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AN ASSESSMENT OF CURRICULAR PRACTICES  
IN SELECTED JUNIOR HIGH SCHOOLS

by

Ronald Thomas Brown

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A Dissertation Submitted to the Faculty of the  
DEPARTMENT OF ELEMENTARY EDUCATION  
In Partial Fulfillment of the Requirements  
For the Degree of  
DOCTOR OF EDUCATION  
In the Graduate College  
THE UNIVERSITY OF ARIZONA

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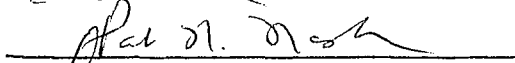



GRADUATE COLLEGE

I hereby recommend that this dissertation prepared under my  
direction by Ronald Thomas Brown  
entitled An Assessment of Curricular Practices in Selected  
Junior High Schools  
be accepted as fulfilling the dissertation requirement of the  
degree of Doctor of Education

  
Dissertation Director

9/22/75  
Date

After inspection of the final copy of the dissertation, the  
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*Ernest J. Brown*

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## ABSTRACT

The purpose of this study was to investigate the relationship between theory and practice in regard to curricular practices in middle school/junior high school education. Recommended practices which were validated by a panel of ten scholars were compared to existing curricular practices as recorded by principals of accredited sample schools of the North Central Association of Colleges and Secondary Schools.

The Junior High School Curriculum Assessment Instrument was constructed which incorporated a comprehensive list of suggested practices and concepts in middle school education. Five categories were listed in the following order: I. Organization and Curriculum, II. Required Courses, III. Practices and Concepts of Individualization, IV. Materials for Individualization, V. Elective Courses. The first three categories had five choice answers, and the last two had yes or no choices. There were eighty-two separate statements with Category I having 24; Category II, 14; Category III, 24; Category IV, 7; and Category V, 13.

The scholars responded to the instrument by using a five point scale of degrees of recommendation for items 1-62, and yes or no for items 63-81. The principals responded to the instrument by using a similar five point

scale of degrees of existence for items 1-62, and yes or no for items 63-82.

The analysis of the data collected from the two groups was conducted in the following way: Using mean scores, a t-test of statistical significance was computed for Categories I, II, and III, and each of the first 62 statements. The chi-square test of statistical significance was computed for Categories IV and V and items 63-82.

Further interpretation of the data was made by dividing the mean scores of the first 62 items into three ranges. A mean score between 1.0000-2.4999 was defined as recommended strongly by scholars and existed strongly in the schools as judged by principals. Mean scores between 2.5000-3.4999 were defined as moderately recommended and moderately in existence, and mean scores between 3.5000-5.0000 were defined as not recommended and not in existence.

The mean responses of scholars and principals showed no statistical disagreements in thirty-nine tests. There was a statistical disagreement between mean scores of principals and scholars on six items. The practices represented by these items were departmentalization, interscholastic athletics, nongraded structure, age and grade crossing in classes, mini courses, and methods other than letter grades for reporting student progress. (Thirty-seven mean scores were considered inconclusive.)

The conclusions of this study can be briefly stated as follows:

1. Schools accredited by the North Central Association of Colleges and Secondary Schools are current in providing middle school/junior high school programs.
2. Scholars and principals agree on required course offerings, elective course offerings, and materials for individualization of instruction.
3. Scholars and principals do not agree on organization and curriculum and concepts and practices of individualization.
4. Principals are committed to the philosophy of change for the improvement of instruction.
5. Departmentalization is the dominant pattern of organization in the middle school/junior high school.
6. Nongradedness, age-grade crossings in classes, and mini courses are in limited use because of the influence of departmentalization.
7. The letter grade is the most prevalent system of reporting pupil progress.
8. Interscholastic athletics is strongly entrenched in schools in spite of recommendations to the contrary.

It is recommended that the sample schools in this study investigate further their approaches to individualization of instruction and organizational patterns.

## CHAPTER I

### PRESENTATION OF THE PROBLEM

Abstractions are symbolic reflections of aspects of reality. As the rate of change alters technological, social, and moral realities, we are compelled to do more than revise our abstractions; we are also forced to test them more frequently against the realities they are supposed to represent (Toffler, 1974, p. 14).

The changing technological, social, and moral realities have had as great an effect on public education as on any other facet of our society. The changes have been rapid, and, as Toffler has suggested there has been a real need to test the theories and abstractions which have given direction to our practices.

One approach to testing our theories in education is to survey the degree of existence of the practices which have been derived from our abstractions. Schools accredited by accrediting associations follow a procedure of evaluation which is designed to give direction to implementing current curricular practices. The gap between theory and practice should be lessened in accredited schools, and it is with this thought in mind that middle-school/junior high schools accredited by the North Central Association of Colleges and Secondary Schools were asked to participate in this study.

In 1924 the North Central Association of Colleges and Secondary Schools recognized the importance of the junior high school (McGlasson and Pace, 1971) but action was

not forthcoming until 1968 when Stephen Romine, Dean of The University of Colorado College of Education, established, through a survey, the need for junior high school accreditation. Committee structures were inaugurated in 1963, and evaluation standards for middle school/junior high school emerged for use in 1967. Eighteen schools were accredited in 1968, and by 1970 enrollment had risen to ninety-three (McGlasson and Pace, 1971). Today there are 252 member middle school/junior high schools in the Association, and each of these schools has undergone an intensive evaluation process for the purpose of improving the educational program.

The process of evaluation requires that each school establish standards which it strives to meet. Recommended standards are developed by university professors, state department of education personnel, and professionals in the field. Participating schools are welcome to use these criteria or develop their own. Theoretically, member schools develop plans for the purpose of continued improvement of the educational program, and an assumption is made that the North Central Association's approach to evaluation is an effective tool for bridging the gap between theory and practice. Maurice McGlasson (1973, p. 29) states it aptly: "By setting standards the North Central Association is endeavoring to pull all junior high schools/middle schools up to the standards described in the literature for middle schools/junior high schools." Whether accredited middle

schools/junior high schools successfully bridge the gap between theory and practice, or reach a recommended standard is not known. There is no research available. Historically, this lack of research has been characteristic of the junior high school movement.

The junior high school concept originated during the last decade of the nineteenth century, and until the sixties, a large number of school districts utilized the 6-3-3 organizational plan with grades 7-8-9 making up the junior high school. This structure promoted the adoption of many secondary school practices in the junior high school. Beginning in the early sixties, the concept of the middle school became more widely accepted and there was a renewed interest in curriculum practices in these schools for the eleven to fourteen year old. There has, however, been a lack of research to give guidance to both scholars and practitioners in the area.

#### Statement of the Problem

This study is an attempt to gain information about curricular practices in accredited middle school/junior high schools in the areas of curriculum and instructional organization, required and elective courses, and provisions for meeting the needs of individual students. The problem of this study is summarized in the following question: Is there a difference in curricular practices in accredited

middle school/junior high schools of the North Central Association of Colleges and Secondary Schools and curricular practices recommended by selected scholars in middle school/junior high school curricula?

### Purpose of the Study

The purpose of this dissertation is to assess the degree of relationship between theory and practice of curricular practices in selected middle schools/junior high schools. This investigation can be viewed as an attempt to organize current recommendations in regard to the middle school/junior high school curricula.

The identified concepts and practices provided a model for comparison of existing practices in public schools. The assessment of recommended practices in public schools can be of importance to persons planning and developing middle school/junior high school programs.

### Hypotheses

Procedures for determining recommended curricular practices and those that exist in public schools needed to be developed. In order to accomplish this, the following procedures were used.

Current curricula theories and accompanying recommended practices were identified by reviewing the related literature of middle school/junior high school education. An instrument was written, Junior High School Curriculum



Assessment Instrument, which included the most highly recommended practices in curriculum and instructional organization, required courses, concepts and practices of individualization, materials for individualization, and elective courses. The instrument was mailed to ten selected scholars in order to elicit their reactions and recommendations to these practices.

In order to ascertain existing practices, it was felt that a sample of schools had to be chosen which were current in their understandings and applications of existing recommended practices. The evaluation process used by the North Central Association has been an annual exercise designed to improve and update the total school operation. The thrust of the evaluation has been to promote growth and improvement primarily through self-evaluation.

A study was then conducted in an attempt to measure the following hypotheses about middle school/junior high school curricular practices in accredited North Central Association schools.

1. There are no significant differences between recommended practices and existing practices in regard to organization and curriculum.
2. There are no significant differences between recommended practices and existing practices in regard to required courses.

3. There are no significant differences between recommended practices and existing practices in regard to concepts and practices of individualization of instruction.
4. There are no significant differences between recommended practices and existing practices in regard to the availability of materials for individualization of instruction.
5. There are no significant differences between recommended practices and existing practices in regard to elective courses.

#### Definition of Terms

1. Instructional organization: A school's pattern of organization is determined by the way its pupils and teachers are assigned to each other for instructional purposes. This is usually reflected in the master schedule (Dunn and Dunn, 1972, p. 50).
2. Required courses: Those courses that all students must take.
3. Elective courses: Those courses that are optional to students.
4. Individualization of instruction: Any instructional procedure which attempts to meet the needs of each child.

5. Middle school/junior high school: An expression meaning schools which use either name, middle school or junior high school. The North Central Association of Colleges and Secondary Schools does not distinguish between the two, and neither does this study. The terms middle school and junior high school shall be used interchangeably.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

The developmental uniqueness of the emergent adolescent has played a large part in the rationale for having a separate educational program in the middle school/junior high school. Hall stated in 1904,

Adolescence is a new birth, for the higher and more completely human traits are now born. The range of individual differences and average errors in all physical measurements and psychic tests increases (p. xiii).

James Conant, for all his junior high observations, found this age youngster to be an enigma. Jerome Bruner admitted his befuddlement, and Alison Davis (sociologist) admitted his inability to understand his own children during their pre- and early-adolescent years (Andree, 1967, p. 33).

This wide range of growth and development during pubescence has contributed to the difficulty in determining appropriate middle school/junior high school curricular practices (Gruhn and Douglass, 1956, pp. 4-5). In spite of the complexity of programming for the adolescent, and the lack of research, the literature showed a consistent belief among educational scholars about the functions of the middle school/junior high school.

The United States is the first cultural system to identify a psycho-social orientation as primary for the middle school/junior high school. This provides a rationale for a separate approach from elementary and secondary education and indicates a need to identify the specifics of such an approach. This does not imply that cognitive processes are neglected, but that the thrust should be in the affective domain. Samuel Popper (1967, pp.xi-xii) states, "The purposes of the middle school have to be extracted from physiological and psychological sciences, and structures and curriculum be geared to appropriate socialization for the unit of organization."

The classic statement of junior high school functions was that of Gruhn and Douglass in 1947, and is still referred to in most literature. Six general functions were identified: integration, exploration, articulation, socialization, guidance, and differentiation (Gruhn and Douglass, 1971). Integration was defined as planned learning of curricular themes as opposed to separate subject matter. Exploration was the expansion of objectives of the curriculum beyond normal subject areas to include a wide variety of topics. The transition from elementary to secondary education can be traumatic, and articulation of this gap was another role of the junior high school. Socialization was broadly defined as social experiences designed to help boys and girls participate in an increasingly effective manner in home,

school, and community activities. Personal adjustment to school, home, and community environments was a guidance function, and differentiation referred to the individualization of learning, teaching, and pupil progress.

Anderson and Van Dyke (1963, pp. 86-88) were more specific in sighting the need for having a different function associated with the middle school/junior high school:

1. The great majority of students entering the middle grades are beginning to experience puberty, ages 10-12 in girls and 11-13 for boys. It is important that these youngsters be housed together to provide for common physiological and social development.
2. A middle school/junior high school curriculum can provide a broader curriculum for pre and early adolescents than an elementary school.
3. Young adolescents will have more opportunities to experience leadership roles if not housed with senior high students.
4. Junior high schools are better prepared to handle the increasing intellectual needs of students by having teachers with expertise in various subject areas.
5. Junior high schools can provide better guidance services than elementary schools.
6. The transitional phase to the secondary setting is better handled in the middle school/junior high school.

The aim of the emergent middle school as stated by Alexander (1967, p. 19) strikes a familiar chord:

To provide optimum individualization of curriculum and instruction for a population characterized by great variability.

To promote continuous progress through the smooth articulation between several phases and levels of the total educational program.

To accomplish these broad aims Alexander proposes the following guidelines for a middle school. These schools should help each youngster understand himself and his surroundings. This requires a counselor-teacher arrangement in which the youngster can receive personal attention. Secondly, every pupil must be assured a degree of success in understanding the principles of organized knowledge. Teachers should be subject matter oriented in most areas with expertise in at least one field. Thirdly, middle schools must promote maximum individual growth in the basic learning skills and foster independent learning on the part of every pupil. Lastly, the student must have opportunities for exploration of personal interests (Alexander, 1967, p. 84). According to Alexander, the vertical organization best suited to serve the pre and early adolescent should incorporate non-gradedness, multi-age grouping, continuous progress, and interdisciplinary teaming (Alexander, 1967, pp. 85, 107, 115).

A 1961 publication of the Association for Supervision and Curriculum Development listed fifteen characteristics of the middle school/junior high school of the future which are today's schools. Among these functions were the need for non-gradedness, varying instructional procedures, flexible use of time, creative and aesthetic experiences,

teaming of teachers, expanded guidance services, individualized learning, increased specialized staff (gifted and remedial), and more exploratory opportunities.

Pumerantz and Galano (1972, p. 56) express a philosophy for the middle school/junior high school which emphasizes a strong concern for the individual student. Exploratory experiences, the development of a wholesome self image and respect for others, plus programs to individualize learning of skills must exist in these schools.

