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A COMPARATIVE STUDY OF MIDDLE SCHOOL AND
JUNIOR HIGH SCHOOL TEACHER ATTITUDES
TOWARD TRANSECENT NEEDS

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ABSTRACT

This study sought answers to the following three questions: (1) Is there any difference in the way middle school teachers and junior high school teachers view the developmental needs of the transescent? (2) Will intermediate teachers with six or more years of teaching experience reflect more positive attitudes toward transescent developmental needs than those with 5 or fewer years of teaching experience? and (3) Will the attitudes of elementary certified teachers reflect a greater degree of personal acceptance of transescent developmental needs than the attitudes of secondary certified teachers?

Methods and Procedures

The data were collected by means of a researcher-developed questionnaire administered to 207 middle school and junior high school Indiana teachers. The Likert-type instrument contained 34 items pertaining to the social-emotional, physical, and intellectual needs of the transescent. For each dependent variable, mean scores and standard deviations were obtained for the two levels of each independent variable—school type, teaching experience, and certification level. Mean differences were computed and the statistical significance of each difference was assessed using an independent t test. The results were used in evaluating the twelve hypotheses of this study. A .05 significance level was used to accept or reject each hypothesis.
Findings

The findings of this study indicate:

1. Middle school and junior high school teachers do differ in their attitudes toward the social-emotional needs of the transescent.

2. Middle school and junior high school teachers do not differ significantly in their attitudes toward the physical, intellectual, and overall developmental needs of the transescent.

3. Teachers with 6 or more years of teaching experience and ones with 5 or fewer years of teaching experience do differ in their attitudes toward the physical needs of the transescent.

4. Teachers with six or more years of teaching experience and ones with 5 or fewer years of teaching experience do not differ significantly in their attitudes toward the social-emotional, intellectual, and overall developmental needs of the transescent.

5. Elementary certified teachers and secondary certified teachers do not differ significantly in their attitudes toward the social-emotional, physical, intellectual, and overall developmental needs of the transescent.
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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>v</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>viii</td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>STATEMENT OF THE PROBLEM</td>
<td>3</td>
</tr>
<tr>
<td>SIGNIFICANCE OF THE STUDY</td>
<td>4</td>
</tr>
<tr>
<td>DEFINITION OF TERMS</td>
<td>6</td>
</tr>
<tr>
<td>DELIMITATIONS OF THE STUDY</td>
<td>8</td>
</tr>
<tr>
<td>LIMITATIONS</td>
<td>8</td>
</tr>
<tr>
<td>ORGANIZATION OF THE STUDY</td>
<td>8</td>
</tr>
<tr>
<td>2. REVIEW OF RELATED LITERATURE AND RESEARCH</td>
<td>10</td>
</tr>
<tr>
<td>THE JUNIOR HIGH SCHOOL MOVEMENT</td>
<td>10</td>
</tr>
<tr>
<td>THE MIDDLE SCHOOL MOVEMENT</td>
<td>17</td>
</tr>
<tr>
<td>THE TRANSESSENT</td>
<td>28</td>
</tr>
<tr>
<td>Developmental Characteristics of the Transescent</td>
<td>28</td>
</tr>
<tr>
<td>Physical Characteristics</td>
<td>30</td>
</tr>
<tr>
<td>Social-Emotional Characteristics</td>
<td>34</td>
</tr>
<tr>
<td>Intellectual Characteristics</td>
<td>42</td>
</tr>
<tr>
<td>Developmental Needs of the Transescent</td>
<td>46</td>
</tr>
<tr>
<td>Physical Needs</td>
<td>46</td>
</tr>
<tr>
<td>Social-Emotional Needs</td>
<td>50</td>
</tr>
<tr>
<td>Intellectual Needs</td>
<td>56</td>
</tr>
<tr>
<td>THE INTERMEDIATE TEACHER</td>
<td>60</td>
</tr>
</tbody>
</table>
3. RESEARCH PROCEDURES AND METHODOLOGY .............. 64
   DESCRIPTION OF THE POPULATION .................. 65
   DEVELOPMENT OF THE INSTRUMENT .................. 66
   COLLECTION AND ANALYSIS OF THE DATA .............. 71
   HYPOTHESES ........................................... 72
4. STATISTICAL ANALYSIS OF THE DATA ..................... 75
   PRESENTATION OF THE DATA .......................... 76
5. SUMMARY OF THE STUDY ................................ 83
   SUMMARY .............................................. 83
   CONCLUSIONS ......................................... 86
   DISCUSSION .......................................... 88
   RECOMMENDATIONS .................................. 89
REFERENCES .............................................. 92

