THE IMPACT OF SELECTED INDIVIDUALIZED
CURRICULUM ORGANIZATIONS ON FACULTY PERCEPTIONS,
STUDENT ATTITUDES, AND STUDENT ACHIEVEMENT

by

Michael T. McCormick

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ABSTRACT

PURPOSE

The purpose of the study was to examine the impact of traditional and individualized curriculum organizations on faculty attitudes, student attitudes, and student achievement. Current emphases in curriculum organization continue to pursue the creation of the humane school which is defined by Trump as one which treats learners and teachers as individuals, each with unique responsibilities and possessing definite and identifiable features. Characteristic of these efforts are learning situations which seek to place students and teachers in individual and small group learning environments which stress both increased student responsibility in the learning process and the developing role of the teacher as guide and resource person for the process. Previous research has found that teachers tend to view these efforts at curriculum re-organization favorably while student attitudes and achievement have demonstrated no such discernable trend.

METHODOLOGY

Three parochial secondary schools representing a traditional, partially individualized, and predominantly individualized curriculum organization were selected for participation in the study. A total of 626 students in grades eight through twelve and 56 teachers were polled in the study. This represents a 100 percent response for all schools.

Stern's Organizational Climate Index was employed in evaluating faculty attitudes in eight areas: Intellectual Climate, Achievement Standards, Personal Dignity, Organizational Effectiveness, Orderliness, Impulse Control, Development, and Task Effectiveness. Jackson's Student Opinion Poll was employed in evaluating student attitudes. Student achievement was evaluated through an analysis of verbal and mathematics scaled scores for nationally standardized examinations taken by students in the tenth, eleventh, and twelfth grades. The data gathered were examined through the use of analysis of variance for faculty and student attitudes and analysis of covariance for student achievement. Student IQ served as the covariate.

FINDINGS

Faculty attitudes were found to be statistically significant in four of the eight areas measured by the Organizational Climate Index (Intellectual Climate .01 level, Organization Effectiveness .05 level, Orderliness

.01 level, and Task Effectiveness .01 level). In each instance the individualized schools demonstrated the more favorable perceptions of their work environment.

Student attitudes did not demonstrate any statistically significant differences on the eighth, tenth, eleventh, or twelfth grade level. Ninth grade students in the predominantly individualized school were significantly more satisfied with their school experiences than were the ninth grade students in either the traditional school (.05 level) or the partially individualized school (.001 level).

The attitudes of high ability students on the eighth, tenth, eleventh, and twelfth grade levels did not demonstrate any statistically significant differences. High ability ninth grade students in the partially individualized school were found to be significantly less satisfied than students in either the traditional school (.05 level) or the predominantly individualized school (.001 level).

Differences in student achievement were found to be statistically significant only for tenth grade students. Verbal achievement for tenth grade students in the partially individualized school significantly exceeded that of students in the traditional school (.01 level); mathematics achievement for tenth grade students in the partially individualized school significantly exceeded that of students in the traditional school (.01 level) and the predominantly individualized school (.05 level). The achievement of satisfied and dissatisfied students demonstrated limited statistically significant differences.

CONCLUSIONS

Individual perceptions of a work environment and the accompanying level of performance are a reflection of organizational climate and effectiveness. The investigator found a limited amount of evidence to suggest that current programs to individualize curriculum organizations tend to be viewed positively by faculties which are asked to implement such programs. These findings are similar to those of Steward and Love, Kelley, Bosco and others. And they offer encouragement that continuing efforts to broaden the responsibilities of the learner in the school environment and better utilize the special competencies of the faculty members they interact with may be favorably received and viewed as supportive of educational endeavors.

Results of this study suggest that in the area of student attitudes regarding their school experiences most students tend to assume a neutral posture. However, the significant differences on the ninth grade level reflecting significant satisfaction on the part of students in the predominantly individualized school and significant dissatisfaction on the part of high ability students in the partially individualized school would seem to indicate more pronounced responses in the early phases of secondary experiences. Increased emphases on the affective aspects of curriculum development may provide a momentum for both creative and positive responses on the part of students which could carry through their high school years and beyond. The current findings demonstrating significant differences in tenth grade students' achievement favoring the partially individualized school imply the need for continued development of a variety of learning experiences at varying grade levels. Despite limited statistical confirmation, the general findings for satisfied and dissatisfied student achievement and the small number of scores examined imply that student achievement is not related to curriculum organization. Finally, the results of this study would seem to indicate that efforts to improve the instructional programs must concern themselves with both affective and cognitive areas and include a broadened view of anticipated results. This is to suggest that such characteristics as sustained effort, consistent performance, and expanding cultural and civic awareness are all within the province of desirable goals. Their inclusion in program design and analysis may prove to be a valuable evaluative criteria for both teachers and researchers.

DEDICATION

This study is dedicated to the one person whose patience, support, and continuing encouragement made its completion a reality-- my wife Patti.

ACKNOWLEDGMENTS

The writer wishes to express his sincere appreciation to Professor Armand J. Galfo, under whose guidance this investigation was conducted, for his patient guidance and criticism throughout the investigation. The author is also indebted to Professor Robert Maidment and Professor G. William Bullock, Jr., for their careful reading and criticism of the manuscript.

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A COMPARISON OF THE IMPACT OF SELECTED INDIVIDUALIZED
CURRICULUM ORGANIZATIONS ON FACULTY PERCEPTIONS,
STUDENT ATTITUDES, AND STUDENT ACHIEVEMENT

Chapter 1

INTRODUCTION

The organizational life of any school is centered in its curriculum. It provides the basis for realizing the philosophical tenets of the school and achieving the specific and identifiable goals and objectives that arise from that statement of belief. Every individual in the organization is an integral part of the structure for reaching those goals and must be ready and equipped to "assist in the establishment of a harmonious and enabling structure for their attainment."¹ Central to this process are the questions: "Is it possible to encourage the emergence of an organizational structure in which the total individual can find satisfying experiences and in which the organization nurtures the attainment of human goals?" and "What are the prime moves in that direction?"² The issues posed in these questions are complex and complicated. They find their expression in the balance between linear, organizational needs, and spiralling individualized self-actualizing needs, between authority and freedom in the processes which bring faculties, staffs, and students together in common pursuits.³

¹Robert S. Gilchrist and Bernice R. Roberts, Curriculum Development A Humanized Systems Approach (Belmont: Lear Siegler, Inc./Fearon Publishers, 1974), p. 19.

²Ibid., p. 20.

³Ibid.

BACKGROUND

A Definition of Curriculum

Within schools the significant determinants of performance and attitudes are the curriculum strategies which bring about the interaction between student and teacher. The conventional approach to defining curriculum often describes it in terms of the instructional activities planned and provided for students by their school. Trump suggests that curriculum is much more than planned activities and must be viewed as "a vital, moving, complex interaction of people and things in a free-wheeling setting."⁴ "It includes questions to debate, forces to rationalize, goals to illuminate, programs to activate, and outcomes to evaluate."⁵ Curriculum is, in effect, a design to develop the curiosity and creativity innate in each individual in order that he or she might constructively contribute to an ever changing society.⁶ Taba notes that:

This concept means that not only is intellectual training to be directed to understanding the forces of the culture and to mastering the intellectual tools necessary for that understanding, but also that there is a fundamental responsibility for training in the culture's essential values and loyalties. In this view, then, social cohesion depends not so much on

⁴J. Lloyd Trump and Delmas F. Miller, Secondary School Curriculum Improvement (Second Edition; Boston: Allyn and Bacon, Inc., 1973), p. 13.

⁵Ibid.

⁶Ibid.

transmission of the common knowledge as the sharing of common values and concerns.⁷

For "without continual reorientation to changing conditions education becomes unreal and in a sense useless because it does not prepare youth for life's problems and responsibilities."⁸ Curriculum attempts to comprehensively reflect experiences which are "similar to those in life."⁹ Taba, in Curriculum Development Theory and Practice, points out that these experiences stress "internalization of values and feelings ...and provide fairly potent models for identification in the form of significant persons as well as forceful experiences."¹⁰ In essence, curriculum is "a socializing agent of some consequent which shapes the values and standards of individuals and adds a measure to their life orientation."¹¹ Curriculum, when viewed from this perspective, becomes a major vehicle for meeting societal and individual needs of life. On the societal level, it provides the foundation for the refinement of social processes. And, on the individual level, it offers an opportunity for the attainment of personal goals.

Curriculum and Learning Theories

Curricula and the organizations within which they operate are founded on a vision of the individual as learner. Current curricula are

⁷Hilda Taba, Curriculum Development Theory and Practice (New York: Harcourt, Brace and World, Inc., 1962), p. 25.

⁸Ibid.

⁹Ibid., p. 66

¹⁰Ibid.

¹¹Ibid., p. 77.

composites of numerous theories which began with the concept of faculty psychology, and this was followed by a theory which saw the learner as a system of dynamic forces engaged in the processes of maintaining a state of equilibrium that encompasses his entire being.¹² The theory of faculty psychology or mental discipline stressed the value of difficult tasks in the learning process. Training in the sense of drill and practice result in learning. The succeeding concept of equilibrium has produced two theories of behavior and learning: one was the associationist or behaviorist theory which rested primarily on learning by trial and error and the other was the Gestalt or field theory.¹³ This latter approach "assumes that cognitive processes -- insight, intelligence, or organization -- are the fundamental characteristics of human response."¹⁴ The capacity to perceive and create relationships is central to the learning situation and the forces operating in it.¹⁵ Emphasis is placed on cognitive processes and field theory views learning as essentially a social process, ... (and) individual differences are crucial."¹⁶ These theories provided the framework within which curriculum development has taken place. Their cumulative effect has been to create a vision of the learner as one who requires interactive processes which enhance individual growth.

¹²Ibid., p. 77.

¹³Ibid., p. 80.

¹⁴Ibid., p. 81.

¹⁵Ibid.

¹⁶Ibid., p. 82.

CURRICULUM DEVELOPMENT

Goodlad notes that "society tends to allocate to schools the preservation of certain tendencies considered essential."¹⁷ Value judgments abound in such a process, and it is further complicated by the "fact that the products and methods of man's inquiries far outstrips the capacity of a single man to know them."¹⁸ "The resulting pedagogical problems are not merely problems of encompassing fresh accumulations of knowledge--awesome though these tasks may be--but of making instructional order out of quantitative chaos."¹⁹ Ultimately curriculum demands a rigorous discipline which includes the areas of goals, content, evaluative processes, and organizational strategies.²⁰ Effective curriculum designs must mold these components into total educational programs which offer to the individual a sense of perspective as regards contemporary life experiences and the opportunity to pursue chosen areas of interest and competence to the maximum.

Goals

Curriculum goal selection is premised on three basic concepts. First, the skills of learning must be made intrinsic with emphasis

¹⁷John I. Goodlad, School, Curriculum, and The Individual (Waltham: Blaisdell Publishing Company, 1966), p. 13.

¹⁸Ibid., p. 14.

¹⁹Ibid.

²⁰Ibid.

placed on locating, recording, and appraising resources for learning, budgeting time, locating information, and developing the ability to cooperate.²¹ These skills have both social and ethical value and are appropriate within "the context of the complex institutional structures in which most people live."²² Second, the learning situation must be consistent with the evolving discovery of the modern mind; it dramatizes and emphasizes that perceptiveness and enterprise are resources to be nurtured.²³ And third, patterns of inquiry must be typical of sophisticated study and parallel the phases of modern research.²⁴ This emphasis on research models provides a sound structure for the identification of goals and the content which subsequently leads to their attainment.

Content

The development of curricula must reflect a recognition of the differences between "basic materials and those which are in the realm

²¹Ryland, W. Crary, Humanizing The School (New York: Alfred A. Knopf, 1969), p. 125.

²²Ibid.

²³Ibid.

²⁴Ibid. Crary points out that "the structure of modern research (includes): Phase 1 -- exploration and planning -- parallels the design of the project and the statement of hypotheses. Phase 2 -- inquiry, activity, and research -- is the accumulation of data stage; its classroom instruments may be those of any research discipline (documentary, survey, statistical, or field). Phase 3 -- presentation, organization, and conceptualization -- is like the data-processing and reporting stages of a research project. Phase 4 -- appraisal and evaluation -- represents the critical intelligence applied to findings of inquiry, an application both by the researcher and by his peers, on behalf of both. Phase 5 -- utilization, reflection, and reconceptualization -- reflects the outcome of research, which includes every step from rejection to replication to utilization." Ibid., p. 125.

of creativity and special interests."²⁵ Basic materials are those deemed essential for the individuals within a society who are educable; they are the facts, concepts, skills, and appreciations minimally necessary for contributive citizenry.²⁶ Beyond this minimum are those materials which are considered desirable and enriching and serve as a logical extension of the basic materials. Creativity and special interests are dimensions of curriculum which add both breadth and depth to the fundamental areas and provide opportunities for the learner to pursue uniquely rewarding areas of individual competence or curiosity.²⁷ The successful merging of the basic and creative components of curriculum content can and will provide a full range of educational experiences which offer a maximum potential for individual development. At the same time, the societal needs which Taba has stressed are more fully met. Thus, the emphasis placed on each area and the time allotted to them are central concerns in content selection and organization.

Evaluative Processes

The methods of evaluation used in conjunction with curriculum development are crucial to valid decision making as regards both refinement of current programs and adoption of new designs. "Speaking

²⁵Trump and Miller, Secondary School Curriculum Improvement, p. 23.

²⁶Ibid., p. 24.

²⁷Ibid.

of evaluation in general, Lewis points out that actions could not attain success except that there are evaluations, which are essentially predictions."²⁸ "The movement is from reality of the present to a chosen future (and) the principal function of empirical knowledge is that of an instrument enabling transition from one to the other."²⁹ Hastings notes that "without such feedback, either the decision to revise or the decision not to revise -- and most certainly the decision of how to review -- must be based upon feeling tones and the arguments of personal preference."³⁰ It is essential, therefore, that patterns of evaluation include objective criterial which provide a basis for future curriculum direction. The whole point of evaluative processes is the provision of data which allow for program refinement and the adoption of those strategies most likely to make that growth a reality.

Organizational Strategies

The organization of the school has increasingly become a pervasive factor in the initiation of changes that many educational leaders view as imperative.³¹ It is useless to consider individualizing

²⁸Peter A. Taylor and Doris M. Cowley, Readings in Curriculum Evaluation (Dubuque: W. C. Brown Company Publishers, 1972), p. 81, citing C. I. Lewis, An Analysis of Knowledge and Valuation (1946), pp. 371-72.

²⁹Ibid.

³⁰Ibid., citing J. T. Hastings, "Curriculum Evaluation," Journal of Educational Measurement IX (1969), 35.

³¹Arthur W. Foshay, Curriculum For The 70's: An Agenda For Invention (Washington, D.C.: National Education Association, 1970) p. 17.

the pace of the school offerings if, for example, time schedules dictate approaches.³² Large numbers of both teachers and administrators have taken note that "whole-class instruction, which has been condemned by observers of education ever since the Renaissance goes right on because of the way the school is organized."³³ Organizational patterns have heretofore based their existence on an uninterrupted routine and proper sequencing, and thus students who followed the pattern could find success within the system. "The purpose of going to school never was, of course, to go through school but to gain an education; our present organizations confuse one with the other."³⁴ Current changes in traditional structure "have as their obvious intent making the school organization fluid enough so that it can respond to the differing needs of individual students."³⁵ It is, however, important to note that the "organization of the school is not the curriculum of the school."³⁶ Structure and content are not synonymous but should be mutually supportive. Structure can provide the opportunity for curriculum to come alive for the individual student and serve as a means to acquire designated essentials and to actively engage

³²Ibid.

³³Ibid., p. 18.

³⁴Ibid.

³⁵Ibid.

³⁶Ibid.

in those experiences which inspire creativity and satisfy special interests. Of equal importance is the requirement that content be flexible enough to take full advantage of the opportunities made available through new approaches to organization. Staid and inflexible parameters limit creative response and make even the achievement of essential objectives a frustrating experience.

CURRICULUM DESIGN

Specific curriculum designs are expressions of theoretical concepts. As such, they include methods and materials consistent with the view of the learner and have followed three major approaches; the subject-centered approach, the student-centered approach, and the problem-centered approach.³⁷

Subject-Centered

The subject-centered approach is organized around clearly delineated areas of study which are to be arduously pursued and mastered.³⁸ Learning is measured in terms of the material covered and retained. Curriculum as expressed and formulated in the subject-centered approach gives little attention to the learner per se and concentrates on the appropriate selection and ordering of subjects to which the learner is exposed. Subject matter is assumed to be universally applicable. It stands apart from the learner in terms of interest or preference and makes uniform expectations as regards

³⁷Rudy K. Bent and Adolph Unruh, Secondary School Curriculum (Lexington: D. C. Heath and Company, 1969, p. 6.

³⁸ibid.

time and the amount of material to be covered. Changes in subject-centered curriculum arise from the refinement or expansion of the specific discipline.³⁹ Ignored in this process are the learner response to content and instructional experience in the presentation of material. And, the instruction itself tends to be as systematic as content. The end products of this approach are "concepts, skills, rules, and principles which are basic to further study in each subject."⁴⁰

Student-Centered

The student-centered approach is a response to the constraints of a purely subject orientation to curriculum and "advocates placing emphasis on the learner...and upon selecting content which met the needs and interests of youth."⁴¹ Curriculum building proceeds from interest and insight theory and makes large assumptions regarding the validity of selected content.⁴² It brings with it a strong guarantee of interest satisfaction, variety of materials, and learner interest with relevance the criterion of selection.⁴³ The highly subjective nature of such an approach, however, contributes to a lack of general organization and common direction. The values of natural motives and inclinations are obvious, but there exists the real potential for extreme imbalances in

³⁹ Ibid., p. 8.

⁴⁰ Ibid., p. 7.

⁴¹ Ibid., p. 9.

⁴² Ibid.

⁴³ Ibid., p. 10.

terms of desired outcomes. Curriculum must offer a guide to the accomplishment of goals which are definable and contributive to societal and individual needs. It may be difficult at best to satisfy this curriculum requirement if neither societal nor individual needs are not readily apparent to the learner. The constant change which surrounds contemporary existence only serves to intensify the requirement for thoughtful analysis of what must be included in a comprehensive curriculum.

Problem-Centered

The third method of curriculum development, the problem-centered approach, is characterized by the selection and organization of content and methods of learning based on the concept of learning as problem solving and encourages reflective thinking.⁴⁴ It is based on the field theory and while it employs some of the features of the subject-centered and student-centered approaches it adds the dimension of student problems, needs, concerns, and difficulties and a different method of organizing learning experiences. Method is the key to the success of the problem approach and emphasis is placed on the interaction between teacher and student.⁴⁵ This curriculum design creates an environment which brings the learner and teacher together in a situation requiring clear patterns of communication and cooperative

⁴⁴Ibid., p. 11. "The steps in reflective thinking are those employed in research. Each problem begins with a felt need or difficulty which cannot be solved (only) through the securing of data, the organization of data, and the formulation of conclusions based on them."
Ibid., p. 12.

⁴⁵Ibid.

efforts. The learner as problem solver and the teacher as guide in the process brings with it a substantial opportunity for the sharing of experiences and the assumption of a realistic amount of responsibility by the learner in the educative process. An approach to curriculum which redistributes responsibility and calls for communication on a one to one basis demands much of both teacher and student. The teacher must come to the learning environment equipped to allow a wider range of individual responses to the demands he will make. The methodologies employed must draw the learner into thoughtful analysis. Patterns and relationships of an interdisciplinary and intradisciplinary nature can and will become apparent when content and process are skillfully blended in viable patterns. The learner must come to the learning environment aware that problem solving requires a self-imposed discipline. Accumulation of data is but a means to an end and not an end in itself. Rejection of proposed solutions, continual revision of approaches, and incorporation of critical input require flexibility and determination.

The problem oriented curriculum, as it has evolved, has fundamentally changed the teacher-learner interaction and fostered the emergence of additional curriculum revisions that offer great promise: the process curriculum, the structure curriculum, and the humanistic curriculum.⁴⁶ The process curriculum draws upon the manner of inquiry

⁴⁶Ibid., p. 15.

developed for a respective discipline and emphasizes the skills required for following an investigative sequence.⁴⁷ The structure curriculum concentrates on establishing interrelationships and clarifying generalizations derived from empirical studies of the field.⁴⁸ The humanistic approach

...provides for readiness, for the structure of each subject can be taught at any secondary-school age providing it is presented in the vocabulary of the pupils and is consistent with their experiences. The development of readiness can be stimulated by providing further experiences, either actual or vicarious.

One of the chief values of this approach is that it provides answers to questions pertaining to the selection of learning experiences which cannot be determined wholly through a study of the structure of knowledge and the mode of inquiry. It is an eclectic method employing the best elements of the several approaches.⁴⁹

The humanistic curriculum attempts to narrow the gap between the content and the individual by recognizing readiness, in terms of prior experiences, and providing appropriate learning experiences as follow-ups to them. This is in contrast to previous approaches in which, as Howard notes, "A student who might wish to study a topic more deeply is penalized by having to do the regular work as well as that in which he has become interested."⁵⁰ Ultimately it becomes

⁴⁷ Ibid., p. 14

⁴⁸ Ibid., p. 15

⁴⁹ Ibid., p. 19

⁵⁰ Alvin W. Howard and George C. Stoumbis, The Junior High and Middle School: Issues and Practices (Scranton: Intext Educational Publishers, 1970), p. 405.

possible to avoid the conclusion drawn by far too many students "that school is not a good place to pursue their interests -- such pursuits will interfere with their work."⁵¹

THE HUMANE SCHOOL

In general, contemporary secondary education is experiencing a wide variety of changes in the areas of curriculum structure and content. The emphasis of the majority of these changes continues to be the creation of what has come to be called the humane school. Trump describes the humane school as one which treats learners and teachers as individuals, each with unique responsibilities and possessing definite and identifiable features.⁵² Characteristic of the Trump model of the humane school are options designed to allow learners to move forward and experience success in terms of their own talents and interests. Additional features are also stressed by Trump in his discussions of the humane school. Learners are in contact with a teacher-advisor who sees them as total human beings. Needs are diagnosed and programs are planned in a consultative atmospheres which emphasize the future. Motivational experiences are planned to move students through basic and fundamental areas and into in-depth analysis of special interests which surpass original expectations and

⁵¹ Ibid., citing Eugene R. Howard and Roger W. Bardwell, How to Organize a Non-Graded School (Englewood Cliffs, N. J.: Prentice-Hall, 1966) p. 12.