The whole child concept is emphasized for middle school/junior high school by most proponents, and illustrated by McCarthy and Goldman (1967, p. 14), who feel that a school must be ungraded and utilize interdisciplinary teams in order to reach the whole child.

According to Freisen (1975, p. 11) middle schools have several principles underlying their existence. These schools must meet the human needs of students. They must be humanizing agencies, and this is best accomplished through an open system based on trust which permits students to participate in decisions affecting their education and growth. Middle schools also have a transition responsibility to help bridge the gap between elementary school and high school. This implies more independent study and learning in an interdisciplinary environment. Students at this age also need the opportunity to explore the world of



work, world of leisure, world of education, and themselves. An adolescent must receive supportive, positive guidance.

Freisen believes that the middle school/junior high school can meet its goals in three distinct ways: through changes in organization, changes in curriculum, and changes in instruction. New programs must be directed toward core curriculum, options in the curriculum, extracurricular activities, exploratory curricular experiences, social activities, varying types of learning units, and pupil participation in decision making. Freisen (1975, pp. 12-13) feels team teaching is a better organizational pattern to meet these goals than departmentalization.

Ted Moss (1971) noted several characteristics which comprise a good school for pre and early adolescents. Paramount among these were individualization of instruction, adequate guidance services, flexibility in programming, and opportunities for exploration.

Fisher (1970) identified several features borrowed from the British Middle School which would substantiate Moss's study.

1. Older children are capable of working for longer periods and should experience block scheduling.
2. A workshop type environment should prevail.
3. A range of choices should be made available to the youngsters, and the teacher should act as a catalyst.

4. Attention should be focused on the process rather than the product.
5. Team teaching, core curriculum, and flexible scheduling should be encouraged.

In the 1958 publication, The National Society for the Study of Education, such well known educators as Benjamin Bloom, David Krathwol, Ralph Tyler, and John Goodlad advocated the concept of integration for the modern junior high school. Applied to the junior high school this means that the assortment of courses, formal learning experiences, and unrelated extra class activities should be replaced by an educational program which pupils will see as a unit. The scope and sequence of a youngster's experiences in junior high school should help him to understand the inter-relatedness of basic concepts, skills, and behaviors.

Baughman (1967, p. 15) suggests that integration means more than inter-relatedness of subject matter. Community involvement in schools, faculty integration in teams, and the pupil's integration with his total environment are components of integration.

Long ago Hebart proposed the correlation of subject matter to unify knowledge. Today the specialization of jobs and the proliferation of knowledge have created a dilemma in regard to integration. It is for this reason that Baughman (1967, p. 16) stated that the unification of subject matter

in middle school/junior high school should not have been left to chance. Administrators and teachers should have worked together to provide a curriculum which would have achieved integration.

### History of Junior High Schools

The restructuring of the educational system in the United States which led to the formation of a middle level of education known as the junior high school originated around the turn of the twentieth century. The first city to introduce a specific grade organization was Richmond, Indiana, in 1896. Seventh and eighth graders were put in a separate building. New York City did the same in 1905, and Columbus, Ohion, opened a junior high school in 1909 as part of a 6-3-3 organization. Berkeley, California, unveiled its Introductory High School in 1910 (Nickerson, 1966, p. 3).

The growth of the junior high school has been rapid since fifty-five schools were counted in 1920. By 1930 there were 1,842 (Gaumnitz and Hull, 1954, p. 116). Seven thousand junior highs existed in 1964 (Lounsbury and Douglass, 1965, p. 87), and more than eight thousand in 1973 (McGlasson, 1973, p. 14).

A strong factor in the early junior high movement was the desire to bring secondary school benefits to younger children. High schools became a dominant level of public education in the twentieth century, and many of the

extracurricular activities were thought to have value for seventh and eighth graders. These children were to receive departmentalization, guidance services, special electives like art, music, industrial arts, and home economics (Vars, 1973, p. 19).

College presidents, led by Charles Elliot of Harvard, wanted freshman at an earlier age and suggested shortening the elementary and secondary phase of education. This idea borrowed some justification from European systems which were accepting entering students at a younger age. Universities initiated many secondary courses in methods and use of materials to be used with teachers who would be working in the junior high grades (Nickerson, 1966, p. 2).

McGlasson (1973, p. 11) reported the impact that college entrance requirements could have on junior high programming. If the ninth grade were housed with the junior high school, the sequence of courses could be dictated from the top down. In addition, he identified several other factors affecting the junior high school. Educators in the elementary grades felt that a duplication of programs existed in the first eight years of schooling, particularly in the seventh and eighth grades. Psychologists suggested that secondary methods and materials be introduced in the seventh grade, and the State of New York officially declared grades 7-12 as secondary in 1937 (pp. 10-12).

In urban settings, the rearrangement of grade structures was influenced by racial concerns. Junior high schools offered a wider geographic area of attendance which, in turn, widened the ethnic population of the school. Because of the desirability of having a wider ethnic base in urban areas 6-3-3 and 8-4 organizational patterns emerged (McGlasson, 1973, p. 13).

State legislatures directly influenced junior high school organization in some states. Illinois has had dual districts in some areas with the cut off grade being the eighth. Junior high schools housing a ninth grade would be responsible to two boards of education. As a result an 8-4 organization became mandated.

Student drop outs were frequent during the latter elementary grades which suggested that the existing program was not suitable for a certain percentage of the students. In 1900, schools were able to keep just 40% of eligible students in the eighth grade (Eichorn, 1973, p. 195).

#### Trends in Middle School/Junior High School

The label, junior high school, has remained since its inception and is still the most common name used to describe this organizational pattern. In spite of the tenacity of the label, it has been continually challenged. In the late 1950's and early 1960's, a counter movement to the junior high school started. The new hope rested with

the middle school. Junior high schools were criticized as being dysfunctional and unable to meet the goals of educating the pre and early adolescent. Freisen (1975, p. 12) stated that the middle school trend emerged as an antidote to fifty years of mini high school organizational patterns and instructional practices in so many junior high schools.

Organizational patterns per se are no guarantee of improved instruction or learning opportunities; however, organization can be used to expedite attainment of educational goals. The educational goals and practices recommended for today's middle school/junior high school are clearly presented in the literature.

Georgiady and Romano (1973, pp. 238-240) established comprehensive guidelines to determine the effectiveness of the middle school/junior high school. These guidelines were developed by reviewing the literature, interviewing leaders in the field, visiting schools experiencing success, and considering the nature of the child to be served.

The following criteria authored by Georgiady and Romano are appropriate to this study and can serve as a guideline for the planning of programs for middle school/junior high school education.

Students should be allowed to progress at their own rates. Adolescence is a time in which individual differences are greatest. Because of this, students should not be forced into rigid chronological grouping patterns. The

curricula must be built on continuous progress, permitting each student to progress at his own rate.

The basal text approach has disadvantages which give cause for serious concern. One disadvantage is its inflexibility, since it assumes that all students react equally to the same approach. The nature of the transescent is such that such a wide range of accessible instructional materials and a variety of activities are more suitable. The multi-material approach is consistent with the needs of the junior high age youngster.

Rigid time schedules can interfere with learning. Schedules should be varied and flexible in order to accommodate various learning styles and teaching strategies.

Some middle school/junior high school youngsters are not ready for sophisticated social activities while others have a strong interest in social contacts with members of the opposite sex. There should be a social program which includes wholesome social contact with members of the opposite sex through small group interaction, large group activities, and mixer dances like square dancing. Dating should be delayed until a later stage.

Competitive athletic programs are not appropriate for the transescent. Physical education classes should center their activity on helping students understand and use their bodies. Intramural programs which encourage

participation in many activities are preferred. The emphasis should be on the development of body management skills.

Every teacher possesses strengths and weaknesses which can be used to benefit students through a carefully planned schedule which puts them in contact with more than one teacher. The highly departmentalized approach of the high school is not appropriate. Team teaching which utilizes teacher strengths in working with students individually and in groups is the better organization for the transescent.

One characteristic of the pre and early adolescent is his eagerness to make more of the decisions concerning his own behavior, his own social life and choice of friends, and his learning activities. He is ready for some decision making at this stage but not ready to assume the full burden of planning. The middle school/junior high school program should permit the student more independence but at the same time continue to offer sound adult counseling.

Because the students have a strong interest and curiosity in the world in which they live, electives should be offered so that every student has the opportunity to explore his unique talents.

Middle school/junior high school youngsters experience many rapid physical changes. This can cause problems requiring careful counseling from teachers and from trained guidance counselors. Group and individual counseling



services are an important part of a successful middle school/junior high school program.

The transescent has strong individual interests and curiosity. These characteristics can serve as a highly effective motivational force when independent study is planned for the student. Independent study can foster self direction by students which makes it an important provision of the middle school/junior high school.

Because some children have not entirely mastered the basic skills, a program of basic skills extension is required. There should be many opportunities for students to improve reading, writing, and arithmetic skills. Remedial teachers may be necessary for some students.

The creative talents of students require opportunities for expression. Pupils should be free to explore creative interests in many areas. Student newspapers, dramatic activities, art, and musical programs should be conducted in such a way that they encourage students to select, conceive, plan, and carry out activities in these areas.

The middle school/junior high school program should provide a system of evaluation that is personal and positive. Evaluation of pupil progress should be individualized. The student should be encouraged to assess his own progress and participate in planning for his future progress. A letter

grade system is of little value in helping a youngster understand his own strengths and weaknesses.

An effective middle school/junior high school is community minded and should attempt to develop and maintain a program of community relations.

Pumerantz and Galano (1972, p. 5) presented a list of instructional practices which were complementary to individualization of instruction and integration of the disciplines. Team teaching, variable grouping practices, flexible scheduling, independent study, large group instruction, small group instruction, and learning centers are suggested, and all have appeared more frequently in new middle schools around the nation.

From a teacher's point of view the interdisciplinary team provides for multiple instructional groups and independent study which helps the teacher focus on the individual. There is an improvement in communication among teachers and students in a teamed environment. Pumerantz and Galano have found that teachers use instructional media more effectively when teamed and are more apt to develop independent study plans. Teachers' talents, expertise, and interests are tapped to a greater degree (p. 26).

Alexander (1967) believes that many existing organizational schemes should be modified to meet current needs in spite of the great influence that local conditions have on school policies and procedures. Departmentalization,

for example, was instituted for another time and function and should be changed to meet today's needs.

An example of modification is offered by McCarthy and Goldman (1967, p. 14).

We feel that ungradedness is necessary, if our schools are to meet the challenge of educating the masses of children while at the same time providing the type of instructional program which enables each student to learn at his own rate, and which takes into account each student's interests and abilities.

The recent trend in middle school/junior high school education appeared to be directed to humanizing the schools. Many of the studies conducted in regard to middle school/junior high school practices tend to be either too specific in focus, confined to too small a sample, or too conflicting with one another to be very conclusive (Gatewood, 1973, p. 222).

#### Research in Middle School/Junior High School

In the Spring of 1973, a survey of ERIC, Dissertation Abstracts, and periodicals yielded twelve studies dealing with middle school evaluation (Alexander, 1973, p. 13). Since there is a limited amount of data about middle school/junior high school programs, it seemed that observation and reflective thinking determined much of the present status of middle school rationale. Recent investigations have probed the question of grade level organizational patterns for middle school/junior high school.

Several surveys reflect the trend of housing the ninth grade in the senior high school. Cuff's (1967, pp. 82-86) survey in 1965 identified 499 schools moving to a 6-7-8 or 5-6-7-8 grade structure. Alexander (1967, Ch. 9) identified 1101 such schools, and Kealy (1971, pp. 20-25) located 2298 middle school/junior high schools not housing the ninth grade. Again in 1973, Alexander conducted a survey which supported the movement of eliminating the ninth grade from the middle school/junior high school (p. 13). According to Gatewood (1970) new middle schools show a definite preference for a grade 6-7-8 structure. In 1969-70, 58.2% of new middle schools had a 6-7-8 arrangement while 25.8% were 5-6-7-8.

A recent report from the North Central Association was cited by Education USA (1971, p. 33) as indicating that the three year high school was on the way out. As the middle school movement gained momentum the North Central Association membership showed an increase in four year high schools.

The United States Office of Health, Education and Welfare commissioned Heding (1970) to conduct a research project. His goal was to identify the best grade arrangement for the middle school/junior high school by analyzing the factors involved in placing the ninth graders in the high school. The findings supported the 5-6-7-8 or 6-7-8 grade structure for these schools. Ninth graders were found

to have more in common physically, mentally, emotionally, and socially with tenth graders than with eighth graders.

Mills (1961, p. 45) studied 320 physical, mental, emotional, and social characteristics of children and placed youngsters in three distinct groups: K-4, 5-8, and 9-12.

Creek (1969) and Dacus (1963) found that sixth graders were more like seventh graders than fifth graders. The reason was related to the onset of puberty which begins most frequently around the age of eleven.

Popper (1967, p. xi) questioned the appropriateness of a 7-8-9 grade placement for youngsters between elementary and high school. He stressed the need to have a proper set of curricular practices for youngsters entering pubescence rather than a set grade level structure.

Mellinger and Rackauskas (1970) reported a tendency for middle school/junior high schools to adopt a variety of curricular practices intended to serve the early adolescent learner. Such practices as continuous progress, individualization of instruction, independent study programs, increased curricular options, widened activities, and exploratory programs were gaining prominence. Some schools experimented with cooperative teaching plans of various types, and more flexible grouping practices. Students were given a greater responsibility in deciding their educational programming, and, as a result, opportunities to explore personal interests gained in status. Mellinger and

Rackauskas noted that schools were readjusting traditional curricular plans, which were monopolized by language arts, social studies, science, and math, to include some broader goals such as personal development and human relations.