APPENDIXES

A. LETTER TO ADMINISTRATOR ........................... 102
B. LETTER TO TEACHERS ............................... 104
C. INITIAL QUESTIONNAIRE .............................. 106
D. QUESTIONNAIRE ....................................... 111
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Inter-Item Correlations of the Social-Emotional, Intellectual, Physical, and Total Scales</td>
<td>69</td>
</tr>
<tr>
<td>3.2</td>
<td>Reliability Coefficients of the Social-Emotional, Intellectual, Physical, and Total Scales</td>
<td>71</td>
</tr>
<tr>
<td>4.1</td>
<td>Number and Percent of Respondents to the Needs Survey Form by School Type</td>
<td>77</td>
</tr>
<tr>
<td>4.2</td>
<td>Number and Percent of Respondents to the Needs Survey Form by Teaching Experience</td>
<td>77</td>
</tr>
<tr>
<td>4.3</td>
<td>Number and Percent of Respondents to the Needs Survey Form by Certification Level</td>
<td>78</td>
</tr>
<tr>
<td>4.4</td>
<td>Cronbach Alpha Coefficients for the Subscales and the Total Scale</td>
<td>79</td>
</tr>
<tr>
<td>4.5</td>
<td>Mean Scores, Standard Deviations, $t$ Values, and Significance Levels for Subscales and Total Scale by School Type</td>
<td>80</td>
</tr>
<tr>
<td>4.6</td>
<td>Mean Scores, Standard Deviations, $t$ Values, and Significance Levels for Subscales and Total Scale by Teaching Experience</td>
<td>81</td>
</tr>
<tr>
<td>4.7</td>
<td>Mean Scores, Standard Deviations, $t$ Values, and Significance Levels for Subscales and Total Scale by Certification Level</td>
<td>82</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

Recent research has shown that emerging adolescents have special characteristics and needs that should be of continuing concern among educators when planning an instructional program (Journal interview, 1982; Klingele, 1979; Vaugh, 1969). Any good intermediate school, whether it be a junior high or a middle school, has a program uniquely designed to meet the needs of the transescent (Winchester, 1981). According to Gatewood & Mills (1975) "the lowest common denominator, but yet the highest common necessity, for an effective intermediate school program, is the teacher" (p. 253). In other words, no matter what kind of program is provided or what else is done within the school, the teacher remains the key factor for effective education. Johnson (1962) writes "junior high schools can be eliminated or altered, but pupils of junior high school age will remain, and who will teach them and what they will be taught are the really significant questions" (p. 56).

Although the middle school evolved because of the "alleged failure of the junior high school" (Gatewood, 1970, p. 3) to meet the developmental needs of the emerging adolescent, the philosophies of both schools continue to be almost identical (Stainbrook, 1972). Controversy concerning the middle school and the junior high school movement continues, and mounting research tends to confirm a significant gap between theory and actual practice, in both types of schools (Journal interview, 1982; Moss, 1969; Gatewood & Mills, 1975). Most states are
presently gripped by demands for accountability, and the structure and instructional processes more often than not reflect administrative, political, and economic needs, rather than the needs of the transescent (Journal interview, 1982). More than ever, the teacher remains the key factor with the power to promote or hinder the goals of any learning institution and, therefore, the instructional processes (Baughman, 1982).

The belief of early twentieth century psychologists, that pre- and early adolescents have social-emotional, physical, and intellectual characteristics and needs that are fundamentally different from those experienced by elementary and/or high school students, is now supported by empirical studies and research of various educators and psychologists (Baughman, 1982; Clarke, 1977; Havighurst, 1968; Mead, 1965; Timmer, 1977; Vaugh, 1969; and Wattenberg, 1965). A successful learning environment depends, in part, upon how teachers view the growth needs of their pupils. Thus, the attitudes of teachers toward their pupils becomes a critical factor in the learning environment, particularly in the intermediate years of schooling (Baughman, 1982). In a Middle School Journal interview (1982), Alexander concurs that the "first emphasis should be on the understanding by the teacher of the age group" (p. 6). He also comments that "the profession needs education about children in the middle years" (p. 4) and does not believe the progress needed in teacher preparation has been met. He believes that the most realistic kind of preparation of teachers for the middle school is done on the in-service level. However, the extent to which teacher training prepares prospective teachers in the needs of the transescent is not known. An extensive search of the literature discovered few articles and
dissertations pertaining to teacher attitudes toward the developmental characteristics and needs of the transescent.

STATEMENT OF THE PROBLEM

The problem in this study was to determine the similarities and differences in the attitudes of middle school and junior high school teachers toward the social-emotional, physical, and intellectual needs of the pre- and early adolescent. More specifically, this investigation sought to answer the following questions:

1. Is there any difference in the way middle school teachers and junior high school teachers view the social-emotional needs of the transescent?

2. Is there any difference in the way middle school teachers and junior high school teachers view the physical needs of the transescent?