⁵² Trump and Miller, Secondary School Curriculum Improvement, pp. 21-22.

desires. The humane school curriculum takes the learner where he is and builds within him a sense of purpose and personal confidence premised on continuous progress. With competent supervision the learner experiences a variety of self-directed, self-produced, and self-evaluated materials. The teacher evaluation of the outcomes of these experiences is based on the individual's current performance. In effect, this assists in avoiding the all too common practice of "giving a specific assignment to everyone in a class to be completed once...."⁵³ Comparative data as regards the progress of others is but a part of the self-evaluation process and not the measure of performance. Taken in sum, Trump emphasizes that evaluation recognizes the total effort of the student and reports it in terms which ignore the traditional threat of failure so often employed as the prime motivational device.

Trump also stresses that the humane school is one in which the teacher may make maximum utilization of his professional talents and interests in the form of differentiated staffing.⁵⁴ It recognizes individual competencies among teachers and strives to create an environment which takes maximum advantage of them. The development of human resources in such a manner can inspire a consistently high level of professional performance. In addition, the learner consistently comes

⁵³Howard and Stoumbis, The Junior High and Middle School: Issues and Practices, p. 405, citing Howard and Bardwell, How to Organize a Non-Graded School, p. 11.

⁵⁴Trump and Miller, Secondary School Curriculum Improvement, pp. 21-22.

into contact, in the individual and small group structures which frequently occur in the humane school, with those teachers whose talents and energies are liable to inspire concerted effort and positive response.

A Curriculum Concept

The humane school and the curriculum concepts which operate within it have arisen, in varying degrees, from the observations, experiences, and investigations of thoughtful and perceptive educators. Their concern for the process is expressed, in part, by Silberman who points out that:

Certain skills or abilities are essential to the educated man: the ability to learn for himself, to take hold of a subject and 'work it up' for himself, so that he is not dependent upon his teacher's direction; the ability to think for himself 'to ask the right critical questions and to apply rigorous tests' to his hunches, so that he is not dependent upon the ideas and opinions of others; the ability to respond to beauty, the beauty of nature as well as the art made by his fellow man; and the ability to communicate his ideas and feelings to others. The fact that there is no one curriculum to be specified for everyone does not mean, therefore, that there should be no curriculum at all. 'The most dangerous intellectual aspect of the contemporary scene,' as Robert A. Nisbet suggests, is the inability of so many of the young (and so many of the would-be young) to distinguish between authority and power.⁵⁵

Silberman stresses the importance of recognizing that the central task of adolescence is self-definition. He states that "it is, indeed,

⁵⁵Charles E. Silberman, Crisis In The Classroom (New York: Random House, 1970), p. 333.

the mental structures that emerge during adolescence, and that a well-conceived curriculum is designed to enhance, that make self-definition possible, for they enable young people to think abstractly, to reflect on the meaning of their own thoughts, experiences, and feelings and to conjure up the full range of alternatives for the future."⁵⁶ The obligation of the school is "to clarify for its students the meaning of their experience of life in their society."⁵⁷ Finally, Silberman notes that for this clarification of experiences to happen "it is not just the curriculum that will have to change but the entire way high schools are organized and run."⁵⁸ The concerns expressed by Silberman are central to the continuing efforts to achieve the humane school. And, it is obvious that the improvements he calls for must be a direct outgrowth of basic organizational changes initiated at all levels of the educative process.

Organizational Approaches

The emphases by educators on curriculum organization have been generally consistent in their concern for organizational flexibility, increased student responsibility, a lessening of required courses in favor of electives, and, on a broader plane, expanded numbers of paths to the high school diploma itself. In terms of organizational flexibility

...changes now going on fall into three broad categories:
 Modest changes in school regulations designed to create a freer and more humane atmosphere outside the classroom;
 Somewhat bolder attempts to humanize the schools as a whole for example, by cutting the number of required classes leaving

⁵⁶Ibid., p. 335.

⁵⁷Ibid., p. 336.

⁵⁸Ibid.

students with a third or more of their time unscheduled, to be used for independent study, for taking more elective courses, for fulfilling some course requirements outside the classroom, or for relaxation and leisure;

Radical experiments involving changes of the most fundamental sort -- reordering the curriculum and indeed the entire teaching-learning process, and in some instances broadening the very concept of what constitutes a school.⁵⁹

The bolder attempts to humanize the school in terms of options and use of time clearly reflect a recognition that "what a person does independently determines his unique personality."⁶⁰ These increasing emphases on learning activities which stress individual pursuits also brings with it intensified responsibilities for the learner. As teachers assume the role of advisor and guide they engage in activities which require a less direct control of the learning situation. The learner is required to commit himself actively to the attainment of teacher and self-determined goals, to seek out the necessary resources and help, and to maintain a sense of momentum which, in prior arrangements, was the province of the teacher under the rubric of motivation.

Independent study, in its broadest application, does not limit the student to strictly individual efforts. Once removed from the large group structure, small groups of students may join in cooperative projects. The intradependence created in such a situation provides for a sense of shared responsibility in which "he may succeed and contribute to others as well as to his own personal development."⁶¹

⁵⁹Ibid., p. 337.

⁶⁰Trump and Miller, Secondary School Curriculum Improvement, p. 293.

⁶¹Ibid., p. 294.

Goals for the amount of time to be devoted to independent study vary according to the unique requirements of the programs in operation. Trump suggests that in an effective school employing the concept most students spend approximately one-third of the available school hours in independent study.⁶²

An extension of the concept of independent study also includes the use of individualized scheduling. It is obvious that the time arrangements specified in the schedule enhance or inhibit curriculum improvement.⁶³ Flexible approaches to the use of time have as their objective the ability to alter the schedule on a daily basis and offer to the student an opportunity to exercise a choice in time utilization.⁶⁴ The range of alternatives in this area is quite wide and is, in fact, limited only by the ingenuity of the professional staffs developing the schedule and the specific curriculum of the school. The ultimate aim "is to make a school more humane....with a curriculum environment that stresses self-exploration, decision making, and learning in an environment best suited for each one of them."⁶⁵

⁶²J. Lloyd Trump, Images of the Future -- A New Approach to the Secondary School (Washington, D.C.: The National Association of Secondary School Principals, 1959), pp. 8-9. "Many students will spend additional time in subject fields in which they are competent and have particular interests. Ultimately 60 percent or more of a pupil's time may be spent in independent study....The combination of a different school schedule, cooperative professional decisions by teachers and counselors appropriate attendance and reporting procedures, and new evaluation techniques should be established to encourage and to govern personalized independent study." Trump and Miller, Secondary School Curriculum Improvement, p. 295.

⁶³Trump and Miller, Secondary School Curriculum Improvement, p. 340.

⁶⁴Ibid., p. 341.

⁶⁵Ibid., pp. 348-49.

Academic accountability in individualized scheduling becomes a unique process guided by teachers and controlled, in part, by the student. The demand for individual response requires the teacher-advisor to play an increasingly larger role in the monitoring of student progress. The student-advisee is in continuous contact with a teacher-advisor who may alter the schedule according to the student requests, the rate or level of work being done, or the data according to student requests, the rate or level of work being done, or the data received from other faculty. The immediate adaptability in terms of the individual student requirements and professional observation makes possible a pattern of individual growth and evaluation which is both responsive and tied more closely to student performance.

The crucial element in the increasing emphasis on curricula which are responsive to individual needs is the relationship between the instructional program and the organizational pattern that implements it. The problem of curriculum is to economize learning potential by making the most judicious and appropriate selection of content and the organizational design of its implementation.⁶⁶ The educational system must "bring structure into harmony with new curriculum developments."⁶⁷

In the creating of such a harmony Gilchrist and Roberts suggest that "an open, interlocking, multidimensional structural process, based on an improved view of the nature of man and his values is required."⁶⁸

⁶⁶Philip H. Phenix, Philosophy of Education (New York: Henry Holt and Company, Inc., 1958), p. 59.

⁶⁷Trump and Miller, Secondary School Curriculum Improvement, p. 34.

⁶⁸Gilchrist and Roberts, Curriculum Development A Humanized Systems Approach, p. 22.

Known qualities of organizational structure within which Gilchrist and Roberts believe progress can be made toward the attainment of human goals are related to "assumptions, authenticity, communication, collaboration, leadership, flexibility, and inquiry."⁶⁹

Basic assumptions for the design of an organizational structure for curriculum development rest upon the need for consensus, the expression of feelings, the acceptance of conflict, and the belief that structure is a facilitator.⁷⁰ Authenticity, communication, and collaboration are, in essence, a call for honesty on the part of all those concerned with the learning environment. For the realization of goals there must be a creative response to curriculum demands that is free from artificial restraints and reflects a genuine concern for growth. This time is in large measure an outgrowth of organizational leadership. It requires an emphasis on the individuals within the organization and a complete commitment to their growth and potential for contributing to the overall refinement of the programs. Finally, flexibility can provide the ability to respond in immediate and alternative ways to the problems which will arise in the process of developing a humanistic curriculum. And, a spirit of inquiry can bring student and teacher together in an environment which rewards innovation, encourages unusual methodologies, and provides truly valuable individual growth experiences.

In summary, the current effort to create a humanized curriculum has focused upon a commitment to the individual. Newly emergent patterns

⁶⁹Ibid.

⁷⁰Ibid., p. 23.

have drawn from theoretical and experiential bases to forge experiences which draw both teacher and student into a new learning dynamic. Central to this dynamic is an emphasis on the interaction between student and teacher. The teacher assumes the role of advisor for the complete academic program of some students and for all those students who pursue the objectives of his courses. This advisor-advisee relationship makes apparent the personal importance of the individual student and allows him to share the special talents of the teacher-advisor in a one-to-one setting. The student is challenged academically to become a problem solver and to become increasingly competent in the gathering, examination, and analysis of data. This is a cooperative effort involving both the teacher-advisor and fellow students and demands the establishment of effective channels of communication and the ability to collaborate in the problem-solution process. The ultimate aim is to inspire a self-initiated step from the mastery of those areas seen as essential to the needs of life to the investigation of special interests that will be personally productive and enriching.

The structure which facilitates the growth of the humanized curriculum rests upon a totally flexible organizational approach. Constraints are held to a minimum, and time patterns reflect a recognition that individual efforts require a wide range of options. Change within the structure is encouraged, and the organization does not control the individual's pattern of growth but is responsive to it.

The measure of success in the efforts of those who work to make the humanized curriculum a reality resides, in part, with the satisfaction

and achievement of those most directly concerned with it -- the students and their teachers.

PROBLEM

Purpose of Study

The purpose of the present study was to examine teacher and student perceptions and student achievement in three approaches to curriculum organization. It was anticipated that the present study would possess implications relating to both traditional and individualized curriculum organizations.

Statement of Problem

The problem of the present study was to investigate the impact of three approaches to curriculum organization on faculty and student perceptions and student achievement. The three selected curricula reflected a traditional approach to curriculum organization and the two variations of the Trump model for individualized curricula. One curriculum organization devoted twenty percent of the available school time to individualization. The other curriculum organization devoted sixty-five percent of the available school time to individualization.

Definition of Terms

The following terms will be used frequently through the report. The specific definitions are provided to help the reader properly evaluate the research and its implications.

Traditional Curriculum: As used in this study, the traditional curriculum provided equal time allotments for all courses. The students engage in large group instruction and are evaluated on a specified, periodic basis.

Partially Individualized Curriculum: As used in this study, the partially individualized curriculum provided twenty percent of the available academic time for individual and small group work. Individual student schedules are constructed with advisor direction on a daily basis and provide the daily plan for student activities in the individualized mode. Specific time limits were placed on the completion of individual activities.

Predominantly Individualized Curriculum: As used in this study, the predominantly individualized curriculum provided sixty-five percent of the available academic time for individual and small group work. Student schedules are periodically revised on the basis of student progress. No time limit is placed on the completion of individual activities.

Student Attitudes: As used in this study, student attitudes were the scores attained by students on the Student Opinion Poll.

Faculty Perceptions: As used in this study, faculty perceptions were the scores attained by faculty members on the Organizational Climate Index.

Student Achievement: As used in this study, student achievement was as follows: Twelfth Grade - scores attained by students on the Scholastic Aptitude Test; Eleventh Grade - scores attained by students on the Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test; Tenth Grade - scores attained by students on the American Education Council Achievement Test.

Student Ability: As used in this study, student ability was the intelligence score attained by all students on the Otis Quick-Scoring Mental Ability Test administered upon entrance into the respective schools.

Satisfied Students: As used in this study, satisfied students were those students scoring in the upper quartile on the Student Opinion Poll.

Dissatisfied Students: As used in this study, dissatisfied students were those students scoring in the lower quartile on the Student Opinion Poll.

High Ability Students: As used in this study, high ability students were those students who rank above the ninetieth percentile in terms of the score attained on the Otis Quick-Scoring Mental Ability Test.

Hypotheses

The hypotheses developed for the study reflect an attempt to test the theoretical urgings of Trump, Miller, Gilchrist, Roberts and similar authors discussed in the previous pages. They suggest that emerging curriculum patterns which emphasize expanded student responsibility, self-selected paths for the attainment of curriculum goals, and interactive patterns stressing individual and small group structures offer the greatest potential for improved student and faculty performance within schools.

The hypotheses listed below attempted to provide a comparative basis for an examination of the impact of two specific curricula

which are reflective of current efforts to bring about increasingly individualized learning environments. The theory base would seem to indicate that such strategies can effectively produce positive results in such areas as faculty work environments, student satisfaction with their school experiences and student academic performance in the classroom. Thus, the hypotheses address themselves to the areas of: faculty perceptions of their work environment, student attitudes regarding their school experiences, and student achievement.

The six hypotheses tested were as follows:

Hypothesis 1 - Teacher perceptions of organizational climate will be significantly more favorable in the partially individualized curriculum organization than in the predominantly individualized curriculum organization or the traditional curriculum organization.

Hypothesis 2 - There is a significantly greater degree of satisfaction among students in the partially individualized curriculum organization than in the predominantly individualized curriculum organization or the traditional curriculum organization.

Hypothesis 3 - High ability students reflect a significantly greater degree of satisfaction in the partially individualized curriculum organization than in the predominantly individualized curriculum organization or the traditional curriculum organization.

Hypothesis 4 - The achievement of students in the partially individualized curriculum structure significantly exceeds the achievement of students in the predominantly individualized curriculum organization and the traditional curriculum organization.

Hypothesis 5 - The achievement of satisfied students in the partially individualized curriculum organization significantly exceeds the achievement of satisfied students in the predominantly individualized curriculum organization and the traditional curriculum organization.

Hypothesis 6 - The achievement of dissatisfied students in the partially individualized curriculum organization significantly exceeds the achievement of dissatisfied students in the predominantly individualized curriculum organization and the traditional curriculum organization.

LIMITATIONS

In the present study data for analysis were gathered from small, parochial secondary schools. A limited scale investigation of this type necessarily limits the investigator in his ability to generalize beyond the scope and nature of the schools studied.

ORGANIZATION OF REMAINDER OF STUDY

Chapter 2 will focus on a review of the related research and literature. Chapter 3 will illustrate the design and procedure employed in conducting this study, including explanations of instrumentation, methodology, and data analysis. Chapter 4 will offer findings of the research study. Chapter 5 will present conclusions as drawn from the results obtained and will offer recommendations regarding curriculum organization and the humane school.

Chapter 2

REVIEW OF RELATED RESERACH

This chapter reports research literature relating to teacher perceptions of school climate, the impact of open and closed climate schools, student perceptions of school climate, and student achievement as it relates to traditional and individualized curriculum organizations. It is important to note that the literature uses a number of terms to describe the individualized curriculum organization. Among those referred to in the following chapter are: modular scheduling, flexible scheduling, individually guided education, inquiry method, independent learning, and individualized learning. In each instance the researchers are referring to a learning environment which includes, to varying degrees, student options regarding use of academic time, teachers in the role of resource people in one-to-one or small group situations, and the absence of complete teacher control and direction of the learning process.

FACULTY PERCEPTIONS OF SCHOOL CLIMATE

On the junior high school level, Stern's⁷¹ analysis of the relationship between organizational climate and achievement found

⁷¹George G. Stern, People in Context (New York: John Wiley and Sons, Inc., 1970).

significant positive correlations at the .01 level and significant correlations at the .05 level for student morale. On the high school level, he found significant positive correlations at the .001 level for both achievement and morale.

Stern notes that:

...the more protective and supportive the secondary school is of its staff, and the more structured and conventional the teachers, the better the students' morale and performance. Teachers oriented toward personal achievement in a building that accepts their impulse expressions and social needs are evidently less likely to be doing an effective job in their classrooms, and the students tend more toward underachievement and their absenteeism rate is higher.⁷²

In 1967 Minzey⁷³ investigated the relationship between the teacher morale and student attitudes toward their school environment. From an original sample of twenty-two high schools selected on the basis of school organization and experience of the principal, the three schools with the highest teacher morale and the three schools with lowest teacher morale were determined. From the six schools a random sample of students was selected to gather data regarding student attitudes and items of concern. Minzey's results indicate that students are less extreme in their attitudes as a group than teachers and appear to be unaffected by the morale of their teachers. Teachers and students differ significantly in times of their concerns regarding the school climate and while "student have a very accurate perception

⁷²Ibid., p. 285.

⁷³Jack DeVere Minzey, "A Study of the Relationship Between Teacher Morale and Student Attitudes Toward Their School Environment" (unpublished Doctoral dissertation, Michigan State University, 1967) summarized in Dissertation Abstracts, 28-05A-1626.

of their teacher's morale...teachers are not able to accurately predict student attitudes."⁷⁴ Minzey suggests that despite the apparent independence of student attitudes from faculty influence as regards perception of the school environment the accuracy of student ability to perceive faculty attitudes should not go unnoticed. The impact may not be reflected in attitudinal responses but academic motivation or lack thereof.

Braden⁷⁵ conducted a similar examination, on the elementary school level, of the relationship between faculty and student attitudes. His specific purpose was to relate faculty and student attitudinal factors to the organizational climate of the schools within which they functioned. An examination of the data gathered from eight open climate schools and seven closed climate schools indicated that the attitudes teachers hold toward students differ between teachers in differing organizational climate groups. The teachers in the open climate held more positive attitudes toward students. Faculty attitudes did not influence student attitudes. Braden recommends further investigations to determine possible casual factors which might help to explain the more positive attitudes regarding students held by staff members who work in open climates.

⁷⁴Ibid.

⁷⁵James Neil Braden, "A Study of the Relationship Between Teacher, Principal and Student Attitudes and Organizational Climate" (unpublished Doctoral dissertation, University of Missouri, 1970) summarized in Dissertation Abstracts, 31-08A-3801.

In an early attempt to ascertain the relationship between school atmosphere and pupil progress, Hale⁷⁶ compared progress in the areas of reading, arithmetic, and language to a measure of organizational climate in thirteen schools. The relationships between reading and climate and arithmetic and climate were not significant. The coefficients for language achievement and climate was significant at the .05 level.

Steward and Love note that "...innovation has become the watchword in American education...and the teacher's role is that of a specialist."⁷⁷ In an effort to examine more closely this emerging view of the teacher, the investigators "obtained permission to study the professional personnel of an innovative (high) school...devoted to the goal of individualized instruction...(and the use of) Learning Activity Programs."⁷⁸ Data derived from interviews and a forty-five item attitude scale dealt with teacher perceptions of the individualized school climate and their conceptualization of individualized instruction.

⁷⁶ Jack Hale, "A Study of the Relationships Between Selected Factors of Organizational Climate and Pupil Achievement in Reading, Arithmetic, and Language" (unpublished Doctoral dissertation, University of Alabama, 1965), summarized in Dissertation Abstracts, 26-10A-5817.

⁷⁷ Judith R. Steward and W. A. Love, Jr., "The Teacher's Response to Technology and the Individualization of Instruction" Educational Technology, X (February, 1970), 56.

⁷⁸ Ibid.

In general, the data gathered by Steward and Love suggested that the level of satisfaction was high with over seventy-five percent of the respondents indicating a desire to continue working in an individualized program and recommending the school as a good place to work. In addition, eighty-six percent felt the individualized curriculum maximized the opportunity to be creative on the job. There was, however, some concern for a potential loss of status in comparison to the traditional system with fifty-two percent of the teachers expressing ambivalent feelings on status. Of most concern to the professional staff functioning in this innovative climate was the lack of role clarity and the requirement for expanded staff development programs. Forty-seven percent felt that what was expected of them was unclear, and seventy-three percent felt that staff development for role clarification was essential. Steward and Love conclude that "the lack of structure allows teachers to express their own creative urges (but) the same lack of guidance and structure creates feelings of anxiety."⁷⁹ One aspect of role that was clear was the guidance function in both academic areas and socio-personal development. Seventy-six percent felt that the student's personal development was as important as the imparting of information.

Concerning the concept of individualized instruction, the teachers were asked to rank order five statements describing the innovative system. A coefficient of concordance was computed and

⁷⁹Ibid., p. 59.

found to be significant beyond the .001 level. In effect the professional staff felt that individualized instruction represents an opportunity for students to select the best path among many of the accomplishment of educational objectives and allows them to proceed at their own rate.