Alexander (1969) confirmed the universality of some courses in the middle school/junior high school. Language arts, science, math, social studies, and physical education were required by every student each year. Music, art, home economics, and industrial arts were required about half the time. Many large schools were offering a wide range of exploratory courses, but, overall, the number of electives was sparse. This survey did not support the contention that middle school/junior high schools were practicing individualization of instruction.

Several studies have dealt with specific practices being used in middle school/junior high schools. In 1966 Larkin stated that independent study programs helped individuals meet objectives and caused a favorable reaction by participants. Trump (1966) concluded that an activities program conducted by wise, able teachers should be an integral part of a successful middle school/junior high school program. A block time approach was supported in Vedral's (1966) findings. Both staff and students favored a large block of time agreeing that students' opinions and ideas were more readily shared, and class participation was improved. Paige (1966) encountered a favorable reaction

from students and teachers to team teaching. The achievement of students between traditional and teamed students did not differ, but the attitudes were more positive in the teamed situation.

Willcutt (1967) tried to discover if self-contained classrooms met individual differences better than classes that are grouped by math ability. There was no significant difference in math achievement between the two groups, but students who were in the ability groups had a more positive attitude toward math than those students in the self-contained classrooms.

The issue of individualization for the slower student, regardless of the subject area, was probed by Kirven (1957) and Koyanagi (1970). Kirven discovered that the anxieties of the slower students were caused primarily by self doubts and peer rejection. Koyanagi, as did Kirven, recommended instructional organization that would emphasize individualization.

Several other doctoral dissertations have dealt with approaches to instruction which involved certain organizational patterns. Hamm (1960) attempted to identify the value of a core program as defined and operated by core teachers. His results supported the use of a core program because more flexible methods of instruction were used. The participating staffs felt a need to be concerned about the development of each child. Democratic skills were practiced,

and lessons cut across subject areas with materials being developed according to the student's interest.

Overton (1966, pp. 532-537) conducted a survey which was critical of core curricula. He concluded that there was not enough empirical evidence to support a core curricula.

Georgia was the setting for one of the more pertinent research projects about middle school/junior high school curriculum. Gaston (1968) reported the following conclusions from his study of Georgia schools.

1. There was a conflict between theory and practice in regard to meeting the needs of individual students.
2. There was considerable agreement between theory and practice in regard to required courses.
3. There was some discrepancy between theory and practice in offering exploratory courses.
4. There was conflict, theoretically, about ability grouping and the confusion carried over into school practices in grouping.
5. Departmentalization was the dominant instructional organization in the schools.

A few studies have been conducted which tried to measure student achievement under certain conditions in middle school/junior high schools. Williams (1969) found that the number of teachers that a child encountered over a short period of time did not change his achievement in math.



Cousins (1962) and Armstrong (1969) investigated the idea of teaching reflective thinking in the middle school/junior high schools and concluded that it can be done successfully and improve the student's ability to think critically.

Research does not support the idea that new middle school practices are different from past junior high school practices. Alexander (1967, p. 164) illustrated that there was very little change in curricular practices between new middle schools and older junior high schools. Twenty per cent of the schools had managed to organize daily time in more flexible arrangements than rigid class periods. A large percentage of schools were reporting pupil progress without the use of letter grades. Team teaching patterns were rather infrequent, and schools with fifth graders tended to organize them into self-contained classrooms while the sixth, seventh, and eighth graders were departmentalized. Forst (1969) found that middle school/junior high schools tended to have the same programs as senior high schools. Departmental organizations, Carnegie units, interscholastic athletics, and early socialization activities, that have long plagued the junior high schools, were frequently in existence.

Flynn (1971), Mellinger and Rackauskas (1970), and Riegle (1971) all found a significant gap between the main tenets of the theoretical middle school concept proposed by

leading middle school authorities and actual educational practices in most middle school/junior high schools.

Despite the disparaging evidence reported in research some middle school/junior high schools are becoming more diverse and innovative in their educational offerings. Alexander (1969, p. 356) states that many principals are attempting to modify and replan middle school/junior high school programs to include such arrangements as extended independent study, modular scheduling, team teaching, and block time combinations. Gatewood (1973, p. 223) reported an increase in interdisciplinary team teaching, exploratory programs, individualization of instruction, and non-gradedness in middle schools.

Experts, generally, agree on what constitutes a good program (Gruhn, 1971), but the question is, "Are the schools doing or attempting to do what the scholars recommend?"

## CHAPTER III

### DESIGN OF THE STUDY

In order to investigate to what degree certain theories are being tested in the middle school/junior high schools, two factors must be considered. One factor is the procedure of inquiry, and the other is the sample of schools to be used. The process must include a method of determining recommended curricular practices, and a plan to assess their existence in public schools.

#### Sample Schools

Sample schools were chosen on the basis of their having demonstrated a belief in a program of continuous evaluation. It was primarily for that reason that all participating schools were members of the North Central Association of Colleges and Secondary Schools. An assumption was made that accredited schools, by virtue of their active participation in self evaluation for the improvement of instruction, would serve as an excellent sample to determine current practices in middle school/junior high schools.

An annual study by the Junior High School Accreditation Committee, based on reactions from associate state chairmen and member principals, had been instrumental in keeping member schools current in curricular changes. The

Committee believed that the policies, principles, and standards represented the best thinking in middle school/junior high school education. These policies, principles, and standards assisted member schools in providing programs of education which allowed each adolescent to realize his potential through a program of education suited to his individual needs.

The standards established by the North Central Association are usually a composite of ideas formulated by school people in the field, state department of education personnel, and university professors. The standards, essentially, are professional judgments concerning those factors that foster quality in the middle school/junior high school. The Association does not make a distinction between middle school and junior high school.

### Scholars

Merely gleaning the literature seemed too arbitrary to identify recommended curricular practices. It was decided that the validity of these recommended practices would be increased if a number of scholars in the field were asked to participate in the study. The ten educators selected for this study were all professors and authors of materials about middle school/junior high school education, and all were recognized as leading consultants in the field.

Donald H. Eichhorn is chairman of the Association for Supervision and Curriculum Development's Emerging Adolescent Learner Working Group. He is presently Assistant Superintendent for Instruction, Upper St. Clair, Pennsylvania, Public Schools. Dr. Eichhorn is recognized as one of the leading theoreticians in the emerging adolescent area. He authored one of the more important texts in the field, The Middle School (1966), and is consulted widely in addition to writing extensively in major professional journals.

William Alexander, Professor of Education, the University of Florida, is recognized as the outstanding scholar and theoretician in the evolving middle school movement. The author and co-author of many of the leading texts in the area of curriculum planning, Dr. Alexander has brought his expertise as a curricular planner to the refinement of education for emerging adolescents. His principal authorship of The Emergent Middle School (1967) brought to the field a needed definitive text for practitioners. As a teacher, doctoral advisor, and consultant, his contributions to the field continue to be pre-eminent.

Gordon Vars is Professor of Education, Kent State University. His contributions to theory and practice continue to stem from his role as teacher of emerging adolescents in the Kent University School and in his professional duties. The Executive Secretary of the National Core

Conference, he continues as the nation's leading exponent of core curricula approaches for emerging adolescents. The president of the Midwest Middle School Association, he is co-author of the text, Modern Education for the Junior High School Years (VanTil, Vars, and Lounsbury, 1967).

Conrad Toepfer, Jr., Associate Professor, State University of New York at Buffalo, has developed a graduate sequence in curricular planning for emerging adolescents and is interested in developing further professional sequences for educators working with emerging adolescents. He has been a consultant and has written numerous articles for professional journals in curricular planning, and is a member for the Association for Supervision & Curriculum Development, Emerging Adolescent Learner Working Group.

Philip Pumerantz, Associate Professor, The University of Bridgeport, Connecticut, has been a consultant in the middle school area and is director of the National Middle School Institute sponsored by Educational Leadership Institute. This has resulted in the development of consultant and in-service education programs throughout the nation as well as the newsletter, "Dissemination Services on the Middle Grades." Dr. Pumerantz is also a frequent contributor to many journals and co-author of the texts, The Effective Middle School (DeVita, Pumerantz, and Wiklow, 1970) and Establishing Interdisciplinary Programs in the Middle School (Pumerantz and Galano, 1972).

Ralph Galano, House Principal, Fox Lane Middle School, Bedford, New York, has served as a teacher, curricular specialist, and counselor in the middle grades with particular concern for the development of interdisciplinary programs. The author of a number of articles on this topic, he is co-author with Dr. Pumerantz (1972) of the new text, Establishing Interdisciplinary Programs in the Middle School. He is also the developer and director of SAAC, an open space school for transescent learners in New Canaan, Connecticut.

Mary Compton is Professor of Education, University of Georgia. She serves as consultant to many organizations interested in adolescent learning and contributed to the second enlarged edition of The Emergent Middle School, edited by William Alexander. Miss Compton has written extensively about the middle school in professional journals with the theme of alternative programs to middle school education as illustrated by an article in Theory Into Practice (June, 1968) entitled, "The Middle School: Alternatives to the Status Quo."

Maurice McGlasson is Professor of Education, Indiana University, Bloomington, specializing in middle school/junior high school education and is a former chairman of the Department of Secondary Education. He has written widely in his field and has directed much doctoral research in middle level education. In the North Central Association of

Colleges and Secondary Schools, he has been a member of the Administrative Committee of the Commission on Secondary Schools since 1968 and served as chairman of that committee in 1972-73. He was a member of the Junior High/Middle School Liaison Committee of the North Central Association from 1965 to 1971, serving as chairman from 1968. He has authored and co-authored many articles on middle school/junior high school education, and has been a principal contributor to the Indiana University School of Education Bulletin, Viewpoints.

Dr. Bruce Howell was a pioneer in middle school education. He served as principal and planner for the middle school program in Eagle Grove, Iowa, in the early 1960's. Recognized as the developer of one of the earliest, successful middle school approaches in the country, Bruce Howell has been consulted widely in regard to emerging adolescent education. He is currently serving as Assistant Superintendent of Schools in Tulsa, Oklahoma, and is also adjunct professor at The University of Tulsa.

Dr. Neil P. Atkins is well known among public school people as an educational innovator, author, and consultant. Prior to coming to ASCD in 1968 (Executive Secretary, Association for Supervision and Curriculum Development, Washington, D.C.), he served as director of instruction, part time instructor in curriculum at Teacher's College (Columbia), and principal of Fox Lane campus in Bedford, New



York, which included the middle school which he helped plan, staff, develop, and launch.

### The Instrument

A procedure for collecting data on recommended curricular practices, as well as what practices were being used in the schools, needed to be devised. A review of the literature led to a classification of curricular practices into five categories. These classifications were: Category I, Organization and Curriculum; Category II, Required Courses; Category III, Concepts and Practices of Individualization of Instruction; Category IV, Materials for Individualization; and Category V, Elective Courses. A comprehensive list of practices associated with each category was established, and from this list an instrument entitled "The Junior High School Curriculum Assessment Instrument," was designed by the author of this study. There were a total of eighty-two items which reflected identified practices and concepts.

Category I, Organization and Curriculum, has twenty-four items related to various uses of time, space, personnel, material, and content. For example, team teaching is a particular use of personnel, and block of time scheduling is a use of time. Departmentalization indicates a method of organizing content, time, space, and materials. A

philosophy committed to change would endorse practices that would be flexible in the use of time, space, personnel, materials, and content.

The literature indicated that students in all schools were required to take certain courses each year and other courses at sometime during the middle school/junior high school years. The second category on the instrument was the compilation of the courses which were suggested as required. Fourteen courses were named because of their frequent appearance in the literature.

Individualization of instruction was treated in two sections. There were two distinct approaches to this topic which were extracted from the literature. Category III represented concepts and practices apropos to individualizing instruction. Methods such as independent study, contractual learning, and techniques to evaluate individual progress appeared in this category. Category IV dealt with materials associated with the individualization of instruction such as programmed materials, films and filmstrips, and a resource center. There were twenty-four items in Category III and seven items in Category IV.

The fifth category, entitled Elective Courses, was tabulated and defined as those courses which should be optional to students. Thirteen such offerings were presented in the instrument.

In order to have the instrument yield the kind of data that were sought, two versions were constructed. On the first version (Appendix A), the ten scholars were asked to respond to the eighty-two statements. The first sixty-two items required a response from one of five choices: (1) fully agree, (2) strongly agree, (3) moderately agree, (4) slightly agree, (5) disagree. The last twenty responses were either yes or no. Each statement was written as a suggested idea or practice so that recommended curricular practices could be elicited from the ten scholars.

The second version completed by principals of sample schools was altered so that the intent of each statement was adjusted in order to elicit existence of ideas and practices, and the choices of responses were changed to: (1) exists fully, (2) exists strongly, (3), exists moderately, (4) exists slightly, and (5) does not exist (Appendix B).

The instrument used by the scholars was mailed with a cover letter (Appendix C) explaining the purpose of the study, and requesting participation by each scholar. All ten persons returned the instrument completed.

The instrument used with the principals was mailed to two hundred forty-six principals of accredited middle school/junior high schools of the North Central Association. A cover letter from the Executive Secretary of the North Central Association accompanied the instrument (Appendix D). The principals also received a cover letter explaining the

study (Appendix E). Two hundred thirteen principals responded. The returns were judged sufficient to conduct an analysis of the data.

#### Treatment of the Data

The data for this study were gathered and organized according to the following steps.