3. Is there any difference in the way middle school teachers and junior high school teachers view the intellectual needs of the transescent?

4. Will the teacher's years of teaching experience make any difference in the way in which he/she views the social-emotional, physical, and intellectual needs of the transescent? More specifically, will teachers with 6 or more years of teaching experience reflect more positive attitudes toward transescent developmental needs than teachers with 5 or fewer years of teaching experience?

5. Will the teacher's certification level make any difference in the way in which the physical, intellectual, and social-emotional needs of the transescent are viewed? More specifically, will the attitudes of teachers certified at the elementary level reflect a greater degree of
personal acceptance of transescent developmental needs than the attitudes of teachers certified at the secondary level?

SIGNIFICANCE OF THE STUDY

This study has evolved because middle school advocates claim that middle schools are better prepared to meet the needs of the emerging adolescent than junior high schools (Bohlinger, 1977; Bondi, 1973; Eichhorn, 1973; Romano, 1972) and because junior high school advocates claim there is no difference in the instructional process between a good middle school and a good junior high school (Gatewood, 1970; Timmer, 1977). Considering the literature and research, it seems reasonable to assume that teachers are the common element in both types of schools that will identify student developmental needs and determine the instructional processes used to meet those needs.

If, as Gatewood and Timmer claim, there is little difference in practice between the two types of schools, this study may find similarities in teacher attitudes prevalent. However, if the middle schools are based upon the theoretical framework of human growth and development and upon an understanding of the differing needs of the transescent, there should be differences in teacher attitudes toward the developmental needs of emerging adolescents.

Information relative to the possible differences and similarities of middle school teachers and junior high school teachers toward the social-emotional, intellectual, and physical needs of the transescent are important for several reasons:

1. Middle school advocates claim that middle school teachers are more aware of the educational and growth needs of transescents than are
junior high school teachers. Evidence which either substantiates or refutes this premise is important because it will help determine whether or not the middle school is a viable alternative to the junior high school.

2. Any evidence of a difference in the attitudes of the two groups of teachers in any of the three categories--social-emotional, physical, and intellectual--may help administrators determine the need areas where teachers lack sufficient knowledge concerning the transescent. This has implications for planning of in-service programs.

3. It is important in this study to determine how teachers may have developed their attitudes toward the needs of transescents. How a teacher perceives the needs of the student is determined, in large part, by the teacher's educational background and his/her experiences working with students. An examination of the teaching experience variable may indicate that teachers developed attitudes while on the job. Such a finding would have implications for in-service training, particularly for new teachers.

4. An examination of the educational background variable may determine which group of teachers--those certified to teach at the elementary level or those certified to teach at the secondary level--would have a better understanding of the needs of the transescent. The results of this examination would have implications for teacher training and replacement.

5. This study should add to the limited available knowledge in intermediate school research in regard to teacher attitudes toward transescent needs, as well as serve as a foundation for subsequent research in the field of middle school and junior high school education.
It is assumed that junior high school and middle school teachers have some knowledge of the developmental needs of the transescent. The writer's study will attempt to determine the similarities and differences of their attitudes toward transescent needs. The findings will also provide data to evaluate the relationship of teaching experience and certification level to developed attitudes toward the pre- and early adolescent. More importantly, the findings may show a direction for change required in the preparation of future intermediate teachers. Although evaluated data will be relevant only to the teachers in the selected schools in the study, the findings may have implications that will be relevant for intermediate teachers in other junior high and middle schools.

DEFINITION OF TERMS

For purposes of clarification, the following terms are defined:

1. Middle school is an educational organization which includes grades six through eight, is separately housed and administered from other grade arrangements, and is designed to provide an instructional program to meet the educational and growth needs of the transescent.

2. Junior high school is an educational organization which includes grades seven through nine, is separately housed and administered from other grade arrangements, and has an instructional program similar to the high school program.

3. Transescent is a child who is characterized by rapid changes in, and vastly different levels of, physical, social, and intellectual characteristics. These changes usually take place between the ages of ten and fourteen (Klingele, 1979).
4. **Emerging adolescent** is used as an interchangeable term with "transescent."

5. **Pre-adolescent** is a child whose developmental characteristics indicate that he/she is between childhood and early adolescence, usually between the ages of ten and twelve (Timmer, 1977).

6. **Early adolescent** is a child whose developmental characteristics indicate that he/she is moving toward and about to enter the adolescent stage of human development, usually between the ages of twelve and fourteen (Timmer, 1977).

7. **Middle school teacher** is a person who teaches in a middle school.

8. **Junior high school teacher** is a person who teaches in a junior high school.

9. **Intermediate school teacher** is a person who teaches in a middle school or a junior high school.