In sum, Steward and Love found that faculty who function in an individualized curriculum were satisfied with the environment. And, while there was some concern for loss of status, role definition beyond the realm of the guidance function was essential.

On the elementary level, a study by Kelley⁸⁰ examined the effect of Individually Guided Education (IGE) on organizational climate and found significant relationships in both the areas of length and degree of implementation. His results suggest that the longer an IGE curriculum is in effect and the greater its degree of implementation the more likely faculty members are to perceive the organization as supportive of their personal growth.

Bosco,⁸¹ in an attempt to determine teacher beliefs regarding individualization, surveyed 312 teachers representative of all grade levels in twenty-seven elementary schools. Responses were designed to indicate faculty desired practices and actual practices as regarded individualization. The data indicated that teachers were highly in favor of individualized goals with over eighty-two percent

⁸⁰Edgar A. Kelley, et al., "Teacher Perceptions of School Climate and the Implementation of Individually Guided Education" Reported in ED 083 229, 1974.

⁸¹James Bosco, "Individualization-Teachers' Views," The Elementary School Journal, LXXII (December 1971), 125-31.

indicating a desire to establish goals for students that were determined, in whole or in part, on an individual basis. In actual practice, forty-four percent determined instructional goals, in whole or in part, on an individual basis. These same teachers, however, wished to spend fifty-three percent of the available class time in large group instruction and actually spent forty-two percent of the time in that mode. Finally, in making decisions regarding instructional strategies, the majority of teachers felt that verbal abilities and the interests of the students should be the predominant considerations but, in practice, verbal abilities and teacher analysis of needs were the actual considerations. An examination of the results in terms of years of teaching experience, grade level, and teacher satisfaction with the school showed no significant differences regarding beliefs or actual practices in the classroom. Bosco concludes that "there was more agreement with the goals of individualized instruction than with the teaching practices that may be necessary for individualization."⁸² He suggests that this may be due, in part, to "insoluble problems posed by an instructional program that requires the management of many groups and individuals working on different tasks."⁸³

In a study designed to determine if the level of teacher morale was affected by the curriculum and instructional design,

⁸² ibid., p. 130.

⁸³ ibid.

Lewis⁸⁴ compared a continuous progress-individualized system to a traditional system. His results indicate that:

1. Teacher morale was affected by the curriculum and instructional design of the school system.
2. The continuous progress system's teachers were significantly more satisfied with teaching.
3. The continuous progress system's teachers had a significantly higher rapport among teachers.
4. The continuous progress system's teachers were significantly more satisfied with their curriculum.
5. The continuous progress system's teachers were significantly less concerned about community pressures.
6. The continuous progress system's teachers were significantly more satisfied with the facilities, supplies, and equipment.⁸⁵

A similar attempt to determine if a significant relationship existed between the level of work related satisfaction experience by teachers and the use of modular-individualized scheduling was conducted by Kidston.⁸⁶ He theorized that the teachers in modular schools would be comparatively less dissatisfied with their work environment than were the teachers in traditionally scheduled schools. From data gathered from ten modular and twelve traditionally scheduled senior high schools, Kidston found that there was a generally high level of dissatisfaction in both systems especially in the area of the environment external to their classrooms. Teachers in the modular schools reflected slightly less dissatisfaction, but "the data does not

⁸⁴Daniel Keith Lewis, "A Continuous Progress-Individualized Educational System as Compared to a Conventional Curriculum and Instructional Educational System-A Study of Teacher Morale" (unpublished Doctoral dissertation, University of Southern Mississippi, 1972) summarized in Dissertation Abstracts, 33-09A-4743.

⁸⁵Ibid.

⁸⁶Brain Cecil Kidston, "The Relationship Of A Modular Scheduled Organizational Structure and The Level of Professional Satisfaction Experienced By Secondary School Teachers" (unpublished Doctoral dissertation, The University of Michigan, 1974), summarized in Dissertation Abstracts, 35-05A-2585.

justify the conclusion that all modular schools in this study have been successful in improving the level of their teachers' satisfaction through the adoption of this organizational procedure."⁸⁷ It is interesting to note that Kidston points out that the importance of having the opportunity to help other people were areas of satisfaction for both groups and that while modular teachers have expanded opportunities for interacting with fellow teachers there is no indication that they tend to do so to a greater degree than traditional teachers.

In 1975 Ballwahn⁸⁸ examined teacher perspectives of individualized instruction. The intent was to identify the degree to which elementary and secondary school teachers feel that instructional procedures should be individualized and to identify any differences between the two groups. Perspective on individualized instructional procedures in the areas of placement, planning, formative evaluation, and summative evaluation were obtained from eighty-seven elementary school teachers and eighty-seven secondary school teachers. Selected findings from the study indicated that elementary school teachers record more favorable attitudes than secondary school teachers towards individualization. Both groups were in agreement that attempts to effect individualization should emphasize identification of learning difficulties and achievement feedback. In addition, both groups felt that the areas of

⁸⁷ Ibid.

⁸⁸ Larry Lee Ballwahn, "Teacher Perspectives of Individualized Instruction" (unpublished Doctoral dissertation, University of Wisconsin, 1975) summarized in Dissertation Abstracts, 36-08A-4884.

testing, mastery time, and development of individual learning objectives were of significantly less importance in effecting individualization. Attitudes towards individualized instructional procedures do not vary at a statistically significant level by school size. Ballwahn concludes that while some perceptual differences regarding individualization are apparent between elementary and secondary teachers both groups are in general agreement that individualized instructional procedures should be implemented.

Schafer⁸⁹ studied the differences in teacher attitudes toward students and student's perceptions of the teachers' interpersonal relationships with pupils in differing school organizational climates in an investigation conducted in 1974. Twenty-five junior high schools were randomly selected from a total of two hundred forty-five, and the three schools with the most open organizational climates and the three schools with the most closed organizational climates were identified. Teacher attitudes toward students and student perceptions of teachers' interpersonal relations were measured in each of the six schools. An analysis of the data indicated that, in the schools examined, there was no significant difference in attitudes of teachers toward students. The t test of significant difference of means for the two groups yielded a value of .70 which was not significant at the .05 level. There was, however, a significant difference between student's perceptions of their teachers'

⁸⁹Charles Keith Schafer, "Teacher Attitude Toward Students in Differing Junior High School Organizational Climates in Missouri: (unpublished Doctoral dissertation, University of Missouri, 1974) summarized in Dissertation Abstracts, 36-01A-209.

interpersonal relationships in open as opposed to closed school organizational climates. The t test of significant difference of means for the two groups yielded a value of 20.981 which was significant at the .05 level. Schafer concludes that while organizational climate appears not to influence teachers' attitudes regarding their students, students in an open organizational climate perceive their teachers interpersonal relationships with them as more positive.

Leedy⁹⁰ dealt with the issue of organizational climate and its effect upon teacher morale and student achievement. In a study conducted in 1975 he hypothesized that an open school climate would produce higher teacher morale and higher student achievement than would a closed school climate. He gathered data from 34 elementary schools with enrollments ranging from 300 to 730 pupils and faculties of between ten and twenty-five teachers. Conclusions from the data indicated that a significant positive relation existed between the openness of a school and the level of teacher morale with the academic achievement of students within a building. Schools having a high degree of openness and teacher morale exhibited higher levels of student academic achievement than those schools with lower levels of openness and morale.

⁹⁰Charles Kenneth Leedy, "Academic Achievement as a Function of Organizational Climate and Teacher Morale in Selected Elementary Schools in Ohio, 1974" (unpublished Doctoral dissertation, Kent State University, 1975), summarized in Dissertation Abstracts, 36-06A-3293.

STUDENT ATTITUDES

In the area of student attitudes regarding their school experiences, Jackson indicates that the majority of investigations reflect a general satisfaction.⁹¹ The data also "support the hypothesis that it is school itself rather than individual teachers that provoke student discomfort."⁹² Liepold found that more than seventy-five percent of the high school freshman surveyed in his study of basic satisfaction with school felt positively about their school experiences.⁹³ The majority of the assessments of student attitudes, however, have tended to be dichotomous in their approach, placing students in either a like school or dislike school category. In addition, "they do not contain normative data with respect to the student's general liking for school and...for the most part research has focused on the correlates of students' attitudes -- in studies, for example, of college students' ratings of their instructors and course grades -- or in the origin and treatment of extreme attitudes on particular students -- in studies, for example of school phobia or of school dropouts."⁹⁴ In an attempt to bring into sharper focus the range of attitudes existent with a student population, Getzels and Jackson

⁹¹Philip W. Jackson, Life in Classrooms (Chicago: Holt, Rinehart and Winston, Inc., 1968), p. 50.

⁹²Ibid., p. 51.

⁹³L. E. Liepold, "Children Do Like School," Clearing House XXXI (February 1957), 332-34.

surveyed more than 500 students in grades six through twelve and specifically avoided dicotomizing student opinions.⁹⁵ Their findings indicated that "the average student expressed some dissatisfaction on almost half the items."⁹⁶ Thus, while the data does reflect a general satisfaction among students with their school experiences, a definite indication of dissatisfaction does exist.⁹⁷

The existence of negative attitudes regarding school experiences was examined further by Getzels and Jackson with a followup analysis of the satisfied students in their original study and by Diedrich and Jackson⁹⁸ with satisfied students. Both studies reflect negative attitudes by over 50 percent of these students in response to questions dealing with their typical classroom feeling.

Arlin notes that "implicit in educational literature is the assumption that open education practices are associated with positive pupil attitudes towards school learning."⁹⁹ In his study to examine the mediating effect of locus of control on the degree of pupil

⁹⁴Jackson, Life in Classrooms, p. 53.

⁹⁵Philip W. Jackson and Jacob W. Getzels, "Psychological Health and Classroom Functioning: A Study of Dissatisfaction with School Among Adolescents," Journal of Educational Psychology, L, (December 1959), 295-300.

⁹⁶Jackson, Life in Classrooms, p. 51.

⁹⁷The Getzels and Jackson study found that the top quartile (those students most satisfied with their school experienced) expressed some dissatisfaction with one-third of the items. (Jackson and Getzels, "Psychological Health")

⁹⁸Philip W. Jackson and Richard C. Diedrich, "The Evaluation of School Experiences: A Study of Satisfied and Dissatisfied Students," Mimeographed, 1965, cited by Jackson, Life in Classrooms, p. 58.

⁹⁹Marshall Arlin, "The Interaction of Locus of Control, Classroom Structure, and Pupil Satisfaction," Psychology In The Schools, XII (July 1975) 279.

satisfaction he suggests that "isomorphism between psychological traits and educational treatment heightens the degree of pupil satisfaction and internal pupils are most satisfied in an open environment whereas external pupils are most satisfied in a structural environment."¹⁰⁰ The study included 781 pupils and 30 teachers in grades four, six, and eight. The teachers involved are categorized as excellent open classroom teachers or excellent traditional classroom teachers and students in each of the two categories were then administered an attitude scale and locus of control measure.

Major interactive hypotheses were formulated as follows:

1. Openness and academic locus of control interact significantly to influence pupil attitude.
2. Openness, academic locus of control, and grade level interact significantly to influence pupil attitude.
3. Openness, academic locus of control, and sex of student interact significantly to influence student attitude.¹⁰¹

Data from the investigation supported a main effect with internal students indicating more positive attitudes than external students. In addition hypotheses numbers 1 and 3 were supported at the .05 level and hypothesis 2, while not supported, reflected a trend in the expected direction. Arlin suggests that any investigation of competing curricular organizations should not overlook the possibility that psychological variables may be highly influential and cause a masking of significant factors.

¹⁰⁰Ibid., p. 280.

¹⁰¹Ibid., p. 282.

In an examination of the attitudes of students specifically involved in "high school programs that have moved out of the traditional routine...and into a changing curriculum emphasizing"¹⁰² independent study, Techman found the majority of students satisfied with their experiences. Utilizing an openended questionnaire and drawing from student population in nine schools in seven states Techman noted the following general conclusions:

(1) students felt that independent study should not form the complete curriculum but should be combined with traditional approaches; (2) poor planning for the available time caused the greatest concern among students; (3) independent study seemed palatable and profitable, and students liked the fact that they were free to move over the school building and seek study at their convenience and at the location where necessary materials could be found; and (4) students wanted the freedom to speak to each other when the occasion suggested or to seek the counsel of a teacher when it was needed.¹⁰³

In an effort to examine the effects of recent "concerted efforts... made to reduce student dissatisfaction through curricular revisions,"¹⁰⁴ Beelick conducted a study which focused on "students' perceptions of satisfying and dissatisfying factors"¹⁰⁵ associated with their school experiences. Two hundred seventeen subjects were randomly selected from a high school enrolling approximately two thousand and two hundred

¹⁰²Charles E. Techman, "Students' Views of Independent Study," Theory Into Practice (December 1966) 230.

¹⁰³Ibid., p. 231.

¹⁰⁴Delbert B. Beelick, "Sources of Student Satisfaction and Dissatisfaction," The Journal of Educational Research LXVII (September 1973), 19.

¹⁰⁵Ibid.

students. "To accomplish the objective of identifying factors related to student satisfaction and dissatisfaction with school, it was decided to utilize the personal interview for data collection...and content analyze each response."¹⁰⁶ In addition the Student Opinion Poll was administered to each subject and the relationship between student satisfaction scores and reading levels, grade point averages, and I.Q.'s examined.

The findings of the investigation indicate that achievement, recognition, and school work itself were the factors most often mentioned by students as sources of satisfaction with school. The sources of dissatisfaction most often mentioned were teachers' behavior, school policy, and interpersonal relations with peers. The satisfying factors were reported to have had a positive effect on school performance and attitudes toward school by fifty percent of the students and the dissatisfying factors were reported to have had a negative effect on personality and attitudes toward school by fifty percent of the students.

The analysis of data regarding those students categorized as satisfied or dissatisfied with school and its relationship to the sources of satisfaction and dissatisfaction was found not to be significant at the .05 level. In other words, both satisfied and dissatisfied students were in agreement on the basic factors associated with their feelings toward school. This was also true of the way the two groups viewed the effects of the factors on their school performance, personality, and attitude toward school.

¹⁰⁶ibid.

In his review of the findings Beelick suggests that "educators may be able to increase student satisfaction and decrease student dissatisfaction by improving the opportunities for students to achieve, to be recognized, and to have interesting schoolwork, ...and to have friendly, considerate teachers."¹⁰⁷ Further, it is his contention that the large comprehensive high school automatically limits the opportunities to engage those areas they consider to be a source of satisfaction. It is interesting to note that the areas Beelick points to as having the most potential for effecting positive student attitudes are those at the focal point of the individualized curriculum: increased opportunities to achieve through individual goals, individual recognition, and positive interaction with teachers and peers.

Bennett investigated the "relative effects of distinct curricular organizing strategies upon patterns of classroom interaction and pupil feelings to determine interrelationships among curricular, social, and affective dimensions of the teaching-learning act."¹⁰⁸ Specifically, he was concerned with the difference in interaction patterns, the difference in the amount of teacher influence, and the difference in the amount of pupil affect when two different curricular organizing strategies are employed. The two strategies employed were an inquiry-individualized approach and a teacher-centered approach. Four research classes of sixth grade students totaling ninety-six randomly selected

¹⁰⁷ Ibid., p. 22.

¹⁰⁸ Roger V. Bennett, "Curricular Organizing Strategies, Classroom Interaction Patterns, and Pupil Affect" The Journal of Educational Research, LXVI (May-June, 1973), 392.

subjects and two teachers were involved in the project. Two classes were treated with the inquiry-individualized approach and two with the teacher centered approach.

The data indicated there were no significant differences in pupil affect as a result of their instructional experiences. However, "the teacher's curricular organizing strategy is a highly significant variable which influences patterns of classroom interaction as measured by Flanders' system of interaction analysis"¹⁰⁹ and significant interrelationships exist between curricular and social dimensions of the teaching-learning act.

Bennett stresses that although the conclusions must be very carefully considered in light of the limited scope and somewhat arbitrarily conceived dimensions of the study, the impact of curricular strategies is clear and indicates a requirement for further investigations in this area.

Martin examined student attitudes to determine the "variables which appear to influence positiveness toward school."¹¹⁰ His measurements were concerned with:

(1) how students felt about their school, (2) if they differed from school to school in their attitudes, and (3) if they differed within their schools depending upon their year in school, sex, or academic achievement.¹¹¹

¹⁰⁹Ibid., p. 392.

¹¹⁰Jack William Martin, "A Study of Student Attitudes in Six Suburban High Schools," (unpublished Doctoral dissertation, University of Illinois, 1975) summarized in Dissertation Abstracts, 36-09A-5701.

¹¹¹Ibid.

Students involved in the study were primarily college bound from middle class homes who experienced similar curricular organization, graduation requirements, and the same central office staff.

Responses to the attitudinal survey were factor analyzed and produced four discernable aspects of school: general effect, teacher consideration, curriculum, and time demands. Responses were summed by factors for each of the groups created by classifications of school, year in school, sex, and quartile in class.

Results indicate that as a whole students were generally neutral regarding their school experiences. Of the four factors, students were most positive about school effect and time demands. The variables of specific schools, achievement, and year in school were significant in their relationship to student attitude with higher achievers reflecting generally more positive attitudes and a decline in attitude related to the number of years in school.

In 1972 Rodgers attempted "to determine if there was a significant difference between school morale of junior high school students in open and closed organization climates when the factors of sex, grade level, participation in extra-curricular activities, and non-participation in extra curricular activities were considered."¹¹² The mean scores of students in four open climate schools were compared with the mean scores of students in four closed climate schools in seven subtests and a composite score obtained from a school morale scale.

¹¹²Paul Clayton Rodgers, "The Effect of Organizational Climate on School Morale of Students in Selected Public Junior High Schools in the Mississippi" (unpublished Doctoral dissertation, Mississippi State University, 1972), summarized in Dissertation Abstracts, 33-07A-3223.

The analysis of the data indicated a significant difference in the school morale of students in open and closed organizational climates. Students in the open climate schools appeared to have significantly higher level of school morale than did students in closed climate schools. For all students in each of the seven factors considered on every subtest and the composite score there was a significant difference beyond the .01 level in student morale except for seventh grade students on one subtest which proved not significant and for eighth grade students on one subtest which was significant at the .05 level.

Smith¹¹³ investigated the relationship what exists between student morale and organizational climate in an attempt to determine if students in open and closed climates differ in their morale scores. Data from students and teachers on the fourth, fifth, and sixth grade levels from six schools indicated that the highest morale scores were obtained from schools not classified as most opened or most closed. Instead, the highest scores for student morale clustered near the middle of the continuum, and student morale decreased as the grade level increased.

Finley¹¹⁴ examined student satisfaction with school experiences in an attempt to determine if variables designating meaningful

¹¹³Arthur Clark Smith, "The Relationship of School Organizational Climate and Student Morale in Selected Schools" (unpublished Doctoral dissertation, University of Miami, 1973), summarized in Dissertation Abstracts, 34-02A-543.

¹¹⁴Robert E. Finley, "Environmental and Experiential Characteristics of Students and Attitudes Toward School" (unpublished Doctoral dissertation, Purdue University, 1968), summarized in Dissertation Abstracts, 29-11A-3829.

activities, aspirations, and selected characteristics of the school could be shown to have a relationship with the degree of satisfaction reported by the students.

Data gathered from 2190 students enrolled in four high schools did not support the belief that students who perceived their school experiences as meaningful would reflect a significantly greater degree of satisfaction than those students who did not see their school experiences as meaningful. Student aspirations were significantly related to satisfaction with students desiring to pursue a college education reflecting greater satisfaction than those who would enter the work force. Satisfaction was not related to school size.

Nielson¹¹⁵ conducted a comparative analysis of attitudes in conventional high schools and modular high schools with their accompanying large, medium, and small group instruction as well as individual study time. The study covered three flexible-scheduled high schools and three traditional scheduled schools with approximately ten percent of the students in grades ten, eleven, and twelve randomly selected to participate in the completion of instruments which included the Frymier Student School Motivation Scale. Data from the scale showed no significant difference on the eleventh or twelfth grade level, but did reflect a significant difference on the tenth grade level in favor of the flexible-schedule schools.

¹¹⁵Joseph Lynn Nielson, "A Comparative Survey of Student Attitudes in Conventional and Modular Senior High Schools in Utah" (unpublished Doctoral dissertation, University of Utah, 1970), summarized in Dissertation Abstracts, 31-06A-2654.

In sum, a review of the data dealing with the attitudes of students seems to indicate a tendency towards neutrality when a non-dichotomous approach to their measurement is employed.¹¹⁶ Jackson points out that this is due in large measure to the fact that (1) there is an inevitable mismatch between individual goals and institutional goals; (2) attendance is compulsory; and (3) the establishment of a routine in daily experiences which seems to bring about a separation between students' feelings and the daily business of classroom life.¹¹⁷

ATTITUDES AND STUDENT ACHIEVEMENT

"The logically anticipated relationship between students' attitudes towards school and their scholastic success is difficult to demonstrate empirically."¹¹⁸ Investigations into the relationship between students' attitudes and their grades, standardized test scores, and I.Q.'s tend to show no statistical significance. In an analysis of student satisfaction and grades in four subject areas, three standardized test areas, and I.Q.'s Flanders found that correlations coefficients ranged from a high of .19 to a low of -.08.¹¹⁹ The data

¹¹⁶Jackson, Life in Classrooms, p. 61.

¹¹⁷Ibid.

¹¹⁸Ibid., p. 75.

¹¹⁹Ned A. Flanders, "Teacher Influence, Pupil Attitudes and Achievement" OE-25040, Cooperative Research Monograph No. 12 (Washington: U. S. Government Printing Office, 1965).

clearly indicates no relationships exist between any of the areas that might be considered logical indicators of students' attitudes toward their school experience. It seems apparent, in the Flanders study, that success or lack of it in the form of grades or relative ability levels are not significant causative variables in the formulation of student opinions.