1. All data were tallied for individual responses and prepared for computer analysis.
2. The Statistical Package for Social Science (SPSS) computer program was used to analyze the data statistically using a t-test for items with interval responses and a chi-square test for items with nominal responses.
3. The two groups, principals and scholars, were compared by using null hypotheses. A null hypothesis was written for each of the five categories and each of the eighty-two items. The rejection level for the null hypotheses was set at .05 alpha level.
4. An analysis was made of practices and categories whose mean responses of principals and scholars showed statistically significant disagreements and selected items that showed statistical agreement with the null hypotheses according to mean scores of scholars and principals. These analyses dealt with items 1-62 and Categories I, II, and III.

5. An analysis was made of responses which showed a statistically significant difference between expected frequencies of scholars and observed frequencies of principals. These analyses dealt with items 63-82 and Categories IV and V.

## CHAPTER IV

### RESEARCH FINDINGS

The data were gathered for this study from the Junior High School Curriculum Assessment Instrument designed for this study. Responses were coded for computer use and analyzed by using a system known as the Statistical Package for the Social Sciences (SPSS). The data were prepared for statistical analysis in the following way.

The responses from each principal and scholar were tallied and coded on cards for computer reading. The statistical relationships of these data were computed in two different ways because of the kinds of data obtained. The first three categories of the instrument, I, Organization and Curriculum; II, Required Courses; and III, Concepts and Practices of Individualization, yielded interval data. The last two categories, IV, Materials for Individualizing Instruction and V, Elective Courses, yielded nominal data.

The mean scores for the two respondent groups, principals and scholars, were statistically tested for significant disagreements by a t-test for Categories I, II, and III. A null hypothesis was written for each of the first three categories and for each item 1-62. After the tests were calculated, the results were listed by mean

scores, standard deviation, standard error, t-value, and the probability significance (Appendix F).

The chi-square test was used for Categories IV and V and each of the last twenty items. The tests of significant statistical disagreements were computed for both categories and each item. Two-way contingency tables appear in Appendix G.

After testing each null hypothesis according to the mean scores of principals' and scholars' responses, those items whose mean scores were calculated to reject the null hypothesis at the .05 alpha level were considered separately from those mean scores which accepted the null hypothesis.

To interpret the statistical results, the following approach was devised. Using mean scores, statements which scored from 1.0000-2.4999 were considered to be judged as strongly recommended by scholars and strongly in existence by principals. Items between 2.5000-3.4999 were judged to be recommended moderately or moderately in existence, and items between 3.5000-5.0000 were considered not recommended or non-existent.

If mean scores of principals and scholars showed extreme disagreements, further interpretation of the practice represented by the mean score was made. For example:

1. Scholars ranked a practice in the 1.0000-2.4999 range meaning recommended strongly, and principals

ranked the same practice as not in existence,  
3.5000-5.0000.

2. Scholars ranked a practice in the not recommended range, 3.5000-5.0000, and principals ranked the same practice as existing strongly, 1.0000-2.4999.

Any mean scores which could not be classified in the above two extreme ranges had differences which were considered insignificant and any further interpretation was limited to selected items. There were seven possible mean score comparisons remaining.

1. Scholars and principals both ranked a practice strongly, 1.0000-2.4999.
2. Scholars ranked a practice as recommended strongly 1.0000-2.4999, and principals ranked the same practice as existing moderately, 2.5000-3.4999.
3. Scholars ranked a practice as recommended moderately, 2.5000-3.4999, and principals ranked the same practice as existing strongly, 1.0000-2.4999.
4. Scholars and principals both ranked the practice as existing moderately, 2.5000-3.4999.
5. Scholars ranked a practice as recommended moderately 2.5000-3.4999, and principals ranked the same practice as non-existent 3.5000-5.0000.



6. Scholars ranked a practice as recommended not to exist, 3.5000-5.0000, and principals ranked the same statement as existing moderately, 2.5000-3.4999.
7. Scholars ranked a statement as recommended not to exist, 3.5000-5.0000, and principals ranked the same statement as not in existence, 3.5000-5.0000.

The categories and items which were analyzed by chi-square appeared differently than those in the above nine classifications. The last twenty items, 63-82, were placed in contingency tables and analyzed by chi-square. The percentage of yes responses per group as recorded by principals and scholars is tabulated and listed in Appendix G.

#### Category I, Organization and Curriculum

The null hypothesis was stated as follows: There is no significant statistical difference between the mean rank awarded decision n of the Junior High School Curriculum Assessment Instrument by principals and scholars. (n represents the number of each category, in this case, I.)

Two hundred thirteen principals responded with a mean score of 2.7236. All ten experts responded and tallied a mean score of 2.2500. Interpreting these mean scores, according to the established ranges in this study, the scholars recommended Category I strongly, but the principals rated it as moderate. The test of significant difference

between mean scores of principals and scholars rejected the null hypothesis for this category at .003. Table 1 illustrates the results.

Table 1. Organization and Curriculum

Group	Number	Mean	Std Dev	t-Value	Significance
Principals	213	2.7236	.429	3.89	.003
Scholars	10	2.2500	.374		

The null hypothesis written for each item in Category I appears as follows: There is no significant statistical difference between the mean rank awarded decision n of the Junior High School Curriculum Assessment Instrument by principals and scholars (n represents the number of each item).

There were twenty-four items in Category I. According to mean scores of responses of scholars and principals, eight of the null hypotheses were statistically accepted and sixteen were rejected. The eight items for which the null hypotheses were accepted statistically, according to the mean scores of responses of scholars and principals, were placed in the established ranges in the following way:

1. Practices that were recommended strongly and existed strongly.
  - a. Intramural programs should exist in schools.
  - b. Music concerts, vocal and instrumental, should exist in schools.
  - c. Girls' school activity programs are equivalent to boys'.
  - d. A philosophy of education exists in schools that states a definite belief in and commitment to educational innovation and change.
  - e. Full-time guidance personnel should be available in junior high school.
2. Practices that were recommended moderately and existed moderately.
  - a. Curriculum evaluation is conducted in conjunction with outside consultants.
  - b. Students at all levels participate in a structured core program.
3. A practice that was not recommended but existed moderately.
  - a. Extramural activities, giving every youngster the opportunity to compete against youngsters from other schools, should exist in schools.

The null hypotheses from sixteen statements which were rejected statistically, according to the mean of

responses of principals and scholars, were placed into the established ranges as follows:

1. Practices that were recommended strongly and existed strongly.
  - a. A plan to identify any changing needs in the operation of the school.
  - b. Activities program during the school day (news-paper, chorus, band, orchestra, drama, speech, etc.).
  - c. Exploratory courses (electives, open labs, etc.).
2. Practices that were recommended strongly but existed moderately.
  - a. Instruments have been developed which give data about a teacher's ability to teach.
  - b. Instruments have been developed which give data about the teaching learning program.
  - c. Our middle school/junior high school uses current educational research findings as a guide to program development.
  - d. Parents are used as a source of program evaluation.
  - e. Block time scheduling represents the basic approach to scheduling.
  - f. Middle school/junior high school identifies ways in which the community resources can enhance

the curriculum (mini-boards, ombudsman, surveys, speakers bureau, volunteers).

3. Practices that were recommended strongly but did not exist.
  - a. Nongradedness.
  - b. Age crossing and/or grade crossing in regular classrooms.
  - c. Mini courses.
4. A practice that was recommended moderately and existed moderately.
  - a. Differentiated staffing (team). Two or more teachers plan together for instruction of same group of students.
5. A practice that was not recommended and did not exist.
  - a. Self contained classes exist as the most common organizational approach to scheduling.
6. Practices that were not recommended but existed strongly.
  - a. Schools are departmentalized.
  - b. Interscholastic athletics.

#### Category II, Required Courses

The null hypothesis was stated as follows: There is no significant statistical difference between the mean rank awarded decision n of the Junior High School Curriculum

Assessment Instrument by principals and scholars (n represents the number of each category, in this case, II).

There were two hundred and thirteen principals responding to the category. The principals recorded a mean score of 2.0500. Ten scholars recorded a mean score of 1.9214. According to the previously stated ranges, the scholars recommended Category II strongly and the principals rated it strongly. The statistical test of no significant difference between mean responses was accepted for this category at .558. Table 2 illustrates the results.

Table 2. Required Courses

Group	Number	Mean	Std Dev	t-Value	Significance
Principals	213	2.0500	.764	.61	.558
Scholars	10	1.9214	.682		

The null hypothesis written for each item was stated as follows: There is no significant statistical difference between the mean rank awarded decision n of the Junior High School Curriculum Assessment Instrument by principals and scholars (n represents the number of each item).

There were fourteen items in this category, one for each suggested required course. According to the mean

scores of responses of scholars and principals, thirteen of the null hypotheses were accepted statistically and one was rejected.

Using mean scores the null hypotheses from thirteen statements were accepted statistically. The statements represented by the thirteen mean scores were placed in the established ranges in the following way.

1. Practices that were recommended strongly and existed strongly.
  - a. Home Economics.
  - b. Industrial Arts.
  - c. Vocal Music.
  - d. Art.
  - e. Alcohol and Drug Abuse Education.
  - f. Physical Education.
  - g. Language Arts.
  - h. Math.
  - i. Science.
  - j. Social Studies.
2. Practices that were recommended moderately and existed moderately.
  - a. Algebra.
  - b. Career Education.
  - c. Sex Education.

The null hypothesis which was tested statistically according to mean scores for Health Education was the only one rejected.

Category III, Concepts and Practices of  
Individualization of Instruction

The null hypothesis was stated as follows: There is no significant statistical difference between the mean rank awarded decision n of the Junior High School Curriculum Assessment Instrument by principals and scholars (n represents the number of each category, in this case, III).

Two hundred thirteen principals responded with a mean score of 2.8367. All ten experts recorded a mean score of 1.9125. Interpreting these mean scores according to the classifications of ranges for this study, the principals placed a moderate rating on this category, but the scholars rated it as strongly recommended. The test of significant difference between mean scores of principals and scholars rejected the null hypothesis for this category at the .0000 level. Table 3 illustrates the results.

Table 3. Concepts and Practices of Individualization

Group	Number	Mean	Std Dev	t-Value	Probability
Principals	213	2.8367	.544	9.50	.0000
Scholars	10	1.9125	.284		



The null hypothesis written for each item in Category III was written as follows: There is no significant statistical difference between the mean rank awarded decision n of the Junior High School Curriculum Assessment Instrument by principals and scholars (n represents each item).

There were twenty-four items in Category III. According to mean scores of responses of principals and scholars, five of the null hypotheses were accepted statistically, and nineteen were rejected.

The null hypotheses from five statements were accepted statistically, and according to mean scores, the five statements were placed in the range classifications in the following manner:

1. A practice that was recommended strongly and existed strongly.
  - a. Students exhibit a set of basic skills at the completion of middle school/junior high school.
2. A practice that was recommended strongly and existed moderately.
  - a. Schools provide opportunities in which students, constructively, can influence the instructional program.
3. Practices that were recommended moderately and existed moderately.

- a. All students experience contractual learning sometime each year.
- b. Learning packages designed to meet the needs of individual students are used.
- c. Children are free from fear of failure.

The null hypotheses from nineteen practices were rejected statistically according to the mean scores of responses of principals and scholars. These practices were classified in the ranges, as follows:

- 1. Practices that were recommended strongly and existed strongly.
  - a. Every effort in middle school/junior high school is directed to create a healthy and accurate perception of one's self.
  - b. Opportunities to learn self direction are provided in middle school/junior high school.
  - c. Middle school/junior high school education is geared to provide many opportunities for pupils to interact with peers.
- 2. Practices that were recommended strongly and existed moderately.
  - a. Schools are geared to provide for the individualization of instruction.
  - b. Teacher's evaluation of each pupil is based on the latter's individual growth and development.

- c. Independent study programs are implemented.
  - d. All students experience the inquiry method.
  - e. Integration of course content is implemented.
  - f. Middle schools/junior high schools attempt to lessen competition (athletics, academic).
  - g. Peer tutoring exists.
  - h. Space and time are permitted for students to express their ideas with many people.
  - i. Experiences in creative studies are offered, either as courses (film), or within the curriculum.
  - j. Schools have learning disabilities classes.
  - k. Specialists assist remedial students in skill development.
  - l. The criteria for appraising learning outcomes focuses on the solution of actual learning situations rather than on accumulated data.
  - m. Pupils evaluate their own progress.
3. A practice that was recommended strongly and did not exist.
- a. Methods other than letter grades are used to report pupil progress.
4. A practice that was recommended moderately and existed moderately.
- a. Ability groups exist in schools.

5. A practice that was recommended moderately and did not exist.

a. Work experiences are provided in schools.

Category IV, Materials for Individualizing  
Instruction

The null hypothesis for Category IV was stated as follows: There is no significant statistical difference between principals' and scholars' responses on decision n of the Junior High School Curriculum Assessment Instrument (n represents the number of each category, in this case, IV).

Two hundred thirteen principals and ten scholars responded to this category. In order for a respondent to be judged as recording a decision of yes for the entire category, it was necessary for the respondent to have recorded a response of yes on five out of the seven items in this category. Using the chi-square test the null hypothesis for this category was accepted statistically at the .8646 level.

The null hypothesis for each item was stated as follows: There is no significant statistical difference between the principals' and scholars' responses on decision n of the Junior High School Curriculum Assessment Instrument (n represents the number of each item). Table 4 illustrates the results of the chi-square tests of significance for Category IV.