10. **Elementary-level certification** qualifies a person to teach all subject areas in grades one through eight.

11. **Secondary-level certification** qualifies a person to teach specific areas in grades seven through twelve.

12. **Developmental needs** refer to the social-emotional, physical, and intellectual needs of the transescent as discussed in the literature and research by leading psychologists and educators.

13. **Developmental characteristics** are the behaviors and attitudes associated with the developmental needs of the transescent as identified by leading psychologists and physiologists.
DELIMITATIONS OF THE STUDY

The study was restricted to the following delimitations:

1. The study was restricted to selected middle schools and selected junior high schools in one metropolitan area; therefore, generalizations about any other school localities may not be warranted.

2. The middle schools selected for the investigation were those schools which include only grades six through eight and which are separately housed and administered.

3. The teachers who were involved in this study were limited to middle school and junior high school teaching staff who teach grades seven and eight.

4. The investigation was administered in the spring of 1983.

LIMITATIONS

The study was limited by the following:

1. The degree to which the writer was able to interpret the data accurately.

2. The degree to which the respondents accurately reflected their beliefs.

3. The degree to which the responses were limited by the nature of the questionnaire.

ORGANIZATION OF THE STUDY

This study was an attempt to determine whether there are differences among selected groups of teachers in attitudes toward the developmental needs of the transescent.
Chapter 1 has provided an introduction and a statement of the problem, the significance of the study, the definitions of terms, the delimitations, and limitations of the study.

Chapter 2 contains a review of the literature related to the characteristics and needs of the transescent, the intermediate teacher, the junior high and middle school movement, and how the two school types differ.

The research design is discussed in chapter 2. The instrument used to gather the data along with the methodology to analyze the data is also described in this chapter.

The findings of the study are reported in chapter 4. Detailed hypotheses and an analysis of the data are presented along with tables describing the data. The statistics employed to determine the acceptance or rejection of the research hypotheses will be shown.

A summary of the study with the significant findings is presented in chapter 5. Conclusions and recommendations for further study conclude the presentation.
CHAPTER 2

REVIEW OF RELATED LITERATURE AND RESEARCH

The review of literature and related studies is undertaken to emphasize the importance of teacher attitudes toward the developmental needs of the transescent. It covers five areas.

To understand the educational system as it pertains to the developmental characteristics and needs of the emerging adolescent, a review of the history of both the junior high school and the middle school movements as well as the differences between the two school types, is necessary. To present a proper perspective on the issues involved, a summary of the characteristics and needs of the transescent is provided. To conclude, an overview of material related to the intermediate teacher is given.

The following areas are discussed in this chapter:
1. Junior High School Movement,
2. Middle School Movement,
3. Middle School and Junior High School Differences,
4. The Transescent, and
5. The Intermediate Teacher.

THE JUNIOR HIGH SCHOOL MOVEMENT

In 1888, Charles W. Eliot, president of Harvard University, first put forward the idea that would result in the junior high school being formed. At the National Education Association meeting in Washington, D.C., he presented a paper entitled "Can School Programs Be
Shortened and Enriched?" in which he proposed that the number of grades in the elementary school be reduced from ten to eight (Krug, 1964). Eliot was concerned about the age of college freshmen, and by allowing the secondary school to absorb the last two years of elementary school, it would lower the age at which students would enter college (Stephens, 1967).

Eliot also argued that democratic theory did not imply an identical curriculum for every child. He stated that children are "infinitely diverse" (Krug, 1964, pp. 43-51) and every child has a unique personality; therefore, the public schools should provide individual instruction, grade according to capacity, and provide demonstrations and laboratory experience for learning.

Eliot continued to make other appeals for educational reform and was joined by others who believed it was time for the format and curriculum of the schools to be changed. As a result, the NEA appointed various committees to investigate and make recommendations concerning the "new (child-centered) education" (Krug, 1964, pp. 43-45) and other curriculum changes. The reports of these committees shaped the course of education for years to come.

The first type of junior high school, introduced in Richmond, Indiana, in 1896, was "a modified grade organization" (Hamm, 1974, p. 20) in which 7th and 8th grades became a part of the secondary education department. These two grades were separately housed. The literature is in general agreement that the first three-year junior high school appeared in Columbus, Ohio in 1909.

By 1910, schools began to adopt the six-year secondary plan, which dealt in a practical way with the extreme age ranges prevalent at
the time by putting half in the junior high school and half in the high school. In addition, the serious dropout problem called attention to the need for better programs to meet the needs of many students in grades 7-9 (Stephens, 1967). A change in handling of these students resulted after the publication of G. Stanley Hall's Adolescence, which viewed the adolescent period as being one of upheaval and stressed that special insight was needed to work with this age group. His work influenced educators that schooling should be based on psychology. However, Margaret Mead (1965), among others, has pointed out that the junior high school concept came into being prior to the insights educators have today of the transescent.