Diedrich, examining the attitudes of high school juniors, found a similar lack of significant correlations.¹²⁰ In his study, verbal and nonverbal standardized test scores, an achievement test in English, and the student I.Q.'s were correlated with student opinions. Correlation coefficients ranged from .06 to -.07. In addition, both the Flanders and Diedrich studies also examined those students with extreme positive and negative attitudes and found similar absences of significant relationships. This lack of a demonstrable relationship between variables was also demonstrated in an earlier study by Tenenbaum which investigated student attitudes and such variables as achievement and I.Q.¹²¹

A notable exception to the preceding data is a study by Brodie which examined the attitudes of 505 high school juniors and their

¹²⁰Richard C. Diedrich, "Teacher Perceptions as Related to Teacher-Student Similarity and Student Satisfaction with School" (unpublished Ph.D. thesis, University of Chicago, March 1966) as cited in Jackson, Life in Classrooms, p. 56.

¹²¹Samuel Tenenbaum, "Attitudes of Elementary School Children to School, Teachers, and Classmates" Journal of Applied Psychology, XXVIII (April 1944) 134-41.

performance on nine subtests of the Iowa Test of Educational Development.¹²² Two groups within the population which represented the extremes of the response totals in terms of satisfaction and dissatisfaction were identified. The method of selection for the two groups was based on a student scoring at least one and one-half standard deviations above or below the mean. A total of 15 F ratios reflected statistically significant differences between the two subgroups when the five percent level of confidence was applied with the attitudinal contrast consistently favoring the satisfied students. Brodie notes in his discussion of the data that "a negative attitude towards school would appear to have a particularly inhibitory effect on those learnings which are emphasized in the classroom and the less influential on those not as closely identified with school and education in a formal sense."¹²³

In an examination of classroom climate and individual learning, Walberg and Anderson sought to "demonstrate that the student's individual satisfaction with the climate of the class makes for learning, the criterion of institution effectiveness espoused by school boards, parents, administrators, and teachers."¹²⁴ Their intent

¹²²Thomas A. Brodie, Jr., "Attitude Toward School and Academic Achievement" Personnel and Guidance Journal XLIII (December 1964), 375-78.

¹²³This conclusion is based on the lack of significant differences in the area of General Vocabulary and Background in the Natural Sciences. Ibid., p. 378.

¹²⁴Herbert J. Walberg and Gary J. Anderson, "Classroom Climate and Individual Learning" Journal of Educational Psychology, LIX (December 1968), p. 414.

was to "investigate this crucial relationship and to explore empirically further hypotheses derived from a sociopsychological theory of the classroom as a social system."¹²⁵

The study involved 2100 high school juniors and seniors throughout the country and tested the hypothesis that student achievement and interest could be predicted from structural and affective measures of aspects of climate. The study was "a preliminary evaluation of Harvard Project Physics, an experimental course using a variety of new instructional media and emphasizing the philosophical, historical, and humanistic aspects of physics."¹²⁶

Data were gathered from four areas in the Walberg and Anderson study: physics achievement, science understanding, six semantic differential measures, and physics activities. Thirty-two statistically significant correlations at the .05 level were identified between measured perceptions of classroom climate and learning variables.

In their discussion of the data, Walberg and Anderson point out that perceptions of climate were predictive of achievement, understanding, and affective growth. In addition, structural measures having to do with organization of the class, goal direction, disorganization, and formality were predictive of learning. The authors conclude that "from a practical point of view, the ability to predict learning

¹²⁵ibid.

¹²⁶ibid., p. 415.

outcomes from assessments of classroom climate may have implications for teacher education, modification of in-service training for teachers, and the assessment of teaching effectiveness, provided educators can agree on measurable goals of education."¹²⁷

Green¹²⁸ examined the attitudes of junior high school students involved in an innovative program as compared to those of a traditional program. An attitude survey was administered to a random sample of students from each of the two schools and scores were compared on the basis of fifteen combinations of the variables of school attended, grade level, achievement level and sex. The data revealed that in only two of the fifteen combinations were differences significant at the 0.5 level. Scores compared on the basis of school attended and achievement favored the traditional school as did scores compared on the basis of grade level.

As the third phase of a three year program to deal with serious problems on the secondary level in the area of enrollment, attendance, discipline and achievement, Blanchard¹²⁹ conducted an investigation into the possible relationship between student achievement and their

¹²⁷Ibid., p. 418.

¹²⁸Dean Milton Green, "A Comparison of the Attitudes Toward School of Students Involved in an Innovative Educational Program with Those of Students Involved in a Traditional Program" (unpublished Doctoral dissertation, University of Southern California, 1972), summarized in Dissertation Abstracts, 33-05A-2071.

¹²⁹George Ernest Blanchard, "A Study of Correlation Between Student Attitudes and Achievement Gains in the Seventh and Eighth Grades of Chattanooga Public Schools" (unpublished Doctoral dissertation, University of Tennessee, 1975), summarized in Dissertation Abstracts, 36-11A-7322.

attitudes towards school. The study concerned itself with the attitudes of seventh and eighth grade junior high school students who scored from 1.6 to 2.7 years below grade level on comprehensive achievement tests. It was found that no significant relationship existed between the attitudes of seventh grade students and their achievement scores or the attitudes of eighth grade students and their achievement scores.

Badwal¹³⁰ conducted a study to determine the relationship between the attitude scores of elementary students when grouped by achievement, grade, and sex. The analysis of the results indicated that low achievers obtained a significantly higher attitude score than high achievers. The female students scored significantly higher attitude scores than male students. And, third grade students obtained significantly higher scores than sixth grade students.

In a cross-validation study conducted by Austrin an attempt was made to validate an instrument which was found to be "successful in differentiating students of low achievement from students of high achievement in a large sample of bright secondary school students in two independent schools."¹³¹ In this study a random sample of

¹³⁰Bhajan Singh Badwal, "A Study of the Relationship Between Attitude Towards School and Achievement: Sec and Grade Level" (unpublished Doctoral dissertation, Catholic University of American, 1969), summarized in Dissertation Abstracts, 30-06A-2366.

¹³¹Harvey R. Austrin, "Cross Validation of An Attitude Scale for the Identification of High and Low Academic Achievers," The Journal of Educational Research LVIII (May-June 1965), 426.

public school students in grade six through twelve was used. The students were administered the opinionnaire with students scoring in the upper quartiles and lower quartiles designated as satisfied and dissatisfied students respectively. The scores of upper quartile students tended to be characteristic of students with grade averages of A and B. The scores of the lower quartile were students with grade averages of C, D, and E. Both relationships were significant at the .01 level. When correlations between the level of education aspired to and attitude were computed a significant relationship was found. Students who aspired to a higher level of education scored higher on the student attitude scale. Also, correlations for the entire group and level of aspiration was significant at the .01 level.

In his summary comments, Austrin notes that in a subsequent cross-validation study, involving grades five through twelve, he found similar significant correlations between attitude and scholastic averages and levels of academic aspiration.

Alvord¹³² sought to determine whether relationships between science achievement and attitude toward school varied when viewed in terms of selected variables which included sex and grade level. "The universe for the sample consisted of all Iowa public school pupils in grades four, seven, and twelve; these grade levels were selected since the relationship could then be explored in the three major levels of formal education: elementary, junior high, and high

¹³²David J. Alvord, "Achievement and Attitude," The Science Teacher (April 1972), 36-38.

school."¹³³ The total sample of 3162 students with a third drawn from each of the three selected grade levels was randomly drawn from 83 school districts.

An examination of the data reflected low significant correlations between science achievement and attitude at all three grade levels. The highest correlations were found on the fourth grade levels and the lowest on the twelfth grade level. Low significant correlations between science achievement and attitude were also found when pupils were grouped by sex. In each instance the correlation coefficient reported for boys was higher than that reported for girls. Among his conclusions Alvord notes that for the students studied "the low positive relationship between science achievement and attitude toward school is one which exists throughout a pupil's formal public school career regardless of sex."¹³⁴ Further, it is suggested that when the relationships are viewed in terms of coefficients of determination they suggest that time spent improving pupil attitude toward school may not have much carryover benefit with respect to improving pupil achievement. Finally, "it can be inferred that classroom instruction which centers on specific content-related goals and objectives cannot be expected to produce desired affective goals and objectives merely as by-products of the cognitive-centered instruction; attempts should be made to develop a variety of learning experiences representing affective areas of concern as well as cognitive areas."¹³⁵

¹³³Ibid., p. 36.

¹³⁴Ibid., p. 37.

¹³⁵Ibid., p. 38.

STUDENT ACHIEVEMENT AND INDIVIDUALIZED CURRICULUM

Grater¹³⁶ sought to determine if modular scheduling had any effects upon student achievement. Student grades, total credits earned, numbers of students qualifying for academic honors, and standardized test scores for a two year period immediately preceding the initiation of modular scheduling were compared to results in the same areas following the completion of three years of the program. Analysis of the data indicated that students who experienced the modular organization earned significantly higher grades and numbers of credits beyond the minimum required for graduation. Grater concludes that modular scheduling appears to have some merit for increasing student achievement. He suggests continued experimentation and investigation of such programs and related components such as differentiated staffing and controlled time for student accountability.

Horvath¹³⁷ conducted a comparison of junior high school students' mathematics achievement in an individualized program for a

¹³⁶Margaret Kay Grater, "A Study of the Relative Student Benefits of Modular Scheduling Related to Student Achievement at Woodlake Union High School From Its Initiation in 1969 to 1974," (unpublished Doctoral dissertation, University of South Carolina, 1975) summarized in Dissertation Abstracts, 36-11A-7153.

¹³⁷Matthew John Horvath, Jr., "A Comparative Study of Achievement and Attitude Changes as a Result of Individualized and Nonindividualized Mathematics Teaching Methods in the Seventh, Eighth, and Ninth Grades in Rosamond and Mojave, California" (unpublished Doctoral dissertation, United States International University, 1975) summarized in Dissertation Abstracts, 36-08A-4991.

three year period with students in a traditional program for a similar time period. Analysis of data gathered from pretests and posttests indicated no significant differences.

Mercer¹³⁸ compared two modes of instruction, individualized versus group instruction, from a total of 603 seniors equally divided between two high schools. Group measures on the American College Testing Program Test and cumulative grade point averages were examined for the two groups as a whole and for college bound students from each group. The data revealed no significant differences on any of the measures.

Stone¹³⁹ examined the effect of individualized instruction on the achievement of seventh and eighth grade students as compared to a traditional instruction for a one year period. From a total population of 341, fifty-eight pairs of students matched on the basis of age, sex, race, and I.Q. were compared for differences in academic growth. Examination of the data revealed no statistical difference in any of the paired groups.

¹³⁸ Willis J. Mercer, "A Comparison of Two Modes of Instruction: Individualized Versus Group Instruction in Two High Schools," (unpublished Doctoral dissertation, University of Kansas, 1974) summarized in Dissertation Abstracts, 35-09A-5737.

¹³⁹ James Lenious Stone, Jr., "The Effect of Individualized Learning Activity Packages in Mathematics on the Academic Achievement of Seventh and Eighth Grade Students in the Demopolis City Schools," (unpublished Doctoral dissertation, University of Alabama, 1974), summarized in Dissertation Abstracts, 36-02A-690.

Smith¹⁴⁰ investigated the effects of class size and individualized instruction on the writing skills of high school juniors. A 2 x 3 pretest-posttest control group factorial design was used in conjunction with twelve writing classes. Each of six of the classes was randomly divided into approximately equal individualized or small class groups. The other six classes remained in their large class structure. Each of four teachers taught both the individual and small class groups. Four other teachers taught the large class groups. Both large and small classes received traditional instruction. Tests of the data revealed significant effects for both class size and individualized instruction. Compared with conventional large group instruction, small group instruction can bring about significant improvement in writing skills and individualized instruction can bring about even greater improvements.

Call¹⁴¹ proposed to develop a method of presenting a chemistry course using individualized instruction and to evaluate the effectiveness of the individualized presentation by comparing it with traditional methods. The investigation was evaluated using analysis of covariance with I.Q.'s and previous chemistry knowledge serving as covariates.

¹⁴⁰Doris Iona Smith, "Effects of Class Size and Individualized Instruction on the Writing of High School Juniors" (unpublished Doctoral dissertation, Florida State University, 1974) summarized in Dissertation Abstracts, 35--5A-2844.

¹⁴¹Robert Leon Call, "A Comparison of Individualized and Traditional Methods For Teaching High School Chemistry" (unpublished Doctoral dissertation, Arizona State University, 1974) summarized in Dissertation Abstracts, 35-11A-7140.

Analysis of the data showed no difference in achievement between groups as measured by three nationally standardized tests.

Earhart¹⁴² investigated actual and potential effects of a flexibly organized curriculum structure on the junior high school level. Achievement in the areas of reading, spelling, and quantitative measures for students housed in the traditional program. Data from the study indicated no significant differences in any of the three areas.

Raumin¹⁴³ evaluated the effect of the individualized instruction on geometry students over a one semester period. The achievement of three individualized geometry classes was compared to the achievement of three traditional classes taught by six different teachers. Using intelligence as a covariate, an analysis of covariance indicated a significant difference in favor of the individualized group.

Ohlendorf¹⁴⁴ studied the effects of an independent study system on the achievement of tenth and eleventh grade students in the same school. Students on both grade levels were divided into experimental and control groups with the experimental group using an independent

¹⁴²Joseph George Earhart, "A Comparative Study of Achievement and Attitudes of Students Housed in a Flexible and A Traditional Junior High School," (unpublished Doctoral dissertation, Wayne State University, 1973) summarized in Dissertation Abstracts, 34-11A-6941.

¹⁴³Harley Cyril Raumin, "Impact of Flexible Class Time on the Achievement and Attitude of High School Students in Plane Geometry" (Unpublished Doctoral dissertation, University of Southern California, 1974) summarized in Dissertation Abstracts, 35-05A-2843.

¹⁴⁴Norbert Kurt Ohlendorf, "The Effects of an Independent Study System on Student Achievement and Student Attendance" (unpublished Doctoral dissertation, Texas A & M University, 1972), summarized in Dissertation Abstracts, 33-08A-4021.

study approach and the control group using the traditional approach. Achievement was measured on the basis of scores achieved on tests of Academic Progress and the Iowa Test of Education Development. Data derived from analysis of covariance, with I.Q. the covariate, indicated no significant difference between the experimental and control groups.

Faist¹⁴⁵ investigated the impact of flexible scheduling on the mathematics program of freshmen and juniors in a large comprehensive high school. Data for the study was provided by freshmen in mathematic skills, general mathematics, and Algebra I classes and juniors in Algebra II classes who experienced a traditional schedule the first year of the study and a flexible schedule for the second year of the study. Results obtained from standardized achievement tests indicated no significant differences in mathematic skills and general mathematics. Algebra I and II students performed significantly better under the traditional system.

Goutevenior¹⁴⁶ investigated the effect of a flexible-modular schedule on the achievement of average tenth grade students. One-hundred and forty sophomore students were randomly divided in half and placed in either the flexible-modular schedule or a traditional schedule in the same school. The experiment lasted for one school

¹⁴⁵Clara Rose Faist, "Achievement, Attitudes, and Resource Usage In a Mathematics Program in High School: Traditional Versus Flexible" (unpublished Doctoral dissertation, Northwestern University, 1972), summarized in Dissertation Abstracts, 33-06A-2813.

¹⁴⁶Leon William Goutevenior, "The Effect of a Modular Schedule Upon the Study Habits and Attitudes and the Achievement of Average Tenth Grade Students in a Suburban High School," (unpublished Doctoral dissertation, New York University, 1972), summarized in Dissertation Abstracts, 33-05A-2236.

year and achievement was measured by pretest and posttest administration of the Iowa Test of Educational Development. Analysis of the data for eleven scales favored the experimental group on eight scales, four of which was statistically significant at or below the .05 level.

Laszewski¹⁴⁷ attempted to determine whether the implementation of modular scheduling in a high school was associated with changes in student's academic achievement. Two hundred and five members of one class were measured over a four year period. During the first two years the students experienced a traditional schedule, the final two years they experienced a modular schedule. Achievement was measured by components of the Stanford Achievement Test and student grade point averages. The data indicated that there was no change in student grade point averages, mathematics achievement, or science achievement. There was a slight but not significant decline in language achievement and social studies achievement.

Devine's¹⁴⁸ investigation of student attitudes and achievement in freshman Algebra provides additional insight into the effect of innovative curriculum practices. The study was conducted over a period of one school year and dealt specifically with a comparison of

¹⁴⁷Roy Allen Laszewski, "Evaluation of the Effects of Modular Scheduling on Students' Academic Achievement," (unpublished Doctoral dissertation, The University of Wisconsin, 1972), summarized in Dissertation Abstracts, 34-01A-211.

¹⁴⁸Donald F. Devine, "Student Attitudes and Achievement: A Comparison Between the Effects of Programmed Instruction and Conventional Classroom Approach in Teaching Algebra I" The Mathematics Teacher LXI (March 1968) 296-301.

traditional and independent approaches to the study of Algebra I. Using experimental and control groups in each of two high schools, a simple randomized design was employed to test the hypothesis that: achievement in algebra is not a function of the teaching approach used; attitudes toward mathematics are not a function of the teaching approach used; and there is no deterioration in student attitudes toward the use of independent teaching approach. The findings from the study suggest that the achievement of students exposed to traditional approaches is significantly better than that of students exposed to independent approaches. The attitudes of students are neither affected by the approach used nor is there any deterioration in the attitudes of students toward the independent approach to teaching mathematics.

Ripsey states that:

...students may have particular work styles and particular needs for inclusion and affiliation which will play an important role in determining how they respond to a particular classroom situation. Some students may prefer to work alone, others may be highly dependent upon the teacher. Some students may like to be told what to do, others may profit by figuring some of this out for themselves.¹⁴⁹

In order to examine these concepts he conducted an experiment "to determine whether the importance of a match between personality variables and student achievement could be extrapolated to typical secondary school lower-order process learning"¹⁵⁰ in learning

¹⁴⁹Robert M. Ripsey, "How Different Classroom Environments Affect Learning," Phi Delta Kappan, XLVI (June 1965), 525.

¹⁵⁰Ibid.

environments which indicated high teacher control and low teacher control. The study involved 500 high school freshmen and sophomores in the subject area of English grammar and usage. Students were grouped according to personality test scores resembling high and low achieving students and subsequently treated with teaching methodologies which included high and low teacher control. The evidence of the experiment did not support the hypothesis that lower-order process student achievement is affected significantly by the degree to which classroom procedures support and satisfy needs for control or affection and inclusion.

Rippy concluded that "in terms of learning conventional lower-order material, most students...are not particularly bothered when the classroom does not meet their needs for control or affiliation."¹⁵¹ Investigators may, however, be "overlooking the outcomes of individualized instruction because of a failure to look much beyond lower-order mental process in evaluating student performance."¹⁵²

In 1968, Sinks¹⁵³ conducted an investigation into the effects of changing the educational environment of junior high school students

¹⁵¹ Ibid., p. 527.

¹⁵² Ibid.

¹⁵³ Thomas Alonzo Sinks, "How Individualized Instruction in Junior High School Science, Mathematics, Language Arts, and Social Studies Affects Student Achievement," (unpublished Doctoral dissertation, University of Illinois, 1968) summarized in Dissertation Abstracts, 30-01A-224.

in social studies, language arts, science, and mathematics to achieve an individualized approach. Three hundred and seventy four seventh grade students were divided into two equal groups. One group was given instruction in the traditional approach while the experimental group had flexibility scheduled time, learning activities directed by Learning Activity Programs, and progressed at a self-controlled pace. Data concerning the effects of the year long experiment were compiled from pre and post achievement tests and measure of problem solving skills. The results indicated that the students exposed to the individualized approach showed a significant gain in the measured areas.

Oas¹⁵⁴ attempted to determine the relationship between achievement and participation in flexibly and traditionally programs by examining the differences between achievement scores for 210 eleventh grade students enrolled in a traditional program and the achievement scores achieved by 205 eleventh grade students in the school year previous to the inception of the flexibly scheduled program. Data gathered from nine subtests and a composite score on the Iowa Test of Educational Development indicated greater mean gains on eight of the ten comparisons by the students enrolled in the traditional program.

¹⁵⁴Robert T. Oas, "A Study of the Relationship of Students' Aptitude, Academic Achievement and Attitude Toward School For Selected School Populations," (unpublished Doctoral dissertation, University of South Dakota, 1969) summarized in Dissertation Abstracts, 30-09A-3644.

In a study similar to that of Oas, Leigh¹⁵⁵ investigated the effect of the implementation of modular scheduling on student achievement by comparing the grades and achievement scores of eighty-seven secondary students who had experienced a traditional schedule succeeded the following year by a modular schedule. The comparison of both grade point averages and scores on the Metropolitan Achievement Test Subtests indicated significant improvement beyond the .01 level following the initiation of modular scheduling.

Hatfield conducted a study to judge the effectiveness of an Individualized Learning Center in a small secondary school "on the assumption that a change in the organization of the curriculum may influence student attitude and achievement."¹⁵⁶ Data from 120 students in grades eight through twelve were examined to determine the impact of the change in curricular organization on student achievement as measured by pre and post test scores on the Iowa Tests of Educational Development. Analysis of the results showed no significantly lower achievement scores on any grade level and significantly higher achievement scores for ninth grade students.

¹⁵⁵Thomas Gilbert Leigh, "Changes in Attitudes, Conduct, and Scholastic Achievement Following Modular Scheduling in High School," (unpublished Doctoral dissertation, United States International University, 1969) summarized in Dissertation Abstracts, 30-09A-3640.