Table 4. Materials for Individualizing

Practice	Chi-Square Significance	% of Yes
1. Programmed materials should be available.	.2620 accept null	Principals 80% Scholars 100%
2. Films and filmstrips should bring child in contact with other ideas.	.6515 accept null	Principals 97% Scholars 100%
3. Records and tapes should accompany books.	.8538 accept null	Principals 93% Scholars 100%
4. Art prints available for exploration.	.6166 accept null	Principals 90% Scholars 100%
5. Resource center available.	1.0000 accept null	Principals 94.8% Scholars 100%
6. Special education facility used as resource.	.4511 accept null	Principals 59.4% Scholars 77.8%
7. Many books available for browsing	.0287 reject null	Principals 99% Scholars 100%

### Category V, Elective Courses

The null hypothesis for Category V was stated as follows: There is no significant statistical difference between principals' and scholars' responses on decision n of the Junior High School Curriculum Assessment Instrument (n represents the number of each category, in this case, V).

Two hundred thirteen principals and ten scholars responded to this category. In order for a respondent to be judged as recording a decision of yes for the entire category, it was necessary for the respondent to have recorded a response of yes for nine out of the thirteen items in this category. The null hypothesis for this category was accepted statistically at the .7646 level.

The null hypothesis for each item was stated as follows: There is no significant statistical difference between the principals' and scholars' responses on decision n of the Junior High School Curriculum Assessment Instrument (n represents the number of each item). Table 5 illustrates the results of the chi-square tests of significance for Category V.

### Summary

The data gathered from the Junior High School Curriculum Assessment Instrument were treated statistically in the following manner. The responses of principals and scholars were tested by the t-test to identify significant

Table 5. Elective Courses

Practice	Chi-Square Significance	% of Yes	
1. Foreign Language	.3952 accept null	Principals 85%	Scholars 100%
2. Speech	.4690 accept null	Principals 53%	Scholars 70%
3. Drama	.3557 accept null	Principals 60%	Scholars 80%
4. Industrial Arts	.5021 accept null	Principals 91%	Scholars 80%
5. Algebra	.5860 accept null	Principals 70%	Scholars 70%
6. Sex Education	.6988 accept null	Principals 29%	Scholars 40%
7. Alcohol & Drug Abuse	.8091 accept null	Principals 31%	Scholars 40%
8. Outdoor Education	.0001 reject	Principals 20%	Scholars 80%
9. Typing	.0146 reject	Principals 55%	Scholars 100%
10. Music, Instrumental	.0000 reject	Principals 100%	Scholars 80%
11. Music, vocal	.0000 reject	Principals 99%	Scholars 60%
12. Art	.0001 reject	Principals 95%	Scholars 60%
13. Home Economics	.0348 reject	Principals 93%	Scholars 70%

differences in mean scores of the two groups for Categories I, II, III, and each item, 1-62. The responses from Categories IV and V were tested for significant statistical difference by the chi-square.

A null hypothesis was written for each category and each item on the instrument. The null hypotheses were tested to identify agreements and disagreements statistically between mean scores of scholars and principals.

Ranges were created, using mean scores, to help interpret the results of statistical calculations on the data.

Practices that showed extreme disagreements according to the ranges established for this study were selected for further interpretation. Each category and a few selected practices were also given further interpretation.



## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

The treatment of the data collected in this study indicated that there was agreement between the scholars' recommendations in regard to curricular practices, and practices that existed in schools as judged by principals. The findings also revealed that there were six practices upon which scholars and principals disagreed; specifically, departmentalization, interscholastic athletics, letter grades, nongradedness, age and grade crossing in classrooms, and mini courses.

Five categories of curricula were identified in this study, and the practices suggested by scholars in three of these, Category II, Required Courses; Category IV, Materials for Individualization; and Category V, Elective Courses were determined to be in agreement with practices that existed in the schools. Many of the practices recommended for Category I, Organization and Curriculum; and Category III, Concepts and Practices of Individualization did not exist in the schools. Because of this, a conclusion was made that the scholars and principals do not agree on Organization and Curriculum, and Concepts and Practices of Individualization.

Of eighty-two practices, thirty-nine showed statistical agreement between the recommendations of scholars and the existence in schools as judged by principals. There were thirty-seven practices which were considered statistically inconclusive as to the agreement or disagreement between scholars and principals.

This chapter is organized to present conclusions about the study in the following way:

1. Conclusions dealing with each category will be discussed.
2. Conclusions dealing with practices that are recommended to exist in schools but do not exist.
3. Conclusions dealing with practices that exist but are recommended not to exist will be discussed.
4. Conclusions about selected practices that are recommended to exist and do exist in the schools will be discussed.

#### Category I, Organization and Curriculum

There were eight existing practices in schools in Category I that were considered to be in agreement with the scholars' recommendations. Practices that should exist in school and did exist were: intramural sports programs, musical concerts, girls' activities programs being equivalent to boys', the use of full-time guidance personnel, and a philosophy committed to educational innovation and change.

The use of outside consultants in curriculum evaluation and the existence of core structured experiences were recommended to exist moderately and did exist moderately while extra-mural activities were not strongly recommended and were not strongly implemented.

One of the above practices was selected for further interpretation because of the slight implication it represented: "A philosophy of education exists in our schools that states a definite belief in and commitment to educational innovation and change." Principals agreed with scholars in regard to the significance of this statement. It could have been that the philosophy was strongly implanted in the minds of the principals responding to this instrument because of their membership in the North Central Association of Colleges and Secondary Schools which advocated a continual evaluation for the improvement of instruction. Apparently, principals have accepted the premise underlying the North Central Association's evaluation process as stated in the philosophy. The acceptance of the idea of change for improvement was fundamental to continual curriculum revision. However, some curricular practices were so firmly entrenched that the philosophy of improvement through change has not been effective. For example, the organizational pattern that dominates the operation of the sample schools is departmentalization. Principals rate it as existing strongly in the schools. Scholars, however,

perceive this organizational practice as being one to abandon. The commitment to change is not being effectively implemented in this area.

Because of the status of departmentalization in the schools such innovative practices as nongradedness, age and grade crossings in classes, and mini courses could be limited in their existence. These are recommended practices that do not exist in the sample schools.

Interscholastic athletics, like departmentalization, is strongly implemented in the schools, but receives no support from scholars. The issue is complexly interwoven with social values and secondary school practices, and any probability of the curricular practice being changed appears remote. The philosophy committed to innovation and change has not been applied to the entrenched practices of departmentalization and interscholastic athletics.

Category I can be summarized as follows:

1. The hypothesis to assess the relationship between existing practices and recommended practices in regard to organization for instruction and curriculum was concluded to show disagreement. There is a difference between what is recommended and what is practiced.
2. There were five practices in this category which showed significant disagreement between scholars and principals. Departmentalization and interscholastic

athletics are not recommended by scholars but exist in the schools. Nongradedness, age-grade crossing, and mini courses are recommended but do not exist.

3. Principals are committed to the philosophy of advocating change for instructional improvement, but because of the dominance of the practice of departmentalization of instruction, the ability to implement the commitment of this philosophy is questioned.
4. The practice of departmentalization, which occupies a dominant status in junior high school organizational patterns, preempts the existence of practices like nongradedness, age and grade crossing in the classes, and mini courses.

#### Category II, Required Courses

Thirteen of fourteen recommended course offerings were in existence in the schools. Scholars and principals showed a high degree of agreement regarding course offerings. There was no gap between theory, as defined by the scholars' recommendations, and practice, as defined by the principals' answers. The thirteen courses were Home Economics, Industrial Arts, Vocal Music, Art, Alcohol and Drug Abuse Education, Physical Education, Language Arts, Math, Science, Social Studies, Algebra, Career Education, and Sex Education.

The data with regard to Health Education were given a statistical conclusion according to the mean responses of the two groups that was misleading. The difference between the mean scores was computed to be significant. It would be misleading, however, to conclude that Health Education was not recommended or did not exist. The disagreement between scholars and principals was that Health Education was not offered as much as it was recommended.

Category II can be summarized as follows:

1. There is agreement between scholars and principals regarding required course offerings. What is recommended for schools is what exists in schools.
2. Health Education is recommended as a required course and exists as a required course, but there appears to be some confusion on how much it should be offered as a required course.

#### Category III, Concepts and Practices of Individualization of Instruction

There were five curricular practices that scholars and principals agreed on with regard to individualization of instruction, namely, students should acquire a set of basic skills, students should have an opportunity to provide input for the improvement of instruction, contractual learning should be practiced, learning packages should be used, and children should be free from fear of failure. Scholars and

principals disagreed on one curricular practice, methods other than letter grades to report pupil progress.

There is one practice in this category which could possibly be a fundamental reason for the underlying difference in what is recommended and what is implemented. The curricular practice which states, "Each student should acquire a set of basic skills at the completion of middle school/junior high school," is strongly endorsed by scholars and principals alike. Consequently, it rates as a very important purpose of the middle school/junior high school. In reality, this practice can become the dissemination of information; the pouring forth of facts and exercises. Content becomes the crux of planning. The student who is expected to learn the skills is considered secondarily, and the child becomes subordinated to the content.

The concern of individualization should be the child. What is to be prepared for the child must consider the child, individually. That is the premise of individualization. Teaching staffs in many public schools could be hesitant to accept this premise. If social, professional, and educational emphasis is placed on the acquisition of skills, then skills to individualize the instruction must be developed and used in schools. This is not the case when schools are departmentalized, and the thrust is on subject matter. The gap between theory and practice, as determined in this study with regard to individualization of instruction, appears

real. One result of this conflict is that approaches to individualize instruction will continue to occupy the role of being experimental or innovative, and not assume the dominant style of instruction in middle school/junior high schools.

Letter grades have always been the plague of educators interested in individualization of instruction and, yet, they remain as the most common method of reporting student progress to parents. Scholars recommend that the practice be dropped, but, in reality, it is entrenched.

The conclusions for Category III can be summarized as follows:

1. The hypothesis to assess the relationship between recommended and existing practices and concepts of individualization showed disagreement. There is a difference between what is recommended and what exists.
2. A strong commitment to the acquisition of basic skills could be the underlying reason that this category was rejected. Skill acquisition is endorsed strongly and implemented strongly. Techniques to individualize skills are not.
3. The use of letter grades is a practice which scholars recommend should be replaced by other forms of reporting. However, letter grades are still strongly implemented in the practices of schools.



#### Category IV, Materials for Individualization

The two respondent groups showed high agreement regarding materials and facilities needed for individualizing instruction. The hypothesis to assess the relationship between curricular practices and recommendations as measured by principals and scholars was shown to have a high relationship.

One statistical result yielded scores which were confusing. The statement with reference to the availability of books received frequency scores from the two groups which rejected the null hypothesis but were very close in expected and observed responses of scholars and principals.

The conclusion from Category IV can be summarized as follows:

1. The availability of materials in sample schools was in agreement with recommendations. The conclusion reached was that the schools were well equipped to handle a program of individualization of instruction.

#### Category V, Elective Courses

The principals and scholars were in agreement regarding seven course offerings. These seven offerings were Foreign Language, Speech, Drama, Industrial Arts, Algebra, Sex Education, and Alcohol and Drug Abuse Education.

Course offerings that principals and scholars did not agree upon as elective offerings were Outdoor Education, Vocal Music, Instrumental Music, and Home Economics.

Some of the disagreements could be due to the conflict with required courses. Home Economics was rated as a required course by some of the scholars which could have altered their decision in regard to offering it as an elective course. The same reasoning could have been applied to Vocal Music and Art.

The reasons for a disagreement in Typing and Outdoor Education were easily identified. A large number of principals who responded stated that they were not offering these courses. Ninety-three of the two hundred twelve principals responded in the negative to Typing, and only 20% of the schools were offering Outdoor Education.

Sex Education and Alcohol and Drug Abuse Education were two offerings that both scholars and principals agreed should not be an elective offering. Only four of the ten scholars recommended Sex Education and just sixty-one principals reported any Sex Education course offerings. The statistics for Alcohol and Drug Abuse Education were similar.

Conclusions for Category V can be summarized as follows:

1. Principals and scholars were in agreement with reference to the kinds of elective courses offered.

2. Typing and Outdoor Education were offered in a small number of schools.
3. Art, Music, and Home Economics were recommended frequently as required offerings which could have created a disagreement in this category.
4. Sex Education and Alcohol and Drug Abuse Education were not offered frequently as an elective course.

#### Recommendations

Based upon the findings of this study several recommendations can be made. There are four practices that need further study. Departmentalization, the acquisition of basic skills, the reporting of pupil progress, and interscholastic athletics seem to have a substantial effect on the entire operation of the schools.

Since departmentalization dominates the middle school/junior high school structure, one recommendation would be to probe this practice in more depth. How effective is it? Many schools which practice departmentalization might have modified it to include other organizational practices mentioned in the literature that can be of benefit to the improvement of instruction. Departmentalization, however, has been an effective approach to organizing content for instruction which is closely related to the practice of having youngsters acquire a set of basic skills.

According to the responses of scholars and principals, a primary function of the middle school/junior high school is skill acquisition. Schools should be organized to teach the skills most effectively. Strategies to individualize instruction have been recommended for use in schools, but steps to implement those curricular practices have not been taken. Schools should begin to implement those curricular practices recommended for individualization, Category III.

The practice of reporting student progress by letter grades illustrates another contradiction. Schools generally professed an interest in innovations, particularly individualization of instruction. This study illustrated that there was a difference between theory and practice in individualization. The use of letter grades was a good example. It was not a method associated with reporting individual progress. Schools should have begun to implement alternative reporting systems such as conferences, descriptive reports, and continuous progress, but they have not.

Interscholastic athletics must be assessed from several vantage points. It seems that this practice is a result of a complex set of circumstances and values engendered in the society as a whole. The abandoning of interscholastic athletics does not appear to be an easy task, but it should be done.