Changes in educational philosophy, under the leadership of Dewey, demanded reform and reaction against the traditional school, and adoption of the junior high school became the "thing to do" (Sanders, 1968, p. 7). In 1916, Dewey's Democracy and Education was published, and his definition of democracy as a social process, as an experience, advanced the progressive educational theories of educational practitioners and the theorists of the time.

In 1918, the NEA suggested establishing an intermediate school with a grade structure of 7-9. The Commission on the Reorganization of Secondary Education, appointed by the NEA, proposed that the new school organization should:

Attempt to help the pupil to explore his own aptitudes and to make at least provisional choice of the kinds of work to which he will devote himself. . . . In the junior high school there should be the gradual introduction of departmental instruction, some choice of subjects under guidance, promotion by subjects, pre-vocational courses, and a social organization that calls for the initiative and development of the sense of personal responsibility for the welfare of the group. (Klingele, 1979, p. 10)
The advent of the junior high school was influenced by a variety of complex and interrelated factors existing in the American society at the turn of the century. Lounsbury (1960, pp. 145-147) identifies some of the reasons for its inception:

College presidents in the 1890's wanted secondary schools to speed up and improve college preparation. . . . Several national committees issued influential reports which supported reorganization proposals in the period 1892 to 1918. . . . Educators were seeking a solution to the appallingly high rate of drop-outs and retardation as revealed by the pioneer studies of Ayers, Strayer and Thorndike. . . . Many educators were levying criticisms on the existing systems with its all-too-evident ills and shortcomings. . . . Psychologists, like G. Stanley Hall, supported special institutions as being able to cope with the "new beings" early adolescents were thought to be. . . . Educators aspired to put into practice more completely new understandings of individual differences which the psychologists were clarifying through their research in the 1919's. . . . The junior high school afforded an outlet for the strong reaction against traditional education led by noted educational philosophers. . . . The growing masses of immigrants and urban dwellers required a more extensive type of citizenship. . . . Many who never reached the later years of high school needed vocational training. . . . The junior high school was a good solution to the school building shortage caused by World War I and again by World War II.

Kindred (1968) found the four main purposes of the junior high school in the late twenties to be:

1. To meet the individual difference of pupils,
2. To provide prevocational training and exploration,
3. To provide counseling or guidance,
4. To meet the needs of the early adolescent group (p. 10).

In 1947 Gruhn and Douglas identified six basic objectives which reflect the changes in thinking regarding the purposes of the junior high school over the years.

1. Integration—Providing learning situations in which students may utilize previously acquired skills, attitudes, ideals, interests, and understandings that will become integrated into wholesome and effective student behavior (general education for all students).
2. Exploration--Leading students to discover and explore their specialized interests, aptitudes and ability as a determinant for decisions concerning educational opportunities and future vocational decisions. Stimulating and providing opportunities for students to develop an expanding range of cultural, social, civic, and recreational interests.

3. Guidance--Educational and Vocational--Assisting students in making their own decisions and making satisfactory mental, emotional and social adjustment in growth toward wholesome, well-rounded personalities.

4. Differentiation--Providing for individual differences.

5. Socialization--Providing learning experiences to prepare students for effective and satisfying participation in our complex social order.

6. Articulation--To provide a gradual transition from pre-adolescent education to an educational program suited to the needs and interests of adolescent boys and girls. (p. 60)

Lounsbury (1960) pointed out that it was the interaction of all these factors that caused the junior high school's growth and change. He added that the major purpose of the junior high school movement, overall, was to "provide an appropriate educational program for early adolescents" (p. 146). Gatewood (1970) tends to confirm Lounsbury's belief. He writes, "since its inception, the reason for being of the junior high school has been to intervene in the educational process between childhood and adolescence and serve the special intellectual, social, physical and emotional needs of pre- and early adolescent pupils" (p. 1).

Overly, Kinghorn, and Preston (1972) claim that the junior high school was designed to be more than an administrative arrangement, that it was designed to bridge the gap between elementary school and high school, making transition easier. Educators expected children to remain in school longer because the curriculum would be more interesting than that of the upper elementary grades, and they would be attending a different building.
The central theme behind the junior high school is that the student became an independent individual, an adolescent, and should not be treated as a child. Proponents of the junior high school believed that this new school could better meet the needs of this age group since they needed a special program that would be less departmentalized than the high school and more flexible than the elementary school. The junior high school could offer the security that these children needed (Curtis and Bidwell, 1977).

The growth of the junior high school from 1920 to 1940 was phenomenal. By 1922, there were approximately 733 junior high schools. The period reflected new and changing emphases in development and purposes, and the junior high school became a firmly established American tradition (Stephen, 1967).