¹⁵⁶Darrell Joe Hatfield, "A Three-Year Study of the Effect of An Individualized Learning Center of Students' Attitude and Achievement," (unpublished Doctoral dissertation, Utah State University, 1970) summarized in Dissertation Abstracts, 31-07A-3166.

Bull¹⁵⁷ examined the differences in student achievement in Geometry between students taught by traditional methods as compared with those taught by individualized instruction. Students were randomly assigned to one of four regularly scheduled classes. Two classes taught by different teachers were traditional and two classes taught by the same teachers reversing the methodologies were individualized. The t-test showed the mean score of the students taught by the individualized method to be significantly better than the mean score of the students taught by the traditional method at the .05 level.

Wheaton¹⁵⁸ investigated the nature and degree of cognitive growth of secondary students being instructed in individualized classrooms and compared their growth with that of a comparable group of students being instructed in the traditional classroom setting. The evaluation was conducted in three subject matter fields, English, two mathematics areas, and general science and utilized a pretest - posttest design involving intact groups with each student as a sampling unit. A two by two factorial design was employed in which one of the dimensions could be viewed as the

¹⁵⁷ Scott Spragg Bull, "A Comparison of the Achievement of Geometry Students Taught by Individualized Instruction and Traditional Instruction," (unpublished Doctoral dissertation, Arizona State University, 1971) summarized in Dissertation Abstracts, 31-09A-4616.

¹⁵⁸ Willbur Dean Wheaton, "An Evaluation of an Individualized Learning Program in a California Union High School District," (unpublished Doctoral dissertation, University of Southern California, 1971) summarized in Dissertation Abstracts, 32-10A-5540.

treatment variable and in which the other two dimensions consisted of sex and I.Q. level as classificatory variables.

Selected findings revealed that significant levels favoring the traditional method over the individualized method were achieved in the area of arithmetic applications. All other areas registered no significant difference. The conclusions stress the fact that schools cannot anticipate significant achievement gains when adopting individualized programs in general nor for one sex over the other or for higher or lower I.Q. students. Wheaton recommends continued monitoring of cognitive growth on a comparative basis and the inclusion of affective variables.

Taylor¹⁵⁹ designed an experiment to obtain evidence that might be used to partially determine the effectiveness of independent study in the teaching of Algebra. The experiment was conducted over the period of one semester and involved forty-eight students enrolled in two Algebra I classes. One class of twenty-three students was taught by lecture-discussion; the other class of twenty-five students was taught by independent study. On the basis of the data obtained from achievement tests, Taylor concluded that there was no significant difference between the achievement of the two groups as a whole or when students were compared on the basis of high or low ability.

¹⁵⁹Loretto May Taylor, "Independent Study Versus Presentation by Lecture and Discussion: A Comparative Study of Attitude and Achievement in Two Algebra I Classes," (unpublished Doctoral dissertation, University of Northern Colorado, 1971) summarized in Dissertation Abstracts, 32-07A-3877.

Linebarger¹⁶⁰ notes that foremost among the significant efforts to improve curriculum have been changes in the school's organizational structure in order to modify the basic relationships between teachers and learners in the utilization of time and resources. The modular-flexible approach has been consistently adopted by schools seeking to change their organizational pattern, and Linebarger sought to compare the effects of a junior high school program of four years duration with two comparable junior high schools utilizing traditional approaches. He hypothesized that students in the modular-flexible structure would do as well or better than students in the traditional structure in academic achievement. The data indicated that of the sixteen achievement comparisons six significantly favored the modular-flexible students and ten showed no significant difference.

SUMMARY

A review of the related literature suggests that faculties tend to perceive individualized instruction positively, students tend to assume a neutral posture as regards their school experiences, and their achievement does not appear to be related to their attitudes regarding school nor their participation in individualized curriculum organizations. Thus, a final determination regarding the effects

¹⁶⁰Dale Eugene Linebarger, "A Longitudinal Assessment of the Glendale Junior High School Modular-Flexible Organization for Instruction Focusing on Student Achievement and Morale, 1965-1969," (unpublished Doctoral dissertation, University of Washington, 1971) summarized in Dissertation Abstracts, 32-03A-1230.

of individualized curriculum on student and faculty perceptions of their school experiences and the accompanying trends in academic performance is not yet clear.

In a review of the current status of the theoretical and empirical urgings for teachers and administrators to develop more humanized environments George and Maxwell note that the response has been the establishment of "various forms of individualized instruction."¹⁶¹ They stress that "the status of numerous instructional strategies is extremely tenuous, with many being perpetuated by a false sense of empirical security; teachers are implementing a variety of techniques they assume to be superior but which have not been proven in practice."¹⁶² Comprehensive research efforts are essential if the potential attributes ascribed to individualized instruction by Trump, Silberman and others are to become realities.

¹⁶¹Thomas W. George and Ann Maxwell, "The Validation of Individualized Instruction: A Glance at An Iceberg," Educational Technology, XVI (February, 1976), 56.

¹⁶²Ibid.

Chapter 3

DESIGN OF THE STUDY

Chapter three presents profiles of the schools selected to participate in this study of the impact of curriculum strategies, identifies the instruments employed, and describes the administrative procedures for their implementation and the analytical methods applied to the data gathered.

INSTRUMENTATION

Organizational Climate Index

The instrument is an eighty-item instrument which examines "curriculum, teaching and classroom activities, rules, regulations and policies, student activities"¹⁶³ and associated aspects of school environments "...which help to give them their unique cultural atmospheres."¹⁶⁴ The data output of the OCI reports findings on six first-order factors and two second order factors. The six first-order factors of Intellectual Climate, Achievement Standards, Personal Dignity, Organizational Effectiveness, Orderliness, and

¹⁶³ Stern, People in Context, p. 14.

¹⁶⁴ Ibid.

Impulse Control provide a composite view of faculty perceptions of their work environment. The two second order factors of Development and Task Effectiveness developed from the six first order factors provide a more general indication of the extent to which the environment of the school is perceived as fostering the development of the individual staff member or being concerned with maintaining high levels of orderliness and structure. Factor reliabilities, estimated by means of Kuder-Richardson formulas 20 and 21 range from .67 to .98.¹⁶⁵

Student Opinion Poll

The second instrument employed in the study was the Student Opinion Poll which is a "sixty item opinionnaire designed to elicit responses concerning general satisfaction or dissatisfaction with various aspects of school -- viz., the teachers, curriculum, the student body, and classroom procedures."¹⁶⁶ The instrument has a reliability coefficient of .85.¹⁶⁷

¹⁶⁵See Appendix A for the Organizational Climate Index (Short Form) and Stern, p. 267, for a complete discussion of first and second order factor reliabilities. See Appendix B for factor definitions.

¹⁶⁶Jacob W. Getzels and Philip W. Jackson, Creativity and Intelligence (New York: John Wiley and Sons, 1962), p. 141. See Appendix C for the Student Opinion Poll.

¹⁶⁷Jackson, Life in Classrooms, p. 79.

SELECTED SCHOOLS

General

The three schools selected for the study are basically similar in size, type of students attending, and religious orientation. Each is a parochial school located in inner-city surroundings and draws its largely collegebound student population from suburban areas. All three schools are under the direct administrative control of the superintendent of schools for the Richmond, Virginia, diocesan school system. They are governed by similarly constituted school boards which are responsible for all fiscal and administrative policy matters. The schools determine admission through similar examination procedures, and they each employ one full time administrator. Table 1 presents a profile of students and faculty for each school identified by its curriculum structure.

Curriculum Structure

The curriculum structures in existence at each school are in sharp contrast to each other, and it is the impact of these three different approaches to curriculum organization which was the central concern of this study. Schools were selected on the basis of the curriculum structure in operation at the time of the study -- traditional, partially individualized, or predominantly individualized.

Table 1

Profile of Student and Faculty Populations of Selected Schools

School	Students		Faculty		
Traditional	Grade	8	38		
		9	55		
		10	34	Men	2
		11	38		
		12	<u>31</u>	Women	<u>15</u>
		Total	196	Total	17
Partially Individualized	Grade	8	50		
		9	61		
		10	49	Men	6
		11	36		
		12	<u>32</u>	Women	<u>16</u>
		Total	228	Total	22
Predominantly Individualized	Grade	8	46		
		9	38		
		10	37	Men	6
		11	42		
		12	<u>39</u>	Women	<u>11</u>
		Total	202	Total	17

The traditional curriculum structure requires that all students divide the time available in the academic day equally among all courses. Each class meets at the same time period each day. Large group lecture-discussion is the predominant classroom methodology.

The partially individualized curriculum structure requires that all students divide eighty percent of the time available in the academic day equally among all courses. Large groups, lecture-discussion is the predominant classroom methodology. The remaining twenty percent of each academic day is organized and scheduled by the individual student according to student selected activities designed to reach the objectives specified in Learning Activity Packages (LAPs) utilized in each course. An advisory system operates in conjunction with this curriculum structure, and all students consult with their advisor daily with respect to individual and small group activities, time management, and LAP progress.

The predominantly individualized curriculum structure requires that all students spend approximately thirty-five percent of the available academic time in traditionally organized classrooms for specified courses. The remaining sixty-five percent of the available time is devoted to individual and small group activities determined by the objectives of the Learning Activity Packages utilized in each course. An advisory system also is utilized in this curriculum organization and students meet with their advisors daily to review LAP progress. Modular scheduling is employed and follows a two week cycle.

DATA COLLECTION PROCEDURES

General

Central office personnel and the individual school administrators were contacted individually and appointments were arranged to fully explain the proposed study, specific times were arranged with each of the three schools for the administration of the two instruments and the collection of related data.

During a three week period the instruments were administered at each of the schools following similar procedures on specially designated staff development days which are part of the regular school calendar of each school. These days provide for an abbreviated class schedule in the morning and afternoon faculty meetings. For the administration of the Student Opinion Poll, special packets were prepared for the homeroom teachers in their respective schools. The packet contained test booklets, answer sheets, and directions for distribution and collection of the instrument. Specific directions for the completion of the poll were given over the school public address system by the researcher at two schools and by a representative of the central office at the third school. All polls were completed during an extended homeroom period at the beginning of the school day. For the administration of the Organizational Climate Index, special faculty meetings were conducted during the time provided for staff development activities at each school. The OCI was administered by the researcher at two schools and by a central office representative at the third school.

A special packet for each school principal was prepared which contained testing materials for students and faculty. A total of ten completed student instruments and four completed faculty instruments were forwarded to the researcher within one week of their initial administration. Thus a 100 percent response from both faculty and students at all three schools was attained.

Additional data concerning student ability and achievement scores were abstracted from student files. The entire data collection process for all schools was complete within one month of the initial instrument administration at the first school.

DATA ANALYSIS

Independent Variables

The data were tabulated according to school designation, specific grade levels, and total enrollment for student opinions and by total number of teachers for faculty opinions. The traditional school employed 2 men and 15 women for a total faculty of 17. Student enrollment in the traditional school for grades eight through twelve was as follows: grade eight - 38 students, grade nine - 55 students, grade ten - 34 students, grade eleven - 38 students, and grade twelve - 31 students for a total enrollment of 196 students. These data are summarized in Table 1.

The partially individualized school employed 6 men and 16 women for a total faculty of 22. Student enrollment in the partially individualized school for grades eight through twelve was as follows:

grade eight - 50 students, grade nine - 61 students, grade ten - 49 students, grade eleven - 36 students, and grade twelve - 32 students for a total enrollment of 228 students.

The predominantly individualized school employed 6 men and 11 women for a total faculty of 17. Student enrollment in the predominantly individualized school for grades eight through twelve was as follows: grade eight - 46 students, grade nine - 38 students, grade ten - 37 students, grade eleven - 42 students, and grade twelve - 39 students for a total enrollment of 202 students.

Dependent Variables

The Organizational Climate Index yielded scores presented in Chapter 4. Each item afforded a positive (true) or negative (false) response. Previous factor analysis¹⁶⁸ using a principal component equamax procedure resulted in derivation of the six first order and two second order factors described in Appendix B. Scores for each of the six first order factors were computed by awarding one point for each item answered as keyed. Scores for the two second-order factors were compiled through a combination of first order factors. Scores were statistically examined to determine possible differences in faculty perceptions of their respective school environments for each of the six first order factors and two second order factors. In addition, scores for the six first order factors were converted to standard scores for comparison to national norms in each of the areas.

¹⁶⁸See Stern, Chapter 15, for a complete description of factor analysis procedures.

The Student Opinion Poll yielded scores presented in Chapter 4. Each item afforded four to five different responses indicating varying degrees of satisfaction with the school environment. One point was awarded each time a student selected the most favorable response. A completely satisfied student would thus record a score of 60 while a completely dissatisfied student would record a score of 0. Actual student scores ranged from a low of 4 to a high of 54 with the average score for the three schools combined being 28. Scores were statistically examined on the basis of grade level and total school enrollment to determine possible differences in students' perceptions of their respective school environments.

The Scholastic Aptitude Test scores utilized in the study were the scaled scores for verbal achievement and mathematics achievement. These scores are computed and reported by the College Entrance Examination Board and Educational Testing service and recorded in the individual student's permanent record file.

The Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test scores utilized in the study were the scaled scores for verbal achievement and mathematics achievement. These scores are computed and reported by the College Entrance Examination Board and Educational Testing Service and recorded in the individual student's permanent record file.

The Academic Evaluation Council Test scores utilized in the study were the scaled scores for verbal achievement and mathematics achievement. These scores are computed and reported by the Educational

Testing Service and recorded in the individual student's permanent record file.

The Otis Quick-Scoring Mental Ability Test scores utilized in the study were the normed scores for the beta version of the test as achieved by each student upon application for their respective school. The tests were administered by the respective school's guidance personnel and results recorded in the student's permanent record file.

Statistical Analysis Employed

Data obtained from the Organizational Climate Index and the Student Opinion Poll were analyzed through the use of analysis of variance. The Sheffe Test was applied to the mean scores of factors found to be statistically significant at the .05 or .01 level for the Organizational Climate Index.

Scores for verbal achievement and mathematics achievement for tenth, eleventh, and twelfth grade students and those students identified as satisfied and dissatisfied were analyzed through the use of analysis of covariance. The individual student's Otis IQ score served as the covariate. Analysis of variance was also applied to the verbal and mathematics achievement scores of those students identified as high ability students.

Chapter 4

RESULTS

This chapter presents the statistical findings attained through the execution of the research design described in Chapter 3. Specific findings pertaining to the six hypotheses outlined in Chapter 1 are tabulated with pertinent discussion and analysis in each of the chapter's six sections corresponding to the six hypotheses.

FACULTY PERCEPTIONS OF ORGANIZATIONAL CLIMATE

The first hypothesis posed for investigation stated that: Teacher perceptions of organizational climate will be significantly more favorable in the partially individualized curriculum organization than in the predominantly individualized curriculum organization or traditional curriculum organization. Table 2 and Figures 1, 2, and 3 summarize the findings for the comparison made in conjunction with hypothesis number 1.

The F ratio of 11.1660 for the comparison of faculty perceptions of Intellectual Climate was significant at the .01 level. The difference of 2.9759 between the mean scores of the traditional school and the partially individualized school was significant at the .01 level with the faculty of the partially individualized school having the more positive perception of their school's Intellectual Climate. The

Table 2

Faculty Perceptions of School Environment

Factors	Traditional (T) Mean Scores N=17	Partially Individualized (P ₁) Mean Scores N=22	Predominantly Individualized (P ₂) Mean Scores N=17	F	F
<u>First Order Factors</u>					
1. Intellectual Climate	M 3.7059 SS ¹ -1.2744	6.6818 +.8513	5.1765 -.2240	11.1660 ^a	<.01
2. Achievement Standards	M 7.000 SS +.4000	7.5000 +.7704	7.8824 +.10536	.6761	n.s. ²
3. Personal Dignity	M 6.1765 SS -.1997	7.2273 +.5403	7.5294 +.7531	1.5472	n.s.
4. Organizational Effectiveness	M 6.8824 SS +.2768	8.1818 +.1.2430	8.13529 +.1.3702	3.3152 ^b	<.05

Table 2 (continued)

Factors	Traditional (T) Mean Scores N=17	Partially Individualized (P1) Mean Scores N=22	Predominantly Individualized (P2) Mean Scores N=17	F	F
5. Orderliness	M 4.2353 SS -.8632	6.5455 +.9923	5.2353 -.0600	6.8043 ^c	<.01
6. Impulse Control	M 4.4188 SS -.8912	3.6364 -1.5568	4.9412 -.4368	1.4020	n.s.
<u>Second Order Factors</u>					
1. Development	M 22.4706 SS -.1145	27.7727 +1.1258	25.6470 +.6286	2.8574	n.s.
2. Task Effectiveness	M 11.1176 SS -.3194	14.7273 +1.2992	13.5882 +.7884	5.7888 ^d	<.01

Table 2 (continued)

^a T x P₁ p < .01; T x P₂ p n.s.; P₁ x P₂ p n.s.

^b T x P₁ p < .05; T x P₂ p < .05; P₁ x P₂ p n.s.

^c T x P₁ p < .01; T x P₂ p n.s.; P₁ x P₂ p n.s.

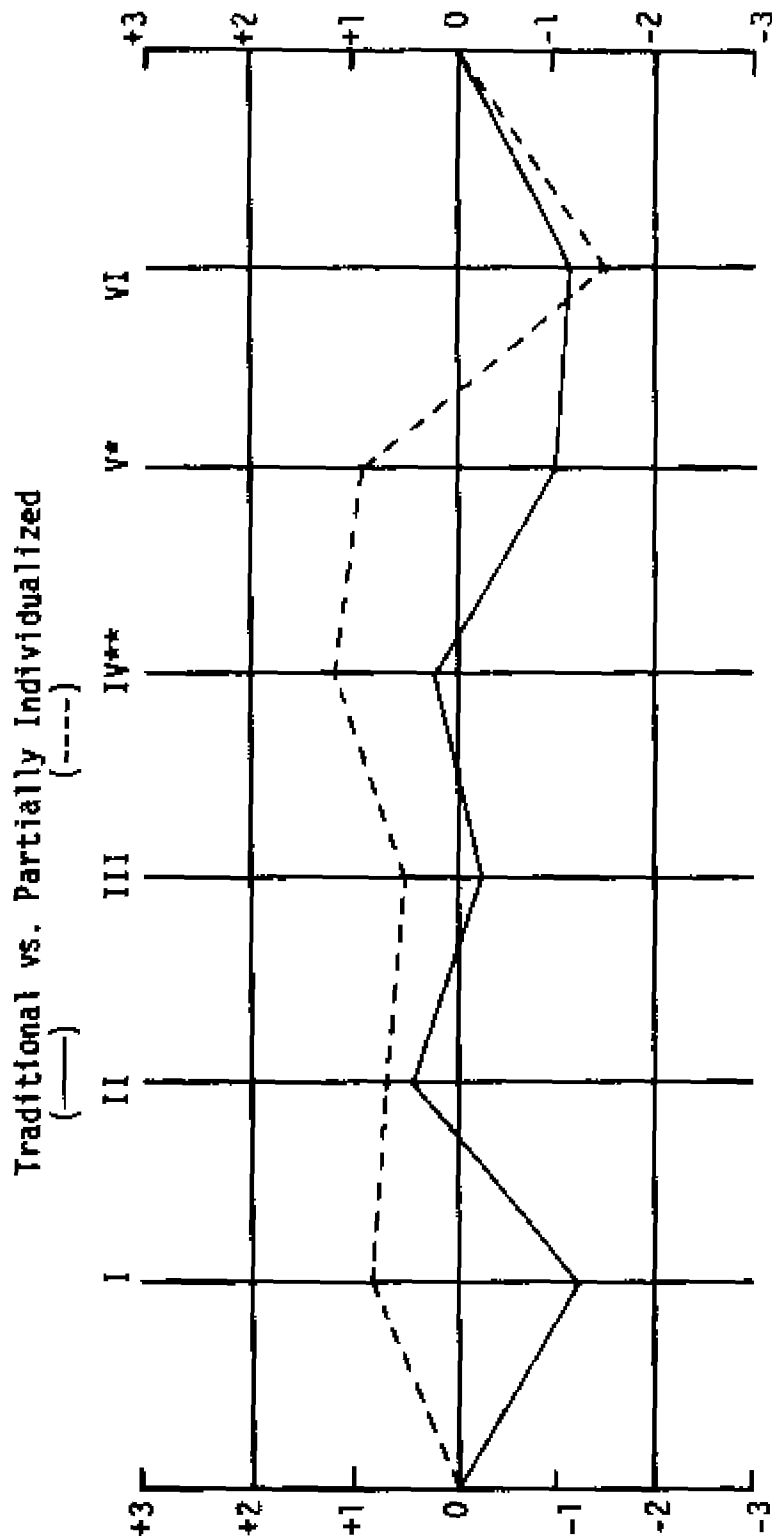
^d T x P₁ p < .01; T x P₂ p < .01; P₁ x P₂ p n.s.