In conclusion this study has indicated that several practices still exist strongly in the schools that have been attacked severely in the literature. Departmentalization, the use of letter grades, and interscholastic athletics are discouraged by scholars of middle school/junior high school, but exist in schools. Until this dilemma is resolved there appears to be no indication that middle school/junior high schools are going to adopt to a greater degree some of the practices recommended in the literature and verified by the panel of scholars in this study. The organization of these schools is greatly affected by the three curricular practices mentioned above, and if educators in middle school/junior high school advocate change, then these three curricular practices must be changed and/or modified.

## APPENDIX A

### JUNIOR HIGH SCHOOL CURRICULUM ASSESSMENT INSTRUMENT (SCHOLARS' VERSION)

Please respond to the following statements and questions to the extent that you agree with them. Use the following response mode to determine which number to circle after each statement.

1. Fully agree
2. Strongly agree
3. Moderately agree
4. Slightly agree
5. Disagree

#### ORGANIZATION AND CURRICULUM

1. A philosophy of education should exist in schools that states a definite belief in and commitment to educational innovation and change. 1 2 3 4 5
2. Schools should have a plan to identify any changing needs in the operation of the school. 1 2 3 4 5
3. To what extent should the following be implemented in middle schools/junior high schools?
  - a. Differentiated staffing (team). Two or more teachers plan together for instruction of same group of students. 1 2 3 4 5
  - b. Non-gradedness 1 2 3 4 5
  - c. Age crossing and/or grade crossing in regular classrooms. 1 2 3 4 5
  - d. Activities program during the school day (newspaper, chorus, band, orchestra, drama, speech, etc.). 1 2 3 4 5
  - e. Mini courses (can be taught by layman). 1 2 3 4 5
  - f. Exploratory courses (electives, open labs, etc.). 1 2 3 4 5
  - g. Inter-scholastic athletics. 1 2 3 4 5
  - h. Intra-mural athletics. 1 2 3 4 5
  - i. Extra-mural athletics (all compete/inter-school). 1 2 3 4 5

- |   |           |
|---|-----------|
| j. Concerts (vocal and instrumental).   | 1 2 3 4 5 |
| k. Full time guidance personnel.  | 1 2 3 4 5 |
| 4. Students at all levels should participate in a structured core program.  | 1 2 3 4 5 |
| 5. Block time scheduling should be the basic approach to scheduling.  | 1 2 3 4 5 |
| 6. Self contained classes should exist as the most common organizational approach to scheduling.  | 1 2 3 4 5 |
| 7. Junior high schools/middle schools should be departmentalized.   | 1 2 3 4 5 |
| 8. Girls' school activities should be equivalent to boys'.  | 1 2 3 4 5 |
| 9. Schools must identify ways in which community resources can enhance the curriculum (mini-boards, ombudsman, surveys, speakers bureau, volunteers). | 1 2 3 4 5 |
| 10. Parents should be used as a source of program evaluation.   | 1 2 3 4 5 |
| 11. Current educational research findings should be used as a guide to program development.   | 1 2 3 4 5 |
| 12. Curriculum evaluation ought to be conducted in conjunction with outside consultants.  | 1 2 3 4 5 |
| 13. Instruments should be developed which give data about a teacher's ability to teach.   | 1 2 3 4 5 |
| 14. Instruments should be developed which give data about the teaching learning program.  |           |

#### REQUIRED COURSES

These courses should be required:

- |                                     |           |
|-------------------------------------|-----------|
| a. Math                             | 1 2 3 4 5 |
| b. Science                          | 1 2 3 4 5 |
| c. Social studies                   | 1 2 3 4 5 |
| d. Language arts (includes reading) | 1 2 3 4 5 |
| e. Physical education               | 1 2 3 4 5 |
| f. Sex education                    | 1 2 3 4 5 |
| g. Alcohol & Drug Abuse             | 1 2 3 4 5 |
| h. Health                           | 1 2 3 4 5 |

i. Art	1	2	3	4	5
j. Music (vocal)	1	2	3	4	5
k. Industrial arts (boys and girls)	1	2	3	4	5
l. Home economics (boys and girls)	1	2	3	4	5
m. Career education	1	2	3	4	5
n. Algebra	1	2	3	4	5
o. Other					
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5

#### INDIVIDUALIZATION OF INSTRUCTION

1. Middle school/junior high school education should be geared to the individualization of instruction. 1 2 3 4 5
2. Every effort in middle schools/junior high schools should be directed to creating a healthy and accurate perception of one's self. 1 2 3 4 5
3. Opportunities to learn self direction must be provided for in middleschools/junior high schools. 1 2 3 4 5
4. Middle school/junior high school should provide many opportunities to interact with peers. 1 2 3 4 5
5. Teacher's evaluation of each pupil should be based on the pupil's individual growth and development. 1 2 3 4 5
6. Independent study programs must be implemented. 1 2 3 4 5
7. All students should experience contractual learning each year. 1 2 3 4 5
8. All students should experience the inquiry method. 1 2 3 4 5
9. Schools should use learning packages designed to meet the needs of individual students. 1 2 3 4 5
10. Integration of course content should be implemented. 1 2 3 4 5
11. Competition (athletically and academically) should be lessened. 1 2 3 4 5



- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 12. Peer tutoring should be implemented.   | 1 | 2 | 3 | 4 | 5 |
| 13. Opportunities should exist in which students can constructively influence the instructional program.                                   | 1 | 2 | 3 | 4 | 5 |
| 14. Ability grouping should be practiced in middle school/junior high school.  | 1 | 2 | 3 | 4 | 5 |
| 15. Space and time should be arranged for students to express their ideas with many people.  | 1 | 2 | 3 | 4 | 5 |
| 16. Students must exhibit a set of basic skills at the completion of middle school/junior high school.                                     | 1 | 2 | 3 | 4 | 5 |
| 17. Children must be free from the fear of failure.  | 1 | 2 | 3 | 4 | 5 |
| 18. Work experiences should be provided in middle school/junior high school.   | 1 | 2 | 3 | 4 | 5 |
| 19. Experiences in creative studies should be offered (films, drama).  | 1 | 2 | 3 | 4 | 5 |
| 20. Learning disabilities classes should be available (LD causes low achievement and is associated with brain damage).                     | 1 | 2 | 3 | 4 | 5 |
| 21. Specialists should assist remedial students in skill development.  | 1 | 2 | 3 | 4 | 5 |
| 22. The criteria for appraising learning outcomes should focus on the solution of actual learning situations rather than accumulated data. | 1 | 2 | 3 | 4 | 5 |
| 23. Pupils should evaluate their own progress.   | 1 | 2 | 3 | 4 | 5 |
| 24. Methods other than letter grades of reporting pupil progress should be used.   | 1 | 2 | 3 | 4 | 5 |

INDIVIDUALIZATION OF INSTRUCTION: Please answer the following with either a yes or a no.

- |  |     |    |
|--|-----|----|
| 1. Programmed materials should be available.                         | yes | no |
| 2. Many types of books should be available for browsing and reading. | yes | no |

- |  |     |    |
|--|-----|----|
| 3. Films and filmstrips should be used to bring children in contact with ideas and languages of others.              | yes | no |
| 4. Children should have access to records and tapes which accompany books.   | yes | no |
| 5. Art prints, music compositions, photographs, and other materials should be available for personal interpretation. | yes | no |
| 6. Middle schools/junior high schools should have resource centers.  | yes | no |
| 7. Children involved in special education should be housed in a resource room rather than a self contained room.     | yes | no |

ELECTIVES: Which would you agree should be electives?

- |                          |     |    |
|--------------------------|-----|----|
| 1. Foreign language      | yes | no |
| 2. Outdoor education     | yes | no |
| 3. Speech                | yes | no |
| 4. Drama                 | yes | no |
| 5. Typing                | yes | no |
| 6. Music (instrumental)  | yes | no |
| 7. Music (vocal)         | yes | no |
| 8. Art                   | yes | no |
| 9. Home Economics        | yes | no |
| 10. Industrial Arts      | yes | no |
| 11. Algebra              | yes | no |
| 12. Sex education        | yes | no |
| 13. Alcohol & Drug Abuse | yes | no |
| 14. Other                |     |    |
| _____                    | yes | no |
| _____                    | yes | no |
| _____                    | yes | no |

## APPENDIX B

### JUNIOR HIGH SCHOOL CURRICULUM ASSESSMENT INSTRUMENT (PRINCIPAL'S VERSION)

Please respond to the following statements and questions to the degree that you feel they are implemented in your school. Use the following response mode to determine which number to circle after each statement:

1. Exists fully
2. Exists strongly
3. Exists moderately
4. Exists slightly
5. Doesn't exist

#### ORGANIZATION AND CURRICULUM

1. A philosophy of education exists in our school that states a definite belief in and commitment to educational innovation and change. 1 2 3 4 5
2. Our school has a plan to identify any changing needs in the operation of the school. 1 2 3 4 5
3. To what extent do the following exist in your school?
  - a. Differentiated staffing (team). Two or more teachers plan together for instruction of the same group of students. 1 2 3 4 5
  - b. Non-gradedness. 1 2 3 4 5
  - c. Age crossing and/or grade crossing in regular classrooms. 1 2 3 4 5
  - d. Activities program during the school day (newspaper, chorus, band, orchestra, drama, speech, etc.). 1 2 3 4 5
  - e. Mini courses (can be taught by layman). 1 2 3 4 5
  - f. Exploratory courses (electives, open labs, etc.). 1 2 3 4 5
  - g. Inter-scholastic athletics. 1 2 3 4 5
  - h. Intra-mural athletics. 1 2 3 4 5
  - i. Extra-mural athletics (all complete/inter-school). 1 2 3 4 5
  - j. Concerts (vocal & instrumental). 1 2 3 4 5
  - k. Full time guidance personnel. 1 2 3 4 5

- |   |           |
|---|-----------|
| 4. Students at all levels participate in a structured core program.   | 1 2 3 4 5 |
| 5. Block time scheduling represents the basic approach to scheduling.   | 1 2 3 4 5 |
| 6. Self contained classes exist as the most common organizational approach to scheduling.   | 1 2 3 4 5 |
| 7. We are departmentalized.   | 1 2 3 4 5 |
| 8. Girls' school activity programs are equivalent to boys'.   | 1 2 3 4 5 |
| 9. Our middle school/junior high school identifies ways in which the community resources can enhance the curriculum (mini-boards, ombudsman, surveys, speakers bureau, volunteers). | 1 2 3 4 5 |
| 10. Parents are used as a source of program evaluation.   | 1 2 3 4 5 |
| 11. Our middle school/junior high school uses current educational research findings as a guide to program development.  | 1 2 3 4 5 |
| 12. Curriculum evaluation is conducted in conjunction with outside consultants.   | 1 2 3 4 5 |
| 13. Instruments have been developed which give data about a teacher's ability to teach.   | 1 2 3 4 5 |
| 14. Instruments have been developed which give data about the teaching learning program.  | 1 2 3 4 5 |

#### REQUIRED COURSES

- |   |           |
|---|-----------|
| 1. To what extent are the following courses offered as required courses for all students? |           |
| a. Math   | 1 2 3 4 5 |
| b. Science  | 1 2 3 4 5 |
| c. Social studies   | 1 2 3 4 5 |
| d. Language arts (includes reading)   | 1 2 3 4 5 |
| e. Physical education   | 1 2 3 4 5 |
| f. Sex education  | 1 2 3 4 5 |
| g. Alcohol & Drug Abuse   | 1 2 3 4 5 |
| h. Health   | 1 2 3 4 5 |
| i. Art  | 1 2 3 4 5 |
| j. Music (vocal)  | 1 2 3 4 5 |
| k. Industrial Arts (boys and girls)   | 1 2 3 4 5 |

l. Home economics (boys and girls)	1	2	3	4	5
m. Career Education	1	2	3	4	5
n. Algebra	1	2	3	4	5
o. Other					
_____	1	2	3	4	5
_____	1	2	3	4	5
_____	1	2	3	4	5

#### INDIVIDUALIZATION OF INSTRUCTION

1. Our middle school/junior high school education is geared to the individualization of instruction. 1 2 3 4 5
2. Every effort in our middle school/junior high school is directed to create a healthy and accurate perception of one's self. 1 2 3 4 5
3. Opportunities to learn self direction are provided in our middle school/junior high school. 1 2 3 4 5
4. Our middle school/junior high school education is geared to provide many opportunities for pupils to interact with peers. 1 2 3 4 5
5. Teacher's evaluation of each pupil is based on the latter's individual growth and development. 1 2 3 4 5
6. Independent study programs are implemented. 1 2 3 4 5
7. All students experience contractual learning sometime each year. 1 2 3 4 5
8. All students experience the inquiry method. 1 2 3 4 5
9. Learning packages designed to meet the needs of individual students are used. 1 2 3 4 5
10. Integration of course content is implemented. 1 2 3 4 5
11. Our middle school/junior high school attempts to lessen competition (athletics, academic). 1 2 3 4 5
12. Peer tutoring exists. 1 2 3 4 5
13. Our school provides opportunities in which students, constructively, can influence the instructional program. 1 2 3 4 5

- |     |  |   |   |   |   |   |
|-----|--|---|---|---|---|---|
| 14. | Ability grouping exists in our school.   | 1 | 2 | 3 | 4 | 5 |
| 15. | Space and time are permitted for students to express their ideas with many people.   | 1 | 2 | 3 | 4 | 5 |
| 16. | Students exhibit a set of basic skills at the completion of middle school/junior high school.  | 1 | 2 | 3 | 4 | 5 |
| 17. | Children are free from fear of failure.  | 1 | 2 | 3 | 4 | 5 |
| 18. | Work experiences are provided in our school.   | 1 | 2 | 3 | 4 | 5 |
| 19. | Experiences in creative studies are offered (either as courses [film] or within the curriculum).                                     | 1 | 2 | 3 | 4 | 5 |
| 20. | Our school has a learning disabilities class(es) (LD causes low achievement and is associated with brain damage).                    | 1 | 2 | 3 | 4 | 5 |
| 21. | Specialists assist remedial students in skill development.   | 1 | 2 | 3 | 4 | 5 |
| 22. | The criteria for appraising learning outcomes focuses on the solution of actual learning situations rather than on accumulated data. | 1 | 2 | 3 | 4 | 5 |
| 23. | Pupils evaluate their own progress.  | 1 | 2 | 3 | 4 | 5 |
| 24. | We use methods other than letter grades of reporting pupil progress.   | 1 | 2 | 3 | 4 | 5 |

INDIVIDUALIZATION OF INSTRUCTION: Please circle the following either yes or no

- |    |   |     |    |
|----|---|-----|----|
| 1. | Programmed materials are available.   | yes | no |
| 2. | Many types of books are available for browsing and reading.   | yes | no |
| 3. | Films and filmstrips are used to bring children in contact with ideas and languages of others.              | yes | no |
| 4. | Children have access to records and tapes which accompany books.  | yes | no |
| 5. | Art prints, music compositions, photographs, and other materials are available for personal interpretation. | yes | no |

- |    |  |     |    |
|----|--|-----|----|
| 6. | Our middle school/junior high school has a resource center.  | yes | no |
| 7. | Children involved in special education (EMH, LD, etc.) are housed in a resource room rather than a self contained classroom. | yes | no |

ELECTIVES: Which of the following are offered as electives?