The years between 1940 and 1960 were a period of transition for the junior high school. Following World War II, education began to concentrate on the junior high school movement with renewed interest as a result of the findings from increased research and studies of the pre- and early adolescent. There was a growing realization of the importance of the junior high school in meeting the developmental needs of this age group (Barton, 1976).

The decade of the 1960's continued the educational programs of the previous decades for the most part. Utilization of such organizational and methodological elements as team teaching, differentiated staffing, independent study, programmed instruction, various kinds of educational technology, as well as improved laboratories and media centers were added to existing programs (Barton, 1976).
During the years of its existence, the junior high school changed very little. The following practices are typical of most junior high schools throughout the country:

1. There is a trend to increase the number of classes.
2. Periods continue to average about 50 minutes.
3. Departmentalization is characteristic.
4. Three-fourths of all separate junior high schools are made up of grades 7-8-9. Two year junior high schools of grades 7-8 are common and make up nearly a fifth of the schools.
5. Many classes have 25-29 pupils, but a typical class might be 30-34.
6. Most junior high schools have their own library, gymnasium, science, and practical arts facilities.
7. Usually electives are found only in eighth and ninth grades (McHugh, 1969, p. 28).

Since the latter part of the sixties the junior high school has been the recipient of a great deal of criticism. Critics claim that the junior high school has been ineffective in meeting its purposes and goals (Conant, 1960; Kindred, 1968; Mead, 1960; and Popper, 1967). Alexander and Williams (1965) write that the dissatisfaction with the junior high school is not with its original conception of function, but partly with what the junior high school has become. The general consensus of critics of the junior high school is that the junior high school appears to have adopted the program of the senior high school; that there is too much emphasis placed upon inter-scholastic sports; that social events are too sophisticated; and that subject matter is departmentalized. Timmer (1977) contends that the junior high school has
failed to meet the needs of the students. Students have not been taken into account when junior high school programs were planned and implemented. Popper (1967) criticized the junior high school because students are promoted by subject and units of credit. The junior high school is like a "junior" (p. 194) to the senior high school, mimicking its academic programs and social activities.

THE MIDDLE SCHOOL MOVEMENT

The mounting evidence of the last 20 years from the research of educators, physiologists, and psychologists concerning the emerging adolescent tends to support the need for certain approaches and methods to satisfy the developmental needs of the 10-14 year old age group. This information has been the theoretical justification for the proponents of the middle school movement who are concerned with the physiological, psychological, and sociological characteristics and needs of the transescent.

With the increased pursuit of academic excellent in the 1950's and 1960's, the junior high schools patterned their curricula more and more after the senior high school. Without doubt, the requirements of the Carnegie Unit in the ninth grade has helped to make the class schedule inflexible for all three grade levels, and has impeded the development of a more functional curriculum. With the social pressures to humanize the schools in the late 1960's and early 1970's, there were increasing attacks on the junior high school, and criticism of its programs began to mount (Overly, Kinghorn, and Preston, 1972).

Concomitantly, educators began to look to the emerging middle school as the vehicle to bridge the childhood phase of elementary
schooling with the adolescent phase of secondary schooling. Kindred (1968) claims the first middle school to be established was located in Bay City, Michigan in 1950. The 1960's and 1970's witnessed a large scale establishment of these schools. Cuff (1967) found 499 middle schools in 29 states in 1965-66; Alexander (1969) located 1,101 middle schools in 37 states in 1967-68; and the 1968-69 school year survey identified 1,146 middle schools in 38 states. In updating Alexander's survey, Kealy & Fillmer (1970) found 2,298 middle schools in 50 states in 1970. Toefler (1977) reports that middle schools in the United States increased from 3,723 in 1974 to over 6,000 in 1977. Toefler also noted that although middle schools are increasing, there is a corresponding decrease in junior high schools.

Middle schools commonly incorporate grades 6-7-8 or 5-6-7-8, placing the ninth grade back in the high school. This frees the middle school of the Carnegie Unit, and with this relief, the pressures associated with an impressive transcript for college entrance no longer exists (Compton, 1968). Porter (1967) believes

This change is the strongest case for the middle school because it removes the many influences of the secondary school, and the middle school does not have to be a junior anything, and thus is free to experiment with non-graded schools, flexible scheduling, ungraded coursework, individual teaching, resource centers and all of the other middle school theories which have too often become abandoned in favor of traditional methods (p. 29)

when the Carnegie Unit must be considered. With removal of the ninth grade, it is much easier to avoid many of the social affairs associated with high school life.

The middle school movement is founded upon the philosophy and growing practice that schools serving the 10-14 year old age group must differ from elementary and high schools to serve the educational require-
ments of the transescent learner. Without exception, the leading middle school advocates stress the creation of a learning program based upon the developmental needs of the pre- and early adolescent.