¹Standard Score $\bar{x}-0$, $\sigma=2$

²n.s. = not significant

Figure 1

First Order Factor Profile For School Work Environment



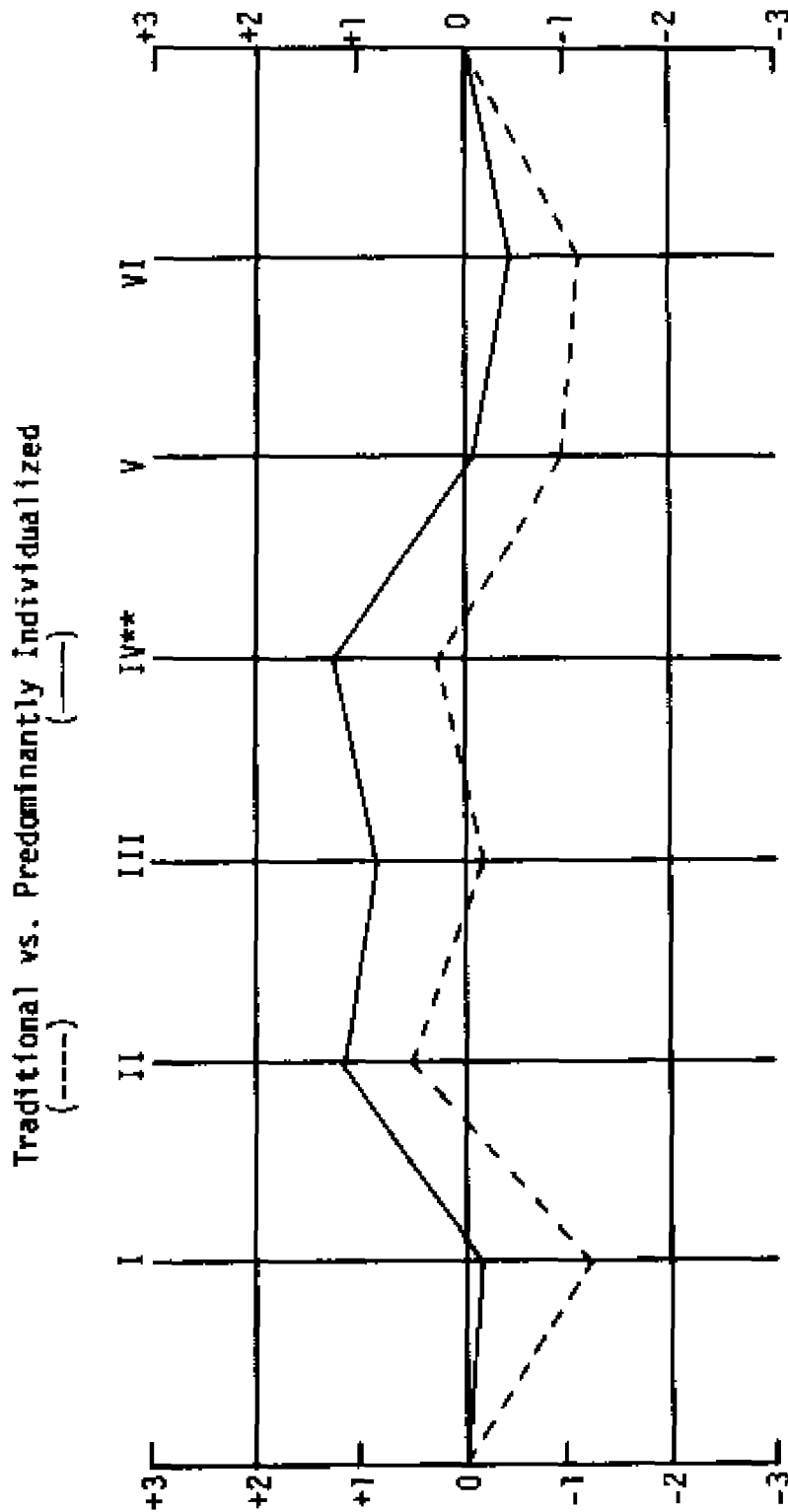
- I - Intellectual Climate
- II - Achievement Standards
- III - Personal Dignity

- IV - Organizational Effectiveness
- V - Orderliness
- VI - Impulse Control

$\bar{x}=0, \sigma=2$

* Differs significantly at the .01 level
 ** Differs significantly at the .05 level

Figure 2
 First Order Factor Profile For School Work Environment



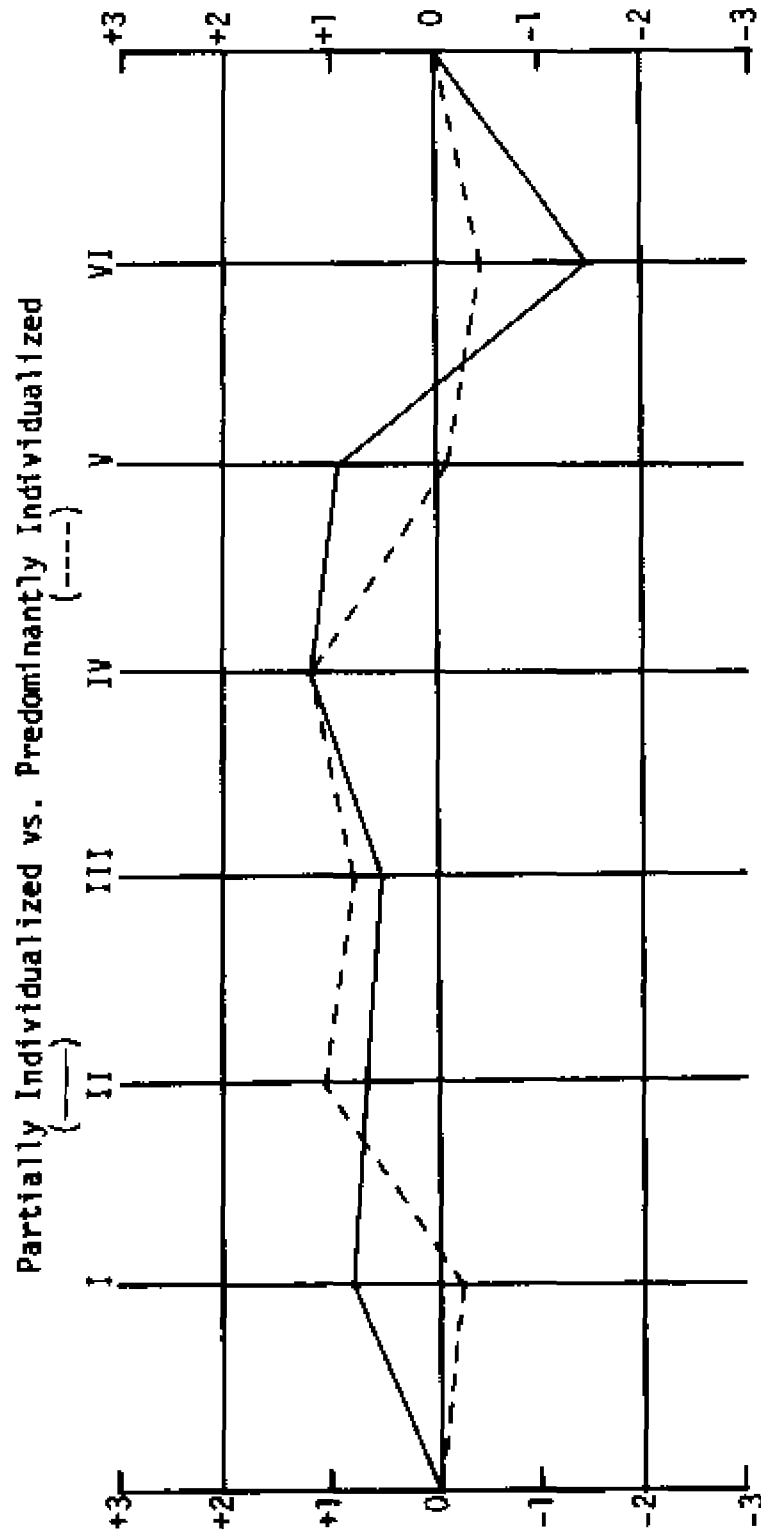
- I - Intellectual Climate
- II - Achievement Standards
- III - Personal Dignity

- IV - Organizational Effectiveness
- V - Orderliness
- VI - Impulse Control

**Differs significantly at the .05 level.

$$\bar{x}=0, \sigma=2$$

Figure 3
 First Order Factor Profile For School Work Environment



I - Intellectual Climate
 II - Achievement Standards
 III - Personal Dignity
 IV - Organizational Effectiveness
 V - Orderliness
 VI - Impulse Control

$\bar{x}=0, \sigma=2$

The difference of 1.4706 between the mean scores of the traditional school and the predominantly individualized school was not statistically significant. The difference of 1.5053 between the mean scores of the partially individualized school and the predominantly individualized school was not statistically significant. The standard scores of -1.2744 for the traditional school, +.8513 for the partially individualized school and -.2240 for the predominantly individualized school were not significantly different from the national norms.

The F ratio of .6761 for the comparisons of faculty perceptions of Achievement Standards was not statistically significant. The standard scores of +.4000 for the traditional school, +.7704 for the partially individualized school and +1.0536 for the predominantly individualized school were not significantly different from the national norms.

The F ratio of 1.5472 for the comparisons of faculty perceptions of Personal Dignity was not statistically significant. The standard scores of -.1997 for the traditional school, +.5403 for the partially individualized school and +.7531 for the predominantly individualized school were not significantly different from the national norms.

The F ratio of 3.3152 for the comparisons of faculty perceptions of Organizational Effectiveness was significant at the .05 level. The difference of 1.2924 between the mean scores of the traditional school and the partially individualized school was significant at the .05 level with the faculty of the partially individualized school having the more positive perception of their school's organizational effectiveness. The difference of 1.4705 between the mean scores of the traditional school and the predominantly individualized school was significant at

the .05 level with the faculty of the predominantly individualized school having the more positive perception of their school's organizational effectiveness. The difference of .1171 between the mean scores of the partially individualized school and the predominantly individualized school was not statistically significant. The standard scores of +.2768 for the traditional school, +1.2430 for the partially individualized school and +1.3702 for the predominantly individualized school were not significantly different from the national norms.

The F ratio of 6.8043 for the comparisons of faculty perceptions of Orderliness was significant at the .01 level. The difference of 2.3102 between the mean scores of the traditional school and the partially individualized school was significant at the .01 level with the faculty of the partially individualized school perceiving stronger organizational pressures for the maintenance of structure. The difference of 1.4705 between the mean scores of the traditional school and the partially individualized school was not statistically significant. The difference of .1711 between the partially individualized school and the predominantly individualized school was not statistically significant. The standard scores of -.8632 for the traditional school, +.9923 for the partially individualized school and -.0600 for the predominantly individualized school were not significantly different from the national norms.

The F ratio of 1.4020 for the comparisons of faculty perceptions of Impulse Control was not statistically significant. The standard scores of -.8912 for the traditional school, -1.5568 for the partially individualized school and -.4368 for the predominantly individualized school were not significantly different from the national norms.

The F ratio of 2.8574 for the faculty perceptions of Development was not statistically significant. The standard scores of -.1145 for the traditional school, +1.1258 for the partially individualized school and +.6286 for the predominantly individualized school were not significantly different from the national norms.

The F ratio of 5.7888 for the comparisons of faculty perceptions of Task Effectiveness was significant at the .01 level. The difference of 3.6097 between the mean scores of the traditional school and the partially individualized school was significant at the .01 level with the faculty of the partially individualized school perceiving stronger organizational emphasis on task completion. The difference of 2.4706 between the mean scores of the traditional and the predominantly individualized schools was significant at the .01 level with the faculty of the predominantly individualized school perceiving a stronger organizational emphasis on task completion. The difference of 1.1391 between the mean scores of the partially individualized school and the predominantly individualized school was not statistically significant. The standard scores of -.3194 for the traditional school, +1.2992 for the partially individualized school and +.7884 for the predominantly individualized school were not significantly different from the national norms.

For hypothesis number one there was a partial statistically significant confirmation for the two first order factors concerning Intellectual Climate and Organizational Effectiveness. There was no

demonstrated significant support in the four remaining first order factors or the two second order factors. There was statistically significant confirmation of an emphasis on Orderliness in the partially individualized school when compared to the traditional school. Finally there was statistically significant confirmation of an emphasis on Task Effectiveness in both the partially individualized and the predominantly individualized school when compared to the traditional school.

STUDENT PERCEPTIONS OF SCHOOL ENVIRONMENT

The second hypothesis posed for investigation stated that: There is a significantly greater degree of satisfaction among students in the partially individualized curriculum organization than in the predominantly individualized curriculum organization or the traditional curriculum organization. Table 3 summarizes the findings for the comparisons made in conjunction with hypothesis number 2.

The F ratio of 7.378 for the comparison of all student opinions was significant at the .001 level. The F ratio of .220 for the comparison of the traditional school student opinion versus the partially individualized school student opinion was not statistically significant. The F ratio of 10.502 for the traditional school student opinion versus the predominantly individualized school student opinion was significant at the .001 level with the students in the predominantly individualized school reflecting a more positive attitude towards their school experiences. The F ratio of 12.200 for the partially individualized school student opinion versus the predominantly individualized school student opinion was significant at the .001 level with the students in the predominantly

Table 3

Comparisons of Student Perceptions of School Environment

Grade	Traditional (T)	Partially Individualized (P ₁)	Predominantly Individualized (P ₂)		
All Grades	N	196	228	202	
	M	27.842	27.399	30.693	
	SD	8.818	10.390	8.994	
	df	SS	MS	F	P
	2	1326.416	663.208	7.378	<.001*
8	N	38	50	46	
	M	30.632	51.600	32.804	
	SD	9.128	10.294	9.793	
	df	SS	MS	F	P
	2	99.798	49.891	.519	n.s.
9	N	55	61	38	
	M	26.273	22.623	30.298	
	SD	8.333	11.086	7.952	
	df	SS	MS	F	P
	2	1393.856	696.928	7.556	<.001*

Table 3 (continued)

Grade	Traditional (T)		Partially Individualized (P ₁)	Predominantly Individualized (P ₂)	
10	N	34	49	37	
	M	25.842	29.000	30.378	
	SD	11.129	8.998	10.056	
	df	SS	MS	F	P
	2	386.282	193.141	1.946	n.s.
11	N	38	36	42	
	M	30.026	28.500	29.548	
	SD	5.944	8.157	7.642	
	df	SS	MS	F	P
	2	44.930	22.465	.420	n.s.
12	N	31	32	39	
	M	26.742	26.250	30.128	
	SD	7.470	10.223	9.302	
	df	SS	MS	F	P
	2	322.295	161.147	1.945	n.s.

*T x P₁: F=.220, p n.s.

T x P₂: F=10.502, p <.001

P₁ x P₂: F=12.200, p <.001

**T x P₁: F=3.790, p n.s.

T x P₂: F=5.035, p <.05

P₁ x P₂: F=13.742, p <.001

individualized school reflecting a more positive attitude towards their school experiences.

The F ratio of .519 for the comparison of eighth grade student opinion was not significant. The F ratio of 7.556 for the comparison of ninth grade student opinion was significant at the .001 level. The F ratio of 3.790 for the comparison of the ninth grade traditional school student opinion versus the ninth grade partially individualized school student opinion was not statistically significant. The F ratio of 5.035 for the comparison of the ninth grade traditional school student opinion versus the ninth grade predominantly individualized school student opinion was significant at the .05 level with the ninth grade students in the predominantly individualized school reflecting a more positive attitude towards their school experiences. The F ratio of 13.742 for the comparison of the ninth grade partially individualized school student opinion versus the ninth grade predominantly individualized school student opinion was significant at the .001 level with the ninth grade students in the predominantly individualized school reflecting a more positive attitude towards their school experiences.

The F ratios of .147 for the comparison of tenth grade student opinion, .658 for the comparison of eleventh grade student opinion, and .148 for the comparison of twelfth grade student opinion were not statistically significant. Thus, for hypothesis number two there was no significant statistical confirmation. Analysis of the data suggest that, with the exception of ninth grade students in the predominantly individualized school, student perceptions of their school experiences do not differ.

HIGH ABILITY STUDENTS' PERCEPTIONS OF SCHOOL ENVIRONMENT

The third hypothesis posed for investigation stated that: High ability students reflect a statistically greater degree of satisfaction in the partially individualized curriculum organization than in the predominantly individualized curriculum organization or the traditional curriculum organization. Table 4 summarizes the findings for the comparisons made in conjunction with hypothesis number 3.

The F ratio of 6.983 for the comparison of the opinions of all high ability students was significant at the .001 level. The F ratio of 5.028 for the comparison of the opinions of high ability students in the traditional school versus high ability students in the partially individualized school was significant at the .05 level with the students in the traditional school reflecting the more positive attitude towards their school experiences. The F ratio of 1.907 for the comparison of the opinions of high ability students in the traditional school versus high ability students in the predominantly individualized school was not statistically significant. The F ratio of 11.817 for the comparison of the opinions of high ability students in the partially individualized school versus high ability students in the predominantly individualized school was significant at the .001 level with the students in the predominantly individualized school reflecting for the more positive attitude towards their school experiences.

Table 4

Comparisons of High Ability Student Perceptions of School Environment

Grade	Traditional (T)	Partially Individualized (P ₁)	Predominantly Individualized (P ₂)		
All Grades	N	28	45	26	
	M	29.393	24.733	32.385	
	SD	7.390	9.314	8.523	
	df	SS	MS	F	P
	2	1034.000	517.000	6.983	<.001*
8	N	8	7	4	
	M	30.875	28.000	31.750	
	SD	7.318	9.557	7.932	
	df	SS	MS	F	P
	2	46.375	23.187	.334	n.s.
9	N	6	19	5	
	M	26.500	19.365	34.800	
	SD	7.064	6.353	4.658	
	df	SS	MS	F	P
	2	1016.243	508.121	12.910	<.001**
10	N	3	8	8	
	M	32.677	27.000	32.875	
	SD	10.263	8.34	11.753	
	df	SS	MS	F	P
	2	156.880	77.440	.733	n.s.

Table 4 (continued)

Grade	Traditional (T)		Partially Individualized (P ₁)	Predominantly Individualized (P ₂)	
11	N	3	6	6	
	M	30.000	30.833	31.500	
	SD	7.211	5.115	7.064	
	df	SS	MS	F	P
	2	4.600	2.300	.057	n.s.
12	N	8	5	3	
	M	28.625	29.600	29.667	
	SD	7.836	14.775	11.504	
	df	SS	MS	F	P
	2	4.009	2.004	.017	n.s.

*T x P₁: F= 5.028, p <.05

T x P₂: F= 1.907, p n.s.

P₁ x P₂: F=11.817, p <.001

**T x P₁: F= 5.466, p <.05

T x P₂: F= 5.028, p. n.s.

P₁ x P₂: F=25.500, p <.001

The F ratio of .334 for the comparison of the opinions of all high ability students in the eighth grade was not statistically significant. The F ratio of 12.910 for the comparison of the opinions of high ability students in the ninth grade was significant at the .001 level. The F ratio of 5.466 for the comparison of the opinions of high ability students in the ninth grade of the traditional school versus high ability students in the ninth grade of the partially individualized school was significant at the .05 level with the students in the traditional school reflecting the more positive attitude towards their school experiences. The F ratio of 5.028 for the comparison of the opinions of high ability students in the ninth grade of the traditional school versus high ability students in the ninth grade of the predominantly individualized school was not statistically significant. The F ratio of 25.500 for the comparison of the opinions of high ability students in the ninth grade of the partially individualized school versus high ability students in the ninth grade of the predominantly individualized school was significant at the .001 level with the students in the predominantly individualized school reflecting the more positive attitude towards their school experiences.

The F ratios of .733 for the comparison of the opinions of high ability students in the tenth grade, .057 for the comparison of the opinions of high ability students in the eleventh grade, and .017 for the comparison of the opinions of high ability students in the twelfth grade were not statistically significant. Thus, for hypothesis number three there was no significant statistical confirmation. An analysis of the data suggests that, with the exception of ninth grade students in the

partially individualized school, high ability students in the three schools do not differ in their perceptions of school experiences.

STUDENT ACHIEVEMENT

The fourth hypothesis posed for investigation stated that: The achievement of students in the partially individualized curriculum organization significantly exceeds the achievement of students in the predominantly individualized curriculum organization and the traditional curriculum organization. Tables 5 and 6 summarize the findings for the comparisons made in conjunction with hypothesis number 4.

The F ratio of 8.685 for the comparison of tenth grade verbal achievement scores was significant at the .001 level. The F ratio of 12.567 for the comparison of tenth grade verbal achievement scores in the traditional school versus the partially individualized school was significant at the .001 level with the students in the partially individualized school scoring higher in verbal achievement.

The F ratio of .228 for the comparison of tenth grade verbal achievement scores in the traditional school versus the predominantly individualized school was not statistically significant. The F ratio of 2.432 for the comparison of tenth grade verbal achievement scores in the partially individualized school versus the predominantly individualized school was not statistically significant.

The F ratio of 5.973 for the comparison of tenth grade mathematics achievement scores was significant at the .01 level. The F ratio of 9.487 for the comparison of tenth grade mathematics achievement scores in the traditional school versus the partially individualized school was

Table 5
Student Verbal Achievement

Grade	Traditional (T)	Partially Individualized (P ₁)	Predominantly Individualized (P ₂)		
10	N	34	49		37
	M	51.176	56.898		52.243
	SD	8.204	9.566		8.122
	df	SS	MS	F	P
	2	671.723	335.861	8.685	.001*
11	N	38	36		41
	M	40.605	38.167		39.341
	SD	10.020	8.923		12.304
	df	SS	MS	F	P
	2	337.254	168.627	2.727	n.s.
12	N	31	32		40
	M	480.968	454.688		410.750
	SD	103.998	130.632		117.634
	df	SS	MS	F	P
	2	5623.813	2811.906	.434	n.s.

*T x P₁: F=12.567, p <.001

T x P₂: F= .288, p n.s.

P₁ x P₂: F= 2.432, p n.s.

Table 6

Student Mathematics Achievement

Grade	Traditional (T)	Partially Individualized (P ₁)	Predominantly Individualized P ₂		
10	N 34	49	37		
	M 46.676	54.796	51.189		
	SD 9.757	9.269	8.406		
	df	SS	MS	F	P
	2	467.730	233.865	5.973	<.01*
11	N 38	36	41		
	M 44.132	41.167	38.390		
	SD 9.905	8.251	11.036		
	df	SS	MS	F	P
	2	218.207	109.104	2.129	n.s.
12	N 31	32	40		
	M 469.677	463.125	405.500		
	SD 113.475	124.782	111.791		
	df	SS	MS	F	P
	2	22995.938	11497.969	1.682	n.s.