- |     |                      |     |    |
|-----|----------------------|-----|----|
| 1.  | Foreign language     | yes | no |
| 2.  | Outdoor education    | yes | no |
| 3.  | Speech               | yes | no |
| 4.  | Drama                | yes | no |
| 5.  | Typing               | yes | no |
| 6.  | Music (instrumental) | yes | no |
| 7.  | Music (vocal)        | yes | no |
| 8.  | Art                  | yes | no |
| 9.  | Home economics       | yes | no |
| 10. | Industrial arts      | yes | no |
| 11. | Algebra              | yes | no |
| 12. | Sex education        | yes | no |
| 13. | Alcohol & Drug Abuse | yes | no |
| 14. | Other                |     |    |
|     | _____                | yes | no |
|     | _____                | yes | no |

end

THANK YOU

## APPENDIX C

### COVER LETTER TO SCHOLARS

February 11, 1975

Dr. \_\_\_\_\_  
Professor of Education

Dear \_\_\_\_\_,

This letter is being written to ask you to assist us in conducting a study about middle schools/junior high schools. The attached instrument was designed to help establish recommended curricular practices for middle schools/junior high schools. The writings of several authorities have been gleaned in an attempt to establish a set of these practices. The attached instrument is to be used as a verification, by consensus, of what, I believe, based on some of your ideas, will be recommended middle school/junior high school practices in organization, required courses, elective courses, and individualization of instruction.

As you will see, most of the items are on a fully agree, strongly agree, moderately agree, slightly agree, and disagree scale with a point value of 1-2-3-4-5, respectively.

A similar instrument will be sent to all principals of middle schools/junior high schools in the North Central Association of Colleges and Secondary Schools. However, the response mode on this instrument will be (1) exists fully, (2) exists strongly, (3) exists moderately, (4) exists slightly, (5) doesn't exist; also on a 1-2-3-4-5 point basis.

A comparison will be made between principals' responses (curricular practices that exist) and authoritative responses (recommended curricular practices) using the t-test. The yes and no items will be analyzed using the chi-square.

The purpose of this study is to analyze the relationship between authoritative recommendations about middle school/junior high school curricular practices and actual practices in member schools of the North Central Association.



You are being asked to help establish recommended curricular practices by completing the enclosed instrument. Your participation will be greatly appreciated.

The results will be used to complete a dissertation requirement for my Ed. D. at The University of Arizona plus assist the North Central Association by providing a set of data for analysis.

Results of this study will be made known to you. I have appreciated your ideas about middle school education, and find you to be an excellent source for pre- and early-adolescent education.

Sincerely yours,

Ronald T. Brown  
Principal

RTB:mh  
Enc

APPENDIX D

COVER LETTER FROM NORTH CENTRAL ASSOCIATION OF  
COLLEGES AND SCHOOLS, COMMISSION  
ON SCHOOLS

TO: NCA Junior High/Middle School Administrators

FROM: John A. Stanavage, Executive Secretary

RE: The Brown Survey of Practices in Effect in NCA  
Junior High/Middle Schools

Mr. Brown has developed an instrument to determine the match between curriculum and program recommendations for junior high/middle schools and the situation actually prevailing in the field. He is using the NCA junior high/middle school principals as a total population rather than merely as a sample. This procedure is based on the assumption that the NCA junior high/middle schools represent a forward group in junior high/middle school education and thus can provide him with sharper insights.

Since Mr. Brown is using the entire 252 NCA junior high/middle school membership as his total population, it is important that the percentage of return be high. Moreover, the study should provide some interesting data for all of us concerning the stance of our member junior high/middle schools relative to curriculum and program practices. In consequence, I urge you to give the study your full cooperation if this is at all possible.

My approval, of course, extends to the study as a whole; the working details are solely the responsibility of Mr. Ronald Brown.

As this 1975 year gets underway, I wish you much challenge, much progress, much success.

Cordially,

/s/ John A. Stanavage

## APPENDIX E

### COVER LETTER TO PRINCIPALS

January, 1975

Dear Principal \_\_\_\_\_:  
(insert name)

The attached instrument has been designed to help update information and research on the junior high schools and middle schools in the North Central Association of Colleges and Secondary Schools. Your cooperation in completing the instrument will be appreciated. The data are also intended to be used as material to complete a dissertation at The University of Arizona.

The same instrument is scheduled to be completed by several experts in the field of middle school and junior high school education; namely, William Alexander, Gordon Vars, Maurice McGlasson, Donald Eichorn, Ralph Galano, Mary Compton, Conrad Toepfer, Jr., Bruce Howell, Philip Pumerantz, and Neil Atkins.

The data will be analyzed by using the chi-square test on items requiring a yes or no response (nominal data) and the t-test for the remainder of the items which are organized as interval data for principals (choices).

The results will assist in determining the significance of differences, if any, between recommended middle school/junior high school curricular practices, and, actual practices in five areas: organization and curriculum, required courses, elective courses, practices and concepts of individualization, and materials for individualization.

Thank you for your participation, and the results will be made known to you. All participants will remain anonymous, and no attempt will be made to discredit any participating principal. If you wish, information about your responses will be supplied to you individually.

Please return the instrument in the enclosed envelope to:

Mr. Ronald T. Brown  
Washington Junior High School  
201 North Washington Street  
Naperville, Illinois 60540

Sincerely yours,

Ronald T. Brown

## APPENDIX F

### t-TEST

Variable	Number of Cases	Mean	Standard Deviation	Standard Error	T Value	Degrees of Freedom	2-Tail Prob.
01--Philosophy Committed to Change							
Group 1	213	2.0235	.929	.064	.11	10.71	.917
Group 2	10	2.0000	.667	.211			
02--A Plan to Identify Changing Needs							
Group 1	212	2.3302	.966	.066	5.28	12.20	.000
Group 2	10	1.4000	.516	.163			
03--Team Teaching							
Group 1	211	3.2038	1.180	.081	4.01	10.24	.002
Group 2	10	1.900	.994	.314			
04--Non-Gradedness							
Group 1	212	3.9953	1.082	.074	8.93	11.37	.000
Group 2	10	2.0000	.667	.211			
05--Age and Grade Crossing in Reg. Class							
Group 1	212	3.5991	1.095	.075	8.39	11.37	.000
Group 2	10	1.7000	.675	.213			
06--Activities Program							
Group 1	212	1.9717	1.122	.077	6.90	22.54	.000
Group 2	10	1.1000	.316	.100			
07--Mini Courses							
Group 1	212	3.7264	1.441	.099	4.43	9.32	.002
Group 2	9	2.1111	1.054	.351			
08--Exploratory							
Group 1	213	2.3568	1.130	.077	2.63	8.86	.027
Group 2	9	1.4444	1.014	.338			

Variable	Number of Cases	Mean	Standard Deviation	Standard Error	T Value	Degrees of Freedom	2-Tail Prob.
09--Inter-Scholastic Athletics							
Group 1	213	1.7465	1.095	.075	-9.58	10.48	.000
Group 2	10	4.4000	.843	.267			
10--Intra-Mural							
Group 1	210	2.4238	1.251	.086	2.20	9.11	.055
Group 2	9	1.6667	1.000	.333			
11--Extra-Mural							
Group 1	201	3.6219	1.451	.102	1.24	10.17	.242
Group 2	10	3.1000	1.287	.407			
12--Concerts							
Group 1	212	1.7217	.025	.064	-1.96	9.64	.078
Group 2	10	2.4000	1.075	.340			
13--Guidance Full Time							
Group 1	212	1.2925	.859	.059	-1.17	11.39	.265
Group 2	10	1.5000	.527	.167			
14--Core Curr All							
Group 1	208	3.2596	1.510	.105	-.19	9.31	.853
Group 2	9	3.3333	1.118	.373			
15--Block Time Schedule Basic Approach							
Group 1	206	3.4369	1.384	.096	2.85	9.81	.017
Group 2	10	2.1000	1.449	.458			
16--Self Cont Basicap							
Group 1	210	3.5571	1.531	.106	-4.80	13.91	.000
Group 2	10	4.7000	.675	.213			

Variable	Number of Cases	Mean	Standard Deviation	Standard Error	T Value	Degrees of Freedom	2-Tail Prob.
17--Departmentalized							
Group 1	211	1.5782	.940	.065	-7.31	9.57	.000
Group 2	10	4.3000	1.160	.367			
18--Girls Equivalent to Boys							
Group 1	213	2.4930	1.003	.069	1.54	9.60	.154
Group 2	10	1.9000	1.197	.379			
19--Community Enhance Curr Identify Ways							
Group 1	212	2.9528	.968	.066	9.92	12.71	.000
Group 2	10	1.3000	.483	.153			
20--Parents as Source of Eval							
Group 1	213	3.1408	.884	.061	2.38	9.36	.041
Group 2	10	2.1000	1.370	.433			
21--Use Research to Eval							
Group 1	213	2.6056	.780	.053	4.42	10.08	.001
Group 2	10	1.6000	.699	.221			
22--Curr Evaluation with Outside Consultant							
Group 1	212	2.9245	1.023	.070	.34	9.70	.741
Group 2	10	2.8000	1.135	.359			
23--Use Instrument for Teacher Evaluation							
Group 1	213	2.9906	1.099	.075	2.63	10.25	.025
Group 2	10	2.2000	.919	.291			
24--Use Instrument for Prog Eval							
Group 1	211	3.0806	1.018	.070	3.83	9.85	.003
Group 2	10	1.8000	1.033	.327			



Variable	Number of Cases	Mean	Standard Deviation	Standard Error	T Value	Degrees of Freedom	2-Tail Prob.
25--Math Required							
Group 1	212	1.2264	.835	.057	-1.37	9.85	.201
Group 2	10	1.6000	.843	.267			
26--Science Required							
Group 1	212	1.3349	.830	.057	-.97	9.84	.354
Group 2	10	1.6000	.843	.267			
27--Soc Stud Req							
Group 1	212	1.3019	.867	.060	-1.09	9.92	.301
Group 2	10	1.6000	.843	.267			
28--Lang Arts Req							
Group 1	212	1.2406	.840	.058	-1.32	9.86	.217
Group 2	10	1.6000	.843	.267			
29--Phys Ed Req							
Group 1	210	1.4619	1.107	.076	.26	11.27	.796
Group 2	10	1.4000	.699	.221			
30--Sex Ed Req							
Group 1	201	2.9950	1.444	.102	1.99	10.74	.073
Group 2	10	2.3000	1.059	.335			
31--Alch Drug Req							
Group 1	207	2.4783	1.222	.085	.52	10.19	.617
Group 2	10	2.3000	1.059	.335			
32--Health Req							
Group 1	207	2.3140	1.228	.085	2.89	10.90	.015
Group 2	10	1.5000	.850	.269			

<u>Variable</u>	<u>Number of Cases</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Standard Error</u>	<u>T Value</u>	<u>Degrees of Freedom</u>	<u>2-Tail Prob.</u>
33--Art Req							
Group 1	209	2.1100	1.258	.088			
Group 2	10	1.8000	.919	.291	1.02	10.71	.329
34--Vocal Music Req							
Group 1	209	2.3301	1.323	.092			
Group 2	10	2.0000	1.155	.365	.88	10.16	.401
35--Ind Arts Req							
Group 1	210	2.3476	1.315	.091			
Group 2	10	1.8000	.919	.291	1.80	10.84	.100
36--Home Ec Req							
Group 1	209	2.3876	1.308	.090			
Group 2	10	2.1000	1.101	.348	.80	10.25	.442
37--Career Ed Req							
Group 1	206	3.0388	1.299	.090			
Group 2	10	2.3000	1.337	.423	1.71	9.84	.118
38--Algebra Req							
Group 1	197	3.0558	1.492	.106			
Group 2	10	3.0000	1.700	.537	.10	9.72	.921
39--Geared to Individualized Instruction							
Group 1	211	2.6635	.759	.052			
Group 2	10	1.4000	.516	.163	7.37	10.93	.000
40--Gear to Create Self Image							
Group 1	211	2.1706	.798	.055			
Group 2	10	1.4000	.699	.221	3.38	10.14	.007