Eichhorn (1973) states three factors that motivate educators to redefine the purposes of schools in the middle:

1. There is a growing body of knowledge relating to the characteristics of boys and girls in late childhood and early adolescence that is causing a reaffirmation of the principle of uniqueness espoused by early junior high leaders. The fact that biological maturation is occurring at an earlier age adds to its impact.

2. There are significant changes in our culture such as population mobility, the dream of racial equality, developments in the transportation and communication systems, and the forces involved in a developing technology which are prompting a reconsideration of building as well as organizational pattern.

3. There is a growing realization that schools in the middle have become rigid and institutionalized. A variety of developing educational concepts such as continuous learner programs, flexible schedules, non-grading, inter-discipline curriculum, cooperative planning and teaching, and affective programs, appear to succeed in a revised framework. (p. 196)

In a review of statements of rationale, Alexander & Kealy (1969) summarize as follows:

1. To provide a program especially adapted to the wide range of individual differences and special needs of the "in-between-ager."

2. To create a school ladder arrangement that promotes continuity of education from school entrance to exit.

3. To facilitate through a new organization, the introduction of needed innovations in curriculum and instruction. (p. 152)

MIDDLE SCHOOL AND JUNIOR HIGH SCHOOL DIFFERENCES

The focus of the middle school concept is on the physical, social-emotional, and intellectual developmental needs of the individual
student in the 10-14 age bracket. The curriculum of the middle school is designed to meet the specialized needs of the transescent learner. The dangers of excessive competitive school activities, the need for optimum balance between individual security and exploratory freedom, and the equal importance of affective, as well as cognitive, learning is considered.

However, the rigorous demands of meeting these criteria have led to controversy and debate in recent years. Gatewood and Mills (1975) state the middle school has not substantially changed the basic educational programs and practices of the junior high schools; that the same sins committed in the past have been repeated because schools were organized for reasons more administrative than educational. Still, some educators argue that differences between the junior high school and the middle school do exist because middle schools were founded on the principles of child growth and development.

Timmer (1977) declares if this is the case, then knowledge of the growth characteristics of transescents "should be present among the staff of a middle school organization if it is to provide a program based upon the needs of the students it serves" (p. 3). Thus the important questions are do teachers have a good understanding of the growth characteristics and needs of the transescent and is this knowledge reflected in the teacher's classroom behaviors? Are middle schools any different from previous organizations and are they better schooling arrangements for children?

A review of the literature revealed that few studies are available relative to the attitudes of teachers toward the developmental characteristics and needs of the transescent. However, much research has
been done to determine which school type seems to be implementing the educational programs deemed appropriate for the emerging adolescent; how each school type is meeting the needs of its students; and whether or not the two school organizations are really any different from one another in action. Several studies are cited to illustrate the differences and similarities in junior high and middle school practices. A few are cited relative to the teacher's understanding of the developmental characteristics and needs of the emerging adolescent.

Harris (1968) surveyed 12 middle schools and 12 junior high schools to compare instructional organization, academic programs, and co-curricular activities and found that the basic programs were more alike than they were different.

Similarly, Gatewood (1970) compared the perceptions of school personnel in 19 middle schools and 19 junior high schools in five states. He reported that teachers and administrators in both school organizations differed in their perceptions of the functions of the middle years of schooling; however, they were more similar than different in organization and in instruction. In both kinds of schools, the respondents considered pupil development through special curriculum and instruction the most important and unique feature of their schools. Nevertheless, he found that in both school organizations, the middle school concept exists more as ideal than a reality.

In a follow-up study in 1971, Gatewood reviewed the literature and concluded that there were more similarities between the two school types than differences. He comments "research gives no unequivocal answer to which type of schooling is better" (p. 264).
Davis (1970) conducted a study in 35 middle schools and 35 junior high schools to determine to what extent the middle school, in actual practice, is doing a better job of meeting the needs of emerging adolescents than its predecessor, the junior high school. He found middle schools were less likely to participate in interscholastic sports, cheerleading sessions, marching bands, night dances, pep assemblies, and honor societies. In addition, middle schools have more flexible schedules, team teaching and independent study compared to the junior high school. He noted, however, that guidance programs in the middle schools did not rate high. In fact, "junior high guidance programs were far superior to the programs in the middle school."

Baruchin (1971) conducted a study to determine whether middle school programs and practices were more innovative than the programs and practices of the junior high school. He found that middle schools were more innovative than the traditional junior high school. Most of the differences in favor of middle schools were reported for grades seven and eight.