*T x P₁: F=9.478, p <.01

T x P₂: F=1.924, p n.s.

P₁ x P₂: F=6.590, p <.05

significant at the .01 level with the students in the partially individualized school scoring higher in mathematics achievement. The F ratio of 1.942 for the comparison of tenth grade mathematics achievement scores in the traditional school versus the predominantly individualized school was not statistically significant. The F ratio of 6.59 for the comparison of tenth grade mathematics achievement scores in the partially individualized school versus the predominantly individualized school was significant at the .05 level with the students in the partially individualized school scoring higher in mathematics achievement.

The F ratios of 2.129 for the comparison of eleventh grade mathematics achievement scores and 1.682 for the comparison of twelfth grade mathematics achievement scores were not statistically significant. Thus, there was a partial statistically significant confirmation of hypothesis number four as was demonstrated in tenth grade verbal achievement for the partially individualized school when compared to the traditional school and in tenth grade mathematics achievement for the partially individualized school when compared to both the traditional school and the predominantly individualized schools. Further analysis of the data indicates that student verbal and mathematics achievement on the eleventh and twelfth grade levels does not differ among the three schools.

ACHIEVEMENT SCORES FOR SATISFIED STUDENTS

The fifth hypothesis posed for investigation stated that: The achievement of satisfied students in the partially individualized curriculum organization significantly exceeds the achievement of satisfied students in the partially individualized curriculum organization and the

traditional curriculum organization. Tables 7 and 8 summarize the findings for the comparisons made in conjunction with hypothesis number 5.

The F ratios of 2.811 for the comparison of verbal achievement scores for satisfied students in the tenth grade, 1.365 for the comparison of verbal achievement scores for satisfied students in the eleventh grade, and .057 for the comparison of verbal achievement scores for satisfied students in the twelfth grade were not statistically significant. The F ratio of 1.773 for the comparison of mathematics achievement scores for satisfied students in the tenth grade was not statistically significant. The F ratio of 5.925 for the comparison of mathematics achievement scores for satisfied students in the eleventh grade was significant at the .01 level. The F ratio of 1.722 for the comparison of mathematics achievement scores for satisfied students in the traditional school versus the partially individualized school was not significant. The F ratio of 10.594 for the comparison of mathematics achievement scores for satisfied students in the traditional school versus the predominantly individualized school was significant at the .01 level with students in the traditional school recording the higher scores. The F ratio of 1.901 for the comparison of mathematics achievement scores for satisfied students in the partially individualized school versus the predominantly individualized school was not significant. The F ratio of 1.461 for the comparison of mathematics achievement scores for satisfied students in twelfth grade were not statistically significant. Thus, for hypothesis number 5 no statistically significant confirmation was demonstrated. An analysis of the data suggests that the verbal and

Table 7

Verbal Achievement Scores For Satisfied Students

Grade	Traditional (T)	Partially Individualized (P ₁)	Predominantly Individualized (P ₂)			
10	N	9	12	9		
	M	52.667	51.833	53.788		
	SD	8.389	12.209	8.555		
	df	SS	MS	F	P	
		2	269.199	135.600	2.811	n.s.
11	N	10	9	11		
	M	43.200	41.889	37.818		
	SD	9.531	5.840	11.400		
	df	SS	MS	F	P	
		2	118.018	59.009	1.368	n.s.
12	N	8	8	10		
	M	503.750	475.000	421.000		
	SD	71.701	140.611	152.712		
	df	SS	MS	F	P	
		2	597.688	298.844	.057	n.s.

Table B
Mathematics Achievement Scores For Satisfied Students

Grade	Traditional (T)	Partially Individualized (P ₁)	Predominantly Individualized (P ₂)		
10	N 9	12	9		
	M 51.222	54.583	50.667		
	SD 9.550	9.662	9.552		
	df	SS	MS	F	P
	2	158.761	79.381	1.773	n.s.
11	N 10	9	11		
	M 47.600	45.667	36.636		
	SD 5.582	5.766	9.330		
	df	SS	MS	F	P
	2	377.365	188.682	5.925	<.01*
12	N 8	8	10		
	M 460.000	488.750	430.000		
	SD 77.257	137.575	84.722		
	df	SS	MS	F	P
	2	14793.375	7396.688	1.461	n.s.

*T x P₁: F= 1.722, p n.s.

T x P₂: F=10.594, p <.01

P₁ x P₂: F= 1.901, p n.s.

mathematics achievement of satisfied students does not differ on the tenth and twelfth grade levels. The significant results favoring the satisfied students in the traditional school versus the predominantly individualized school cannot be attributed to curriculum organization in view of the findings on the tenth and twelfth grade levels and the small number of scores examined.

ACHIEVEMENT SCORES FOR DISSATISFIED STUDENTS

The sixth hypothesis posed for investigation stated that: The achievement of dissatisfied students in the partially individualized curriculum organization significantly exceeds the achievement of dissatisfied students in the predominantly individualized curriculum organization and the traditional curriculum organization. Tables 9 and 10 summarize the findings for the comparisons made in conjunction with hypothesis number 6.

The F ratios of 1.080 for the comparison of verbal achievement scores for dissatisfied students in the tenth grade, 1.366 for the comparison of verbal achievement scores for dissatisfied students in the eleventh grade, and 1.726 for the comparison of verbal achievement scores for dissatisfied students in the twelfth grade were not statistically significant. The F ratio of 3.671 for the comparison of mathematics achievement scores for dissatisfied students in the tenth grade was significant at the .05 level. The F ratio of 5.922 for the comparison of mathematics achievement scores for dissatisfied students in the tenth grade of the traditional school versus the partially individualized school was significant at the .05 level with the students in the

Table 9

Verbal Achievement Scores For Dissatisfied Students

Grade	Traditional (T)	Partially Individualized (P ₁)	Predominantly Individualized (P ₂)			
10	N	9	12		9	
	M	46.667	55.000		50.333	
	SD	7.141	9.400		9.179	
	df	SS	MS	F	P	
		2	97.791	48.869	1.080	n.s.
11	N	10	9		11	
	M	41.500	35.778		40.818	
	SD	9.618	8.467		12.295	
	df	SS	MS	F	P	
		2	200.710	100.355	1.366	n.s.
12	N	8	8		10	
	M	462.500	477.500		428.000	
	SD	117.199	121.037		127.000	
	df	SS	MS	F	P	
		2	8903.250	4451.625	1.726	n.s.

Table 10
 Mathematics Achievement Scores For Dissatisfied Students

Grade	Traditional (T)	Partially Individualized (P ₁)	Predominantly Individualized (P ₂)		
10	N 9	12	9		
	M 43.222	55.750	50.889		
	SD 7.742	10.270	6.547		
	df	SS	MS	F	P
	2	394.196	197.098	3.671	<.05*
11	N 10	9	11		
	M 44.500	39.111	40.727		
	SD 11.674	3.983	12.476		
	df	SS	MS	F	P
	2	63.254	31.627	.457	n.s.
12	N 8	8	10		
	M 457.500	482.500	399.000		
	SD 120.801	115.974	141.849		
	df	SS	MS	F	P
	2	7301.000	3650.500	.693	n.s.

*T x P₁: F= 5.922, p <.05

T x P₂: F= 2.618, p n.s.

P₁ x P₂: F= 1.322, p n.s.

partially individualized school recording the higher scores. The F ratio of 2.618 for the comparison of mathematics achievement scores for dissatisfied students in the traditional school versus the predominantly individualized school, and the F ratio of 1.322 for the comparison of mathematics achievement scores for dissatisfied students in the tenth grade of the partially individualized school versus the predominantly individualized schools were not statistically significant. Thus, for hypothesis number six a partial statistically significant confirmation was demonstrated. An analysis of the data suggests that verbal and mathematics achievement scores of dissatisfied students does not differ on the eleventh or twelfth grade levels. And, although there was statistically significant confirmation for tenth grade students in favor of the students in the partially individualized school when compared to the traditional school findings for the eleventh and twelfth grades and the small number of student scores examined does not make it possible to suggest that curriculum organization had a significant impact on the achievement of these students.

SUMMARY

A review of the hypotheses developed for the current research indicates the following:

Hypothesis 1: Statistical analysis partially supports the hypothesis in the areas of Intellectual Climate, Organizational Effectiveness, Orderliness, and Task Effectiveness. (See Table 2 and Figures 1, 2, and 3).

Hypothesis 2: Statistical analysis does not support the hypothesis.

The perceptions of students in the partially individualized curriculum organization are not significantly more favorable than the perceptions of students in either the traditional or the predominantly individualized curriculum organization.

Hypothesis 3: Statistical analysis does not support the hypothesis.

The perceptions of high ability students in the partially individualized curriculum organization are not significantly more favorable than the perceptions of high ability students in either the traditional or the predominantly individualized curriculum organization.

Hypothesis 4: Statistical analysis partially supports the hypothesis.

Tenth grade students in the partially individualized school scored significantly higher in verbal achievement when compared to tenth grade students in the traditional school and significantly higher in mathematics achievement when compared to both the traditional school and the predominantly individualized school (See Tables 5 and 6).

Hypothesis 5: Statistical analysis does not support the hypothesis.

The verbal and mathematics achievement scores of satisfied students in the partially individualized curriculum organization are not significantly higher than the verbal and mathematics achievement scores of satisfied students in either the traditional or the predominantly individualized curriculum organization.

Hypothesis 6: Statistical analysis partially supports the hypothesis.

The mathematics achievement scores of dissatisfied students in the tenth grade of the partially individualized curriculum organization are

significantly higher than the mathematics achievement scores of dissatisfied students in the traditional curriculum organization. (See Table 10).

Chapter 5

CONCLUSIONS

Chapter 5 presents a summary of this study. The chapter includes concluding discussions, recommendations of other interested researchers, and implications from the study.

GENERAL

Individual perceptions of a school environment and the accompanying level of performance are a reflection of organizational effectiveness. This study sought to investigate the impact of curriculum organizations on faculty perceptions of their work environment, student perceptions of their school experiences, and student achievement. Selected schools represented: (1) a traditional curriculum organization, (2) a partially individualized curriculum organization, and (3) a predominantly individualized organization. The design was an effort to provide a comprehensive comparative basis for an analysis of alternative responses to creating what Trump has called the humane school. At issue was an examination of a traditional program and two attempts at curriculum design in which the learner is required to actively commit himself to the attainment of teacher and self-determined goals, to seek out the necessary resources and assistance, and to maintain the sense of momentum which in the traditional curriculum organization was the sole province of the teacher under the rubric of motivation.

FACULTY PERCEPTIONS OF SCHOOL ENVIRONMENT

Faculty perceptions of Achievement Standards, Personal Dignity, Impulse Control, and Development registered no statistically significant differences. Thus, for the curriculum organizations examined, there would appear to be little or no difference among them as regards their impact on the recognition of the quality of work performed or personal need for openness or individual expression as measured by the Organizational Climate Index.

Differences in faculty perceptions of Intellectual Climate were statistically significant at the .01 level for the traditional school versus the partial individualized school. The general work atmosphere in the partially individualized school was perceived to be more facilitative of intellectual activities and reflective of a concern for supportive interpersonal relationships. The faculty of the partially individualized school appears to recognize a provision for a well rounded and integrated intellectual experience that includes social action and personal effectiveness.

Differences in faculty perceptions of Organization Effectiveness were statistically significant at the .05 level for the traditional school versus the partially individualized and the predominantly individualized schools. In both instances the faculties in the individualized schools perceived their work environments to be more conducive to the effective performance of tasks and cohesive efforts to meet

organizational objectives. Both this factor and Intellectual Climate are, as is noted by Stern, closely related and taken together reflect a perceived emphasis on friendly, cooperative behavior and task-oriented group interaction. This combination suggests the successful establishment of group achievement standards rather than individual competencies.

Differences in faculty perceptions of Orderliness were statistically significant at the .01 level for the traditional school versus the partially individualized school. The faculty in the partially individualized school perceived their work environment to stress organizational structure and procedural guidelines. Their work situation appears to be one which reflects a concern for the maintenance of procedures which avoid impulsiveness, the presence of disorganized behaviors, or confusion regarding institutional purpose. It is important to note that among the primary demands on both students and faculty in an individualized curriculum are the increased requirements for comprehensive planning and organization to bring about the efficient use of that portion of the academic day devoted to individual and small group activities. This is in essence what Trump, Phenix, Miller and Gilchrist, and Roberts among others have emphasized in their discussions of curriculum patterns which emphasize an individualized approach.

Finally, faculty perceptions of Task Effectiveness were found to be statistically significant at the .01 level for the traditional school versus the partially individualized and predominantly individualized schools. In both instances, the faculties of the individualized

schools perceived their work environment to be more concerned with maintaining work oriented atmospheres. This factor, which combines Organizational Effectiveness and Orderliness, reflects an emphasis of maintaining work situations which stress realization of organizational goals within a specified procedural framework. Studies by both Steward and Love and Bosco suggest similar emphasis on structure as an assistance in dealing with the intensified demands of interacting with many groups and individuals working on different tasks.

The significant findings in the areas of Intellectual Climate, Organizational Effectiveness, Orderliness, and Task Effectiveness favoring the individualized curriculum organizations would seem to imply a tendency towards the creation of work environments stressing organized, goal oriented behaviors as defined by the Organizational Climate Index. Of additional interest is the fact that the individualized schools consistently reflected more positive work environment profiles for the six first order factors. These results concerning individualized curriculum organizations and favorable faculty perceptions of their work environment are consistent with the findings of researchers previously cited in Chapter 2.

It is recommended that additional studies dealing with the impact of specific curriculum organizations on faculty perceptions of their work environment be conducted. Such studies may reveal further evidence indicative of possible trends towards a positive impact on work environments for those schools implementing individualized curriculum organizations. As Ballwahn noted in his examination of teacher perceptions

In this area, there appears to be a general agreement among teachers that individualized instructional strategies should be implemented. His results indicated that teachers saw individualization as enabling them to deal more effectively with learning difficulties and provide detailed achievement feedback. The impact of these curriculum organizations, as demonstrated by the findings of this study and others previously mentioned, may imply that individualized curriculum organizations contribute to the creation of work environments which are more in keeping with what teachers view as supportive of their classroom endeavors. At the very least it is not unlikely, as Stern points out, that staff climate is transmitted in some way to the classroom. Minzey confirmed student perceptiveness as regards faculty morale and suggested that it may well be reflected in their motivational responses. The careful study and prediction of teacher perceptions of school climate resultant from changes in curriculum structure may identify successful programs and help to predict settings which will be conducive to the implementation of curriculum change.

STUDENT PERCEPTIONS OF SCHOOL ENVIRONMENT

Differences in student perceptions of school environment for all students were statistically significant at the .001 level. Further comparisons indicated no significant statistical difference between the perceptions of the students in the traditional school and the partially individualized school. The variance, therefore, was all accounted for by differences between the predominantly individualized school

versus both the traditional and the partially individualized schools with the students in the predominantly individualized school reflecting the greater degree of satisfaction. Comparisons of student attitudes by grade level, however, registered no statistically significant differences among eighth, tenth, eleventh, and twelfth grade students but did indicate a statistically significant difference at the .001 level for the perceptions of ninth grade students. In other words the ninth grade alone accounted for the variance differences originally found for the total school populations. There was no statistically significant difference between ninth grade students in the traditional and the partially individualized schools. Comparisons for ninth grade students in the predominantly individualized school versus the traditional school and the partially individualized school were significant at the .05 level and .001 level respectively with students in the predominantly individualized school registering the greater satisfaction with their school experiences.

In view of the total findings for student perceptions of their school experiences, it appears that curriculum organization has no discernable impact on the majority of student perceptions as measured by the Student Opinion Poll. The significant results for ninth grade students were, however, consistent with the findings of Techman, Beelick, Bennett, and Nielson whose studies reflected similar positive relationships between student attitudes and individualized curriculum structures. It is recommended that further examinations of student perceptions be

conducted. Such studies may reveal further and more substantial evidence concerning student attitudinal response to their curriculum experiences.

PERCEPTIONS OF SCHOOL ENVIRONMENT FOR HIGH ABILITY STUDENTS

High ability students' perceptions of school environment registered statistically significant differences at the .001 level. Further analysis indicated significantly more positive perceptions by high ability students in both the traditional school (.05 level) and the predominantly individualized school (.001 level) when compared to the partially individualized school. Further comparisons by grade level registered no statistically significant differences among eighth, tenth, eleventh, and twelfth grade students but did indicate a significant difference at .001 level for ninth grade students. Comparisons at this grade level were consistent with the findings for the comparisons of all high ability students. Students in the traditional school and the predominantly individualized school indicated significantly greater satisfaction with their school experiences at the .05 and .001 levels respectively.

In view of the overall findings for the perceptions of high ability students regarding their school experiences, it appears that curriculum organization has no discernible impact on the majority of these students' perceptions. The apparent dissatisfaction of ninth grade high ability students in the partially individualized curriculum organization, while significant, cannot be concluded to be the result of curriculum organization in light of the findings for the other four grade levels. Specific factors unique to the environment of the selected school may have played a contributive role in the formulation of these students'

response to their school experience. Also of interest is the fact that the other significant findings regarding student opinions were on the ninth grade level and indicated that students in the predominantly individualized curriculum were more satisfied with their school experiences. This may be indicative of possible ambivalent responses to curriculum change in the early high school years. It is recommended that further investigations as to the impact of curriculum organization on high ability students be conducted in order to bring into sharper focus the dissatisfaction identified in this study.

STUDENT ACHIEVEMENT

Student verbal and mathematics achievement demonstrated no statistical significance on the eleventh or twelfth grade levels. Comparisons for tenth grade students' verbal and mathematics achievement were statistically significant at the .01 level. Analysis of verbal achievement indicated significant differences between the scores of tenth grade students in the traditional and the partially individualized schools with the latter attaining the higher scores. Analysis of mathematics achievement indicated significant differences between the scores of tenth grade students in the partially individualized school and those of students in both the traditional and the predominantly individualized schools. In both cases students in the partially individualized school recorded the higher scores.

These findings suggest that additional study may be needed to determine the extent to which the significant findings are representative of other tenth grade students in similar learning environments. Studies conducted by Goutevenior who also found significant gains for tenth grade

students in individualized programs, Grater who demonstrated student achievement gains in programs with controlled individualized time, Smith, Raumin, Sinks, Leigh, Hatfield, and Linebarger support the current findings. It is recommended that subsequent studies attempt to expand the comparative basis for examination of individualized curriculum impact and identify those organizational approaches most appropriate to students at specific grade levels in terms of academic achievement.

VERBAL AND MATHEMATICS ACHIEVEMENT SCORES FOR SATISFIED AND DISSATISFIED STUDENTS

The verbal and mathematics achievement scores for satisfied students registered no statistically significant differences for grades ten and twelve or for verbal achievement on the eleventh grade level. There were significant findings for the comparison of mathematics achievement scores for satisfied students in the eleventh grade in the traditional school versus the predominantly individualized school with students in the traditional school recording the higher scores.

The verbal and mathematics achievement of dissatisfied students registered no statistically significant differences for grades eleven or twelve or for verbal achievement scores on the tenth grade level. There were significant findings for the comparisons of mathematics achievement scores for dissatisfied students in the tenth grade of the traditional school versus the partially individualized school with students in the partially individualized school recording the higher scores.

In light of the small number of student scores examined in the present study and the lack of significant findings on the tenth and twelfth grade levels for satisfied students and the eleventh and twelfth grade levels for dissatisfied students it is concluded that satisfied and dissatisfied student achievement is not related to curriculum organization. In view of the findings of studies conducted by Brodie, Walberg and Anderson, Austrin, and Alvord in their examinations of the achievement of satisfied and dissatisfied students, it is suggested that further inquiries into the possible relationship between student perceptions of their school experiences and their academic achievement be pursued. Such studies may clarify current concerns for affective responses to curriculum experiences and provide expanded empirical bases for proposed changes in the organization of student-teacher interactive patterns.

IMPLICATIONS

In this study a limited number of statistically significant relationships were demonstrated. The significant findings in the area of faculty perceptions of their work environment do, however, offer encouragement as regards identifying contributive factors in the development of faculty work environments. And, the extent to which faculties perceive their work environment in positive terms will most certainly have a discernable impact on those with whom they are in closest contact -- their students. The findings imply further support of data which indicate positive faculty responses to individualized curriculum organizations. Such programs appear to be viewed favorably by the faculties which are asked to

implement them, and stress the need for continued experiential and analytical efforts in the area of curriculum design. These results also carry implications regarding the nature of programs designed to increase the instructional competencies of faculty members and the leadership strategies which must accompany them. Efforts to create environments which fully utilize the complete range of talents and instructional strengths of faculties must necessarily concern themselves with perceptions regarding the viability of the program, its contribution to individual and group goals, and the extent to which the climate supports intellectual pursuits. Similarly, those charged with leadership roles must premise the conceptualization of appropriate strategies on those designs which offer the maximum potential for realizing individual commitment to the instructional program. Curriculum organizations which emphasize individualized learning opportunities appear to suggest such possibilities. The successful merging of the concepts of individualization and faculty perceptions of an enabling working environment can bring about the creation of the humane school which places expanded responsibility upon the learner while at the same time providing for interaction with a teacher-advisor who guides and directs the fulfillment of those responsibilities.

Results of this study suggest that in the area of student attitudes regarding their school experience most students tend to assume a neutral posture. These results are consistent with similar research data and imply, as Jackson contends, a leveling of perceptions resultant from the compulsory aspect of the educational process, and the establishment of a routine which seems to bring about a separation between students' feelings and the daily business of classroom life. However, the

significant differences on the ninth grade level reflecting significant satisfaction on the part of students in the predominantly individualized school and significant dissatisfaction on the part of high ability students in the partially individualized school would seem to indicate more pronounced responses in the early phases of secondary experiences. Increased emphases on the affective aspects of curriculum development may provide a momentum for both creative and positive responses on the part of students which could carry through their high school years and beyond.