<u>Variable</u>	<u>Number of Cases</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Standard Error</u>	<u>T Value</u>	<u>Degrees of Freedom</u>	<u>2-Tail Prob.</u>
41--Oppority to Self Direc							
Group 1	211	2.1991	.723	.050	9.84	13.97	.000
Group 2	10	1.000	.316	.100			
42--Opportunity to Interact with Peers							
Group 1	211	2.0711	.834	.057	6.00	12.62	.000
Group 2	10	1.2000	.422	.133			
43--Teacher Eval Based on Indiv Growth and D							
Group 1	211	2.3365	.766	.053	3.64	10.03	.005
Group 2	10	1.5000	.707	.224			
44--Independent Study Exist							
Group 1	211	3.1611	.947	.065	4.57	11.01	.001
Group 2	10	2.2000	.632	.200			
45--Contract Learn Used W All							
Group 1	211	3.3365	1.076	.074	-.18	9.87	.859
Group 2	10	3.4000	1.075	.340			
46--Students Experience Inquiry Method							
Group 1	210	2.5476	.933	.064	2.28	10.00	.046
Group 2	10	1.9000	.876	.277			
47--Learning Pkges Used							
Group 1	210	3.1381	1.005	.069	1.43	9.64	.185
Group 2	10	2.6000	1.174	.371			
48--Course Content Integrated							
Group 1	206	2.9272	.889	.062	5.18	9.98	.000
Group 2	10	1.5000	.850	.269			

Variable	Number of Cases	Mean	Standard Deviation	Standard Error	T Value	Degrees of Freedom	2-Tail Prob.
49--Competition Lessened							
Group 1	209	3.3349	.889	.062	5.06	9.91	.000
Group 2	10	1.9000	.876	.277			
50--Peer Tutoring Used							
Group 1	209	3.1435	.960	.066	5.17	10.87	.000
Group 2	10	2.0000	.667	.211			
51--Students Able to Input for Instructional							
Group 1	209	3.0718	.855	.059	2.22	9.34	.053
Group 2	10	2.1000	1.370	.433			
52--Ability Groups Exist							
Group 1	209	2.9952	1.171	.081	-.01	9.68	.991
Group 2	10	3.0000	1.333	.422			
53--Spce Time for Kids to Express							
Group 1	209	3.0191	.882	.061	4.31	9.76	.002
Group 2	10	1.7000	.949	.300			
54--Basic Skill Mastery							
Group 1	209	2.4593	.860	.060	.78	9.31	.457
Group 2	10	2.1000	1.449	.458			
55--Children Free to Fail							
Group 1	208	3.0192	.911	.063	.47	9.33	.653
Group 2	10	2.8000	1.476	.467			
56--Work Experiences Provided							
Group 1	210	3.6333	1.091	.075	2.98	9.75	.014
Group 2	10	2.5000	1.179	.373			

<u>Variable</u>	<u>Number of Cases</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Standard Error</u>	<u>T Value</u>	<u>Degrees of Freedom</u>	<u>2-Tail Prob.</u>
57--Creative Studies Offered							
Group 1	209	3.1722	1.019	.070	6.78	10.92	.000
Group 2	10	1.6000	.699	.221			
58--Learn Disabil Class							
Group 1	208	2.7981	1.560	.108	4.16	12.19	.001
Group 2	10	1.6000	.843	.267			
59--Remedial Help Avail							
Group 1	210	2.4000	1.171	.081	2.45	9.30	.037
Group 2	9	1.6667	.866	.289			
60--Criterion Ref Eval							
Group 1	205	2.8098	.753	.053	3.46	8.66	.007
Group 2	9	1.8889	.782	.261			
61--Pupils Self Evaluate							
Group 1	210	3.3286	.777	.054	10.64	12.14	.000
Group 2	10	1.8000	.422	.133			
62--Parent Report Other Than Letter Grades							
Group 1	209	3.5263	1.252	.087	6.43	9.45	.000
Group 2	9	1.5556	.882	.294			

# APPENDIX G

## $\chi^2$ TEST

Variable		Yes 1.00	No 2.00	Row Total
63--Programmed Materials Avail				
Principals	1.00	167	40	207
		80.7	19.3	95.4
		94.4	100.0	
		77.0	18.4	
Scholars	2.00	10	0	10
		100.0	0	4.6
		5.6	0	
		4.6	0	
Column		177	40	217
Total		81.6	18.4	100.0

Corrected Chi Square = 1.25815 with 1 degree of freedom,  
significance = .2620, number of missing observations = 6.

64--Many Bks Avail				
Principals	1.00	209	1	210
		99.5	.5	95.5
		95.4	100.0	
		95.0	.5	
Scholars	2.00	10	0	10
		100.0	0	4.5
		4.6	0	
		4.5	0	
Column		219	1	220
Total		99.5	.5	100.0

Corrected Chi Square = 4.78365 with 1 degree of freedom,  
significance = .0287, number of missing observations = 3.

Variable			Row Total
	Yes 1.00	No 2.00	
65--Films and Filmstrips Brg			
Principals 1.00	204	6	210
	97.1	2.9	95.5
	95.3	100.0	
	92.7	2.7	
Scholars 2.00	10	0	10
	100.0	0	4.5
	4.7	0	
	4.5	0	
Column	214	6	220
Total	97.3	2.7	100.0

Corrected Chi Square = .20398 with 1 degree of freedom,  
significance = .6515, number of missing observations = 3.

66--Records Tapes with Bks			
Principals 1.00	195	14	209
	93.3	6.7	95.4
	95.1	100.0	
	89.0	6.4	
Scholars 2.00	10	0	10
	100.0	0	4.6
	4.9	0	
	4.6	0	
Column	205	14	219
Total	93.6	6.4	100.0

Corrected Chi Square = .03396 with 1 degree of freedom,  
significance = .8538, number of missing observations = 4.

					100
			Yes	No	
			1.00	2.00	Row
					Total
67--Art Prints Music Avail					
Principals		1.00	189	21	210
			90.0	10.0	95.5
			95.0	100.0	
			85.9	9.5	
Scholars		2.00	10	0	10
			100.0	0	4.5
			5.0	0	
			4.5	0	
Column			199	21	220
Total			90.5	9.5	100.0

Corrected Chi Square = .25069 with 1 degree of freedom,  
significance = .6166, number of missing observations = 3.

68--Resource Center Avail					
Principals	1.00		199	11	210
			94.8	5.2	95.5
			95.2	100.0	
			90.5	5.0	
Scholars	2.00		10	0	10
			100.0	0	4.5
			4.8	0	
			4.5	0	
Column			209	11	220
Total			95.0	5.0	100.0

Corrected Chi Square = 0 with 1 degree of freedom,  
significance = 1.0000, number of missing observations = 3,



		Yes	No	Row
Variable		1.00	2.00	Total
69--House Spec Ed in Resource				
Principals	1.00	123	84	207
		59.4	40.6	95.8
		94.6	97.7	
		56.9	38.9	
Scholars	2.00	7	2	9
		77.8	22.2	4.2
		5.4	2.3	
		3.2	.9	
Column		130	86	216
Total		60.2	39.8	100.0

Corrected Chi Square = .56785 with 1 degree of freedom,  
significance = .4511, number of missing observations = 7.

70--For Lang Elect			
Principals 1.00	178	31	209
	85.2	14.8	95.4
	94.7	100.0	
	81.3	14.2	
Scholars 2.00	10	0	10
	100.0	0	4.6
	5.3	0	
	4.6	0	
Column	188	31	219
Total	85.8	14.2	100.0

Corrected Chi Square = .72278 with 1 degree of freedom,  
significance = .3952, number of missing observations = 4.

Variable		Yes	No	Row Total
		1.00	2.00	
71--Outdoor Ed Elect				
Principals	1.00	43	166	209
		20.6	79.4	95.4
		84.3	98.8	
		19.6	75.8	
Scholars	2.00	8	2	10
		80.0	20.0	4.6
		15.7	1.2	
		3.7	.9	
Column		51	168	219
Total		23.3	76.7	100.0

Corrected Chi Square = 15.68537 with 1 degree of freedom,  
significance = .0001, number of missing observations = 4.

72--Speech Elec				
Principals	1.00	112	99	211
		53.1	46.9	95.5
		94.1	97.1	
		50.7	44.8	
Scholars	2.00	7	3	10
		70.0	30.0	4.5
		5.9	2.9	
		3.2	1.4	
Column		119	102	221
Total		53.8	46.2	100.0

Corrected Chi Square = .52432 with 1 degree of freedom,  
significance = .4690, number of missing observations = 2.

		Yes	No	Row
Variable		1.00	2.00	Total
<hr/>				
73--Drama Elect				
Principals	1.00	127	84	211
		60.2	39.8	95.5
		94.1	97.7	
		57.5	38.0	
Scholars	2.00	8	2	10
		80.0	20.0	4.5
		5.9	2.3	
		3.6	.9	
Column		135	86	221
Total		61.1	38.9	100.0

Corrected Chi Square = .85304 with 1 degree of freedom,  
significance = .3557, number of missing observations = 2.

74--Typing Elect			
Principals 1.00	117	93	210
	55.7	44.3	95.5
	92.1	100.0	
	53.2	42.3	
Scholars 2.00	10	0	10
	100.0	0	4.5
	7.9	0	
	4.5	0	
Column	127	93	220
Total	57.7	42.3	100.0

Corrected Chi Square = 5.96409 with 1 degree of freedom,  
significance = .0146, number of missing observations = 3.

		<u>Yes</u>	<u>No</u>	
<u>Variable</u>		<u>1.00</u>	<u>2.00</u>	<u>Row Total</u>
75--Instru Music Elect				
Principals	1.00	212	0	212
		100.0	0	95.5
		96.4	0	
		95.5	0	
Scholars	2.00	8	2	10
		80.0	20.0	
		3.6	100.0	
		3.6	.9	
Column		220	2	222
Total		99.1	.9	100.0

Corrected Chi Square = 23.31595 with 1 degree of freedom,  
significance = .0000, number of missing observations = 1.

76--Vocal Music Elect			
Principals 1.00	210	2	212
	99.1	.9	95.5
	97.2	33.3	
	94.6	.9	
Scholars 2.00	6	4	10
	60.0	40.0	4.5
	2.8	66.7	
	2.7	1.8	
Column	216	6	222
Total	97.3	2.7	100.0

Corrected Chi Square = 41.53846 with 1 degree of freedom,  
significance = .0000, number of missing observations = 1.

Variable		Yes	No	Row
		1.00	2.00	Total
77--Art Elect				
Principals	1.00	202	10	212
		95.3	4.7	95.5
		97.1	71.4	
		91.0	4.5	
Scholars	2.00	6	4	10
		60.0	40.0	4.5
		2.9	28.6	
		2.7	1.8	
Column		208	14	222
Total		93.7	6.3	100.0

Corrected Chi Square = 14.59166 with 1 degree of freedom,  
significance = .0001, number of missing observations = 1.

78--Home Ec Elect				
Principals	1.00	198	14	212
		93.4	6.6	95.5
		96.6	82.4	
		89.2	6.3	
Scholars	2.00	7	3	10
		70.0	30.0	4.5
		3.4	17.6	
		3.2	1.4	
Column		205	17	222
Total		92.3	7.7	100.0

Corrected Chi Square = 4.45385 with 1 degree of freedom,  
significance = .0348, number of missing observations = 1.

		<u>Yes</u>	<u>No</u>	Row
<u>Variable</u>		<u>1.00</u>	<u>2.00</u>	<u>Total</u>
79--Ind Arts Elect				
Principals	1.00	193	18	211
		91.5	8.5	95.5
		96.0	90.0	
		87.3	8.1	
Scholars	2.00	8	2	10
		80.0	20.0	4.5
		4.0	10.0	
		3.6	.9	
Column		201	20	221
Total		91.0	9.0	100.0

Corrected Chi Square = .45054 with 1 degree of freedom,  
significance = .5021, number of missing observations = 2.

80--Algebra Elect				
Principals	1.00	174	38	212
		82.1	17.9	95.5
		96.1	92.7	
		78.4	17.1	
Scholars	2.00	7	3	10
		70.0	30.0	
		3.9	7.3	
		3.2	1.4	
Column		181	41	222
Total		81.5	18.5	100.0

Corrected Chi Square = .29668 with 1 degree of freedom,  
significance = .5860, number of missing observations = 1.

		<u>Yes</u>	<u>No</u>	
<u>Variable</u>		<u>1.00</u>	<u>2.00</u>	<u>Row Total</u>
81--Sex Ed Elect				
Principals	1.00	61	149	210
		29.0	71.0	95.5
		93.8	96.1	
		27.7	67.7	
Scholars	2.00	4	6	10
		40.0	60.0	4.5
		6.2	3.9	
		1.8	2.7	
Column		65	155	220
Total		29.5	70.5	100.0

Corrected Chi Square = .14973 with 1 degree of freedom,  
significance = .6988, number of missing observations = 3.

82--Alcohol and Drug Abuse				
Principals	1.00	66	146	212
		31.1	68.9	95.5
		94.3	96.1	
		29.7	65.8	
Scholars	2.00	4	6	10
		40.0	60.0	4.5
		5.7	3.9	
		1.8	2.7	
Column		70	152	222
Total		31.5	68.5	100.0

Corrected Chi Square = .05835 with 1 degree of freedom,  
significance = .8091, number of missing observations = 1.

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