The current findings demonstrating significant differences in tenth grade students' achievement favoring the partially individualized school imply the need for continued development of a variety of learning experiences. The identification of such programs will assist in the prediction of settings which offer an increased possibility for student success in terms of academic achievement. Additionally it would seem to suggest that different organizational approaches may be required at levels beyond the current grouping patterns. What may be appropriate at one grade level may not be appropriate at the preceding or succeeding level. And, this implies a flexibility and creativity of effort beyond what is currently being considered or implemented.

Finally, the results of this study would seem to imply that efforts to improve instructional programs must concern themselves with both affective and cognitive areas and include a broadened view of anticipated results. The outcomes of such programs may not, as has been suggested earlier, be mutually supportive with positive perceptions prompting higher achievement or academic success necessarily bringing

about satisfaction with school experiences. This is to suggest that such characteristics as sustained effort, consistent performance, and broadening cultural and civic awareness are all within the province of desirable goals. Their inclusion in program design and analysis may provide to be a valuable evaluative criterion for both teachers and researchers.

APPENDICES

APPENDIX A

ORGANIZATIONAL CLIMATE INDEX

SHORT FORM
OCI - 375 SF

Geroge G. Stern, Carl R. Steinhoff, and Joel Richman

There are 80 statements in this booklet. They are statements which describe the environment in which people work. The statements refer to daily activities, to rules and regulations and policies, to typical interests and projects, to features of the physical environment, etc. The statements may or may not be characteristic of your situation because organizations differ from one another in many ways. You are to decide which statements are characteristic of your institution and which are not. Your answers should tell us what you believe the institution is like rather than what you might personally prefer. You won't know the answer to many of these statements, because they may not be any really definite information on which to base your answer. Your responses will simply mean that in your opinion the statement is probably true or probably false about your organization.

Do not omit any item.

DIRECTIONS

On the special answer sheet print your name, and the other information requested. Then, as you read each statement in the booklet, blacken space

T - when you think the statement is generally TRUE or characteristic of the organization, is something which occurs or might occur, is the way people tend to feel or act.

F - when you think the statement is generally FALSE or not characteristic of the organization, is something which is not likely to occur, is not the way people typically feel or act.

Be sure to fill in the whole answer space with a heavy black mark, using any No. 2 or softer pencil. Do not use ball point or ink.

YOU MUST ANSWER EVERY ITEM.

Work rapidly, going through the entire list of statements as quickly as you can. Occasionally compare item numbers from the booklet with the answer sheet space to see that they correspond. Please do not make any stray marks on the answer sheet or in this booklet. Erase all errors and stray marks completely.

1. Work programs are well organized and progress systematically from week to week.
2. People here express their feelings openly and enthusiastically.
3. Everyone here has a strong sense of being a member of the team.
4. There is a lot of group spirit.
5. Administrative policy, goals, and objectives are carefully explained to everyone.
6. When people here disagree with an administrative decision, they work to get it changed.
7. People here put a great deal of energy into everything they do.
8. Improving one's knowledge of important works of art, music, and drama is encouraged here.
9. One of the values most stressed here is open-mindedness.
10. Social events get a lot of enthusiasm and support.

11. People who have friends of the opposite sex show their affections openly.
12. People find others eager to help them get started.
13. People here spend a great deal of time thinking about and discussing complex problems.
14. The ability to plan ahead is highly valued here.
15. Many social activities are unplanned and spontaneous.

16. People are expected to have a great deal of social grace and polish.
17. Untidy reports or ones that depart from a specified style are almost certain to be returned unaccepted.
18. Most people here go to lots of parties and other social activities.
19. There are many facilities and opportunities for individual creative activity.
20. Most people here love to dance.

21. Personality and pull are more important than competence in getting ahead around here.
22. The administrative staff are often joked about or criticized.
23. Most activities here are planned carefully.
24. People here speak up openly and freely.
25. People here are not only expected to have ideas but to do something about them.

26. Good manners and making a good impression are important here.
27. The activities of charities and social agencies are strongly supported.
28. Criticism is taken as a personal affront in this organization.
29. Neatness in this place is the rule rather than the exception.
30. Male-female relationships sometimes become quite serious.

31. Many people here enjoy talking about poetry, philosophy or religion.
32. Everyone is helped to get acquainted.
33. All work assignments are laid out well in advance, so that people can plan their own schedules accordingly.
34. People here thrive on difficulty - the tougher things get, the harder everyone works.
35. Individuals who are not properly groomed are likely to have this called to their attention.

36. Service to the community is regarded as a major responsibility of the institution.
37. People here are not really concerned with deep philosophical or ethical matters.
38. Good work is really recognized around here.
39. Work is checked to see if it is done properly and on time.
40. Administrators are practical and efficient in the way they dispatch their business.

41. There are no favorites in this place; everyone gets treated alike.
42. People here can get so absorbed in their work they often lost all sense of time or personal comfort.
43. People frequently do things on the spur of the moment.
44. Proper social forms and manners are not particularly important here.
45. Few people here are challenged by deep thinking.

46. People set high standards of achievement for themselves here.
47. New ideas are always being tried out here.
48. People here tend to take the easy way out when things get tough.
49. Administrators put a lot of energy and enthusiasm into directing this program.
50. People here talk about their future imaginatively and with enthusiasm.

51. There is a general idea of appropriate dress which everyone follows.
52. There always seem to be a lot of little quarrels going on here.
53. It's easy to get a group together for games, cokes, movies, etc.
54. The work atmosphere emphasizes efficiency and usefulness.
55. People spend a great deal of time together socially.

56. There is not wasted time here; everything has been planned right to the minute.
57. Discussions about improving society are common here.
58. Unusual or exciting plans are encouraged here.
59. People here feel free to express themselves impulsively.
60. People here expect to help out with fund drives, CARE, Red Cross, etc.

61. There is a specific place for everything and everyone here.
62. People here often get involved in long, serious intellectual discussions.
63. The administrative staff will go out of its way to help you with your work.
64. Many people here read magazines and books involving history, economics or political science.
65. Looking and acting "right" is expected.

66. The people here are easily moved by the misfortunes or distress of others.
67. Everyone has the same opportunity to make good.
68. Communications within the organization is always carried on through formal channels.
69. Most activities here present a real personal challenge.
70. People ask permission before deviating from common policies or practices.

71. There is a recognized group of leaders who receive special privileges.
72. People here feel they must really work hard because of the important nature of their work.
73. Parties are colorful and lively here.
74. Programs here are quickly changed to meet new conditions.
75. People are always carefully dressed and neatly groomed.

76. "Lend a helping hand" could very well be the motto of this place.
77. There is considerable interest in the analysis of value systems and the relativity of societies and ethics.
78. There is a lot of interest in the philosophy and goals of science here.
79. Frank discussions about sex are not uncommon among people here.
80. People here are usually quick to help each other out.

APPENDIX 8

Factor Definitions for the Organizational Climate Index

As each of the Syracuse Indexes has been developed, each instrument has been factor-analyzed by use of a principle component equamax procedure. This permits the development of first and second order factors which combine thirty scales in differing ways and thereby permit the identification of a small number of major categories. The number of first and second order factors derived varies according to the type of population for which the instrument is intended. The instrument used in this study, the Organizational Climate Index, has six first-order factors and two second-order factors. The factor structures and their definitions for the Organizational Climate Index are given in the following pages. The definitions are based on those provided in People In Context (Stern, 1970).

1. Intellectual Climate

Schools with positive scores on this factor are perceived to possess environments that are conducive to scholarly interests in the humanities, arts, and sciences. Staff and physical plant are seen to be facilitative of these interests and the general work atmosphere is characterized by intellectual activities and pursuits.

2. Achievement Standards

Schools with positive scores on this factor are perceived to stress high standards of personal achievement. Tasks are successfully completed and high levels of motivation and energy are maintained.

Recognition is given for work of good quality and quantity and the staff is expected to achieve at the highest levels.

3. Personal Dignity

Schools with positive scores on this factor are perceived to respect the integrity of the individual and provide a supportive environment that would closely approximate the needs of more dependent teachers. There is a sense of fair play and openness in the working environment.

4. Organizational Effectiveness

Schools with positive scores on this factor have work environments that encourage and facilitate the effective performance of tasks. Work programs are planned and well-organized, and people work together effectively to meet organizational objectives.

5. Orderliness

Schools with positive scores on this factor are perceived to stress organizational structure and procedural orderliness. Neatness counts and there are pressures to conform to a defined norm of personal appearance and institutional image. There are set procedures and teachers are expected to follow them.

6. Impulse Control

Schools with positive scores are perceived to emphasize a great deal of constraint and organizational restrictiveness in the work environment. There is little opportunity for personal expression or for any form of impulsive behavior.

Second Order Factors

1. Development

Schools with positive scores on Development are characterized by organizational environments that are supportive of intellectual and interpersonal forms of activity. The environments are intellectually stimulating, supportive, set high standards for achievement, and do not inhibit personal expression.

2. Task Effectiveness

Schools with positive scores on Task Effectiveness are perceived as emphasizing high levels of orderliness and structure, in an environment which is work oriented.

APPENDIX C

STUDENT OPINION POLL*

Grade _____

(Last Name) (First)

Answer the following questions by circling the appropriate letter.

1. In determining the basic nature of its program, the school
 - (a) pays too much attention to the wishes of parents.
 - (b) pays just about the right amount of attention to the wishes of parents.
 - (c) pays too little attention to the wishes of parents.
2. In my opinion the variety of subjects offered in the school is
 - (a) too broad.
 - (b) just about right.
 - (c) not broad enough.
3. While there are some differences among them, most teachers in this school are
 - (a) very inspiring.
 - (b) quite inspiring.
 - (c) somewhat inspiring.
 - (d) not inspiring.
4. In some schools the administrators (principals, superintendents, etc.) have close contacts with students, whereas in other schools, such contacts are rare. It seems to me that in this school
 - (a) the administrators keep such close contact with student affairs that they frequently involve themselves in matters that do not require their attention.
 - (b) the contacts between administrators and students are about right.
 - (c) the administrators have contacts with students so rarely that they are unaware of many student problems.

5. The freedom to contribute something in class without being called on by the teacher is
 - (a) discouraged more than it should be-students do not get enough opportunity to have their say.
 - (b) encouraged more than it should be-students seem to be rewarded just for speaking even when they have little to say.
 - (c) handled about right.
6. The things that I am asked to study are
 - (a) of great interest to me.
 - (b) of moderate interest to me.
 - (c) of limited interest to me.
 - (d) of little interest to me.
7. Concerning the opportunities for getting together socially with other students in this school, my opinion is that
 - (a) there are altogether too many things going on, so that you are continually distracted from homework and other individual activities.
 - (b) the opportunities for getting together socially are about right.
 - (c) there are not nearly enough opportunities for getting together with other students.
8. In terms of adequate preparation for college I believe the program of the school is
 - (a) more severe and rigorous than it needs to be.
 - (b) about right.
 - (c) less severe and rigorous than it should be.
9. The content of different courses from year to year is
 - (a) too repetitious - the same material seems to be reworked again and again.
 - (b) repeated just enough to allow for a feeling of continuity.
 - (c) so unrelated that new material does not seem to build on earlier work.

10. In this school the teachers' interest in students' academic work might best be described as
 - (a) too great - they intrude upon the privacy of the student.
 - (b) just about right.
 - (c) not great enough - teachers are not concerned enough with the work of students.
11. When school-work activities requiring full teacher support occur, my feeling is that
 - (a) nearly all teachers cooperate.
 - (b) most teachers cooperate.
 - (c) some teachers cooperate.
 - (d) few teachers cooperate.
12. It is common practice in many classrooms to allot some class time for individual study. I find this study time allotment
 - (a) so generous as to be somewhat wasteful.
 - (b) adequate enough so that most students can get at least a good start on their work.
 - (c) so sparing as to be relatively worthless for any constructive activity.
13. The students in this school who receive poor grades are likely
 - (a) to receive more sympathy from their fellow classmates than they deserve.
 - (b) to be respected by their classmates more than they should be.
 - (c) neither a nor b.
14. From the standpoint of intellectual ability, students in this school are
 - (a) too bright - it is difficult to keep with them.
 - (b) just bright enough.
 - (c) not bright enough - they do not provide enough intellectual stimulation.

15. On the whole the school program places
- (a) less emphasis on artistic training than it should.
 - (b) about the right emphasis on artistic training.
 - (c) more emphasis on artistic training than it should.
16. Most of the subjects taught in the school are
- (a) interesting and challenging.
 - (b) somewhat above average in interest.
 - (c) somewhat below average in interest.
 - (d) dull and routine.
17. In this school the teacher's interest in the students' private life might best be described as
- (a) too great - they intrude on the privacy of the student.
 - (b) just about right.
 - (c) not great enough - teachers are not concerned enough with the personal life of their students.
18. The student who displays a sense of humor in class is generally
- (a) admired by teacher more than he should be.
 - (b) penalized by teachers more than he should be.
 - (c) neither admired nor penalized by teachers more than he should be.
19. There is often a feeling that teachers "go too fast" to permit students to really understand what is going on. In this school, the rate at which teachers usually present materials is
- (a) too slow.
 - (b) about right.
 - (c) too fast.

20. Students who are outstanding athletes in their school are
- (a) respected more than they should be by their fellow students.
 - (b) respected less than they should be by their fellow students.
 - (c) neither a nor b.
21. The relative emphasis on competition and cooperation among students in this school seems to be
- (a) too much emphasis on competition to suit me.
 - (b) too much emphasis on cooperation to suit me.
 - (c) a satisfactory balance between competition and cooperation.
22. All things considered, the school program
- (a) puts too much emphasis on scientific training.
 - (b) emphasizes scientific training in about the right degree.
 - (c) puts too little emphasis on scientific training.
23. The present overall curriculum of the school
- (a) is about right.
 - (b) requires only minor revisions to make it about right.
 - (c) requires considerable revision.
 - (d) should be abandoned and replaced with a different program.
24. In general, the teachers I have had in this school seem to know their subject matter
- (a) very well.
 - (b) quite well.
 - (c) fairly well.
 - (d) not as well as they should.

25. In evaluating the written and oral work of students
- (a) too much emphasis is placed on grammar and style and not enough on the value of what the student is trying to say.
 - (b) the balance between style of expression and content is about right.
 - (c) so little emphasis is placed on grammar and style that students have difficulty learning how to express themselves.
26. Students may work either by themselves or in groups. The amount of work done in groups is
- (a) too great.
 - (b) about right.
 - (c) too small.
27. My observation has been that students from different economic, social, racial, and religious backgrounds get along together in this school
- (a) very well.
 - (b) moderately well.
 - (c) less well than is desirable.
 - (d) very poorly.
28. As compared with what I feel to be desirable, the amount of "school spirit" at this school
- (a) is more than enough.
 - (b) is about right.
 - (c) is not enough.
29. In its total program the school
- (a) puts too much stress on intellectual matters.
 - (b) gives intellectual matters about the right emphasis.
 - (c) does not put enough stress on intellectual matters.

30. The extracurricular program of the school is
- (a) very responsive to the needs and interests of the student body.
 - (b) quite responsive to the needs and interests of the student body.
 - (c) somewhat responsive to the needs and interests of the student body.
 - (d) very unresponsive to the needs and interests of the student body.
31. In matters relating to students, teachers in this school seem to be
- (a) fair at all times.
 - (b) generally fair in their practices.
 - (c) occasionally unfair in their practices.
 - (d) often unfair in their practices.
32. In general classroom procedures are
- (a) often so unorganized that it is difficult to get things done.
 - (b) flexible enough to meet most situations.
 - (c) often so rigidly organized that it is difficult to make changes.
33. Classroom seating arrangements in this school are
- (a) too flexible to suit me; you can never be sure where you will sit and who will sit next to you.
 - (b) just about right.
 - (c) too rigid to suit me; it is difficult to arrange the furniture to meet special needs.
34. The students who receive top grades in this school are likely to be
- (a) admired more than they should be by fellow students.
 - (b) rejected more than they should be by fellow students.
 - (c) neither admired nor rejected by fellow students.

35. In my opinion, student interest in social organizations, such as clubs, fraternities, and sororities is
- (a) too great.
 - (b) about right.
 - (c) not great enough.
36. In general the subjects taught are
- (a) too easy.
 - (b) about right in difficulty.
 - (c) too difficult.
37. When students are in need of special help, teachers in this school are
- (a) always available.
 - (b) generally available.
 - (c) available if given special notice.
 - (d) available only in cases of extreme need.
38. The ability of the teachers in this school to present new material seems to be
- (a) superior.
 - (b) good.
 - (c) average.
 - (d) poor.
39. As compared to other methods of teaching, the practice of having students join discussion groups is
- (a) used more than I feel it should be.
 - (b) used in about the right proportion with other methods.
 - (c) used less than I feel it should be.

40. The time spent in homeroom activities is
- (a) always well spent.
 - (b) generally well spent.
 - (c) rarely well spent.
 - (d) wasted.
41. In general, students in this school take their studies
- (a) too seriously.
 - (b) too casually.
 - (c) in a right proportion between a and b.
42. In some schools a lot of emphasis is placed on student government, honor societies, and other types of formal social organization. In my opinion, the emphasis on such activities in this school is
- (a) too great.
 - (b) about right.
 - (c) not great enough.
43. The physical training program of the school is
- (a) emphasized too much.
 - (b) about right.
 - (c) not emphasized enough.
44. Some things that we learn are of little use to us now but will become useful in the future; other things can be used as soon as learn them. In this school teachers seem to
- (a) focus too much on learning that will not become useful for some time to come.
 - (b) focus too much on learning that is useful to us now, neglecting things that we might need later.
 - (c) achieve a nice balance between things of immediate and future usefulness.

45. When it comes to grading students, teachers in this school are generally
- (a) too "tough."
 - (b) just "tough" enough.
 - (c) not "tough" enough.
46. As compared to other methods of teaching, the practice of having the teacher give a lecture is
- (a) used more than I feel it should be.
 - (b) used in about the right proportion with other methods.
 - (c) used less than I feel it should be.
47. Homework assignments in the school are usually
- (a) carefully thought through by the teacher and clearly related to classroom work.
 - (b) consistent with what is going on in the classroom but not related to it in any systematic way.
 - (c) given without much thought and having little bearing on the classroom work.
 - (d) unrelated to classroom work and chiefly of a "busy work" nature.
48. The student who differs from the crowd in this school is likely to find that
- (a) most students will tend to ignore or reject him for being different.
 - (b) most students do not particularly care whether or not a person differs from the group.
 - (c) most students admire the person who is different.
49. In my opinion, the emphasis which students in this school place on grooming and appearance is
- (a) too great.
 - (b) about right.
 - (c) not great enough.

50. As an objective of the curriculum, social skills, that is, training on how to get along with other people, is
- (a) not given enough emphasis.
 - (b) given just about the right amount of emphasis.
 - (c) given too much emphasis.
51. Some teachers are friendly and accepting to students; others are more detached and aloof. In general, the teachers in this school are
- (a) very friendly and accepting.
 - (b) quite friendly and accepting.
 - (c) somewhat friendly and accepting.
 - (d) only occasionally friendly and accepting.
52. Individual pupils differ in their abilities and interests. Some teachers tend to ignore these differences. Other teachers pay too much attention to these differences. In general, teachers in this school
- (a) focus too much on individual differences, giving undue attention to those who happen to be more different from the group.
 - (b) do not focus enough on individual differences, so that students with special talents or problems are frequently unrecognized.
 - (c) pay just enough attention to individual differences.
53. In general, my attitude toward the grades I have received in this school is
- (a) I always receive the grades that I deserve.
 - (b) I generally receive the grades that I deserve.
 - (c) I sometimes receive the grades that I do not deserve.
 - (d) I frequently receive the grades that I do not deserve.
54. Teaching aids such as films, T.V., and the like
- (a) are used more than I feel they should be.
 - (b) are used as much as they should be.
 - (c) are used less than I feel they should be.

55. Judging from the types of students who are by classmates, I believe that the admissions policy of this school is
- (a) too restrictive, the students are too much alike.
 - (b) just about right.
 - (c) not restrictive enough, there are many students in this school who should not be here.
56. In the typical class, memory work and the learning of important facts are
- (a) given too much emphasis.
 - (b) given about the right emphasis.
 - (c) not given enough emphasis.
57. In some classes the teacher is completely in control, with the students having little to say about the way things are run. In other classes the students seem to be boss, with the teacher contributing little to the control of the situation. In general, teachers in this school seem to take
- (a) too much control.
 - (b) about the right amount of control.
 - (c) too little control.
58. In addition to teachers, some schools employ persons who are specially trained to help students with personal, vocational, and educational problems. In my opinion, this type of service in this school is
- (a) so plentiful that it is sometimes forced on you whether you want it or not.
 - (b) adequate to meet the needs of the students.
 - (c) so meager that it is difficult to obtain even when you want it.

59. When a newcomer enters this school, chances are that other students will
- (a) go out of their way to accept him.
 - (b) are quite willing to accept him.
 - (c) tend to ignore him.
 - (d) openly reject him.
60. In general, my attitude toward school may best be described as
- (a) very favorable - I like it as it is; no changes are necessary.
 - (b) more favorable than unfavorable - a few changes are necessary to make me entirely happy.
 - (c) more unfavorable than favorable - many changes are necessary before I can be entirely happy.
 - (d) unfavorable - I frequently feel that school is pretty much a waste of time.

*Creativity and Intelligence - Explorations with Gifted Students,
Jacob W. Getzels and Phillip W. Jackson, 1962. Reprinted by permission
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