In a similar study, Gatewood (1971) surveyed junior high schools and middle schools in Michigan to determine the differences between the two school types in school practices. He reported that both school organizations had programs and instructional activities similar to those used in the past for early adolescents. Differences between the two school groups were small:

Slightly more middle schools than junior high schools used departmentalization with one teacher for each subject and interdisciplinary team teaching in grades seven and eight. Slightly more junior high schools used subject area team teaching and a combination of either self-contained or block-of-time planned instruction. Slightly larger numbers of junior high schools used large-group and small-group instruction, flexible schedules, core classes, ability grouping, and individually prescribed instruction. (p. 275)
Fenlon (1975) examined several middle school programs to determine if school practices were meeting the educational and growth needs of the students. He concluded that most of the middle school practices were serving the needs of the students.

Green (1977) compared the perceptions of principals of Michigan junior high schools and middle schools to determine the degree to which their schools implemented selected practices recommended in the literature concerning intermediate education. He found that middle schools and junior high schools showed no difference in their perceptions of how much their schools implement practices grouped in the areas of philosophy, organization and administration, instructional programs, activity programs, staff, and facilities.

Bohlinger (1977) conducted a study in Ohio middle schools to determine the current level of implementation of 18 middle school characteristics. He reported that the Ohio public middle schools did not put into practice, "to a great extent" the 18 middle school characteristics.

Wilson (1977) compared student activity programs in Arizona junior high schools and middle schools. He found middle schools put more effort into integrating student activities into their daily activities: the junior high school tends to view the student activity program as "extracurricular." The greatest difference in the two school types' student activity program was found in the area of athletics. The middle school stressed more recreation and intramural type activities, placing less emphasis on athletics than did the junior high school.

George (1977) compared middle school and junior high schools in Florida to determine if the middle schools were really any different from
the junior high school in curriculum and instructional practices. His study confirmed earlier studies that the two school organizations are similar in most respects. Some differences were found in certification patterns, guidance programs, departmentalization, team teaching, sports, and social activities.

Brooks (1978) did a national survey concerning staffing and curriculum in the middle school which continued to confirm earlier studies. He stated "it was hard to tell the difference in programs between the middle school and the junior high school or even from the high school for that matter" (p. 7).

Klingele (1979) writes "the middle school can be compared to the traditional junior high school in philosophy, curriculum, and instruction as shown in the following:"

<table>
<thead>
<tr>
<th>Middle School</th>
<th>Junior High School</th>
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<tr>
<td>1. Emphasis on positive self concept and the importance of the individual.</td>
<td>1. Emphasis on knowledge, learning and norms.</td>
</tr>
<tr>
<td>2. Stresses the uniqueness of the transescent learner. Stresses learning how to learn.</td>
<td>2. Treats the learner as an adolescent. Stresses learning a body of knowledge.</td>
</tr>
<tr>
<td>3. Provides for exploration, creativity, interdisciplinary instruction, and flexibility in scheduling.</td>
<td>3. Provides competition, mastery of facts, skills, and predetermined group goals and instructional time limits.</td>
</tr>
<tr>
<td>4. Emphasis on flexibility and variety of teaching techniques, planning and student involvement in determining goals.</td>
<td>4. Emphasis on teacher-centered and controlled instruction, textbook learning, and lecture and discussion methods of teaching.</td>
</tr>
<tr>
<td>5. Commonly employs individually paced learning.</td>
<td>5. Commonly employs group-paced learning. (p. 8)</td>
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</table>
Armstead (1968) studied the opinions of the sixth-grade middle school teacher and the seventh-grade junior high school teacher. Teachers were asked to indicate whether or not they agreed with eight accepted intermediate school functions. He noted that the purposes of both the junior high school and the middle school are basically the same, are consistent with the literature, are well-accepted, and firmly established.

Costantino (1969) compared three middle schools and three junior high schools in Pennsylvania to determine whether the middle schools differed from the junior high schools in terms of curriculum and teacher-pupil classroom behaviors. He assumed that the middle school offered curriculum and instructional experiences that differ from those in the junior high school. He found that curriculum in both school organizations were similar in all respects and that no difference existed between the two teacher groups in terms of teacher-pupil classroom behaviors.

Hefner (1969) analyzed research on the physical, social, and intellectual growth characteristics of the transescent. The purpose of his study was to establish a model program for intermediate schools. Based upon his findings he made several recommendations for a middle school program, many of which are current practices in middle schools today.

In a similar study, Vaugh (1969) examined the characteristics, needs and interest of pre- and early adolescents to determine their implications for an educational program. Information collected through a review of the literature was contrasted with a survey of different student populations. The findings were utilized to serve as guidelines
in the establishment of middle school programs.

In 1970, Dilg conducted a study to determine if the middle school differed from the junior high in attempts to develop curricula based upon emerging adolescent needs. He found that several practices of the middle school, particularly its flexibility, were better able to meet students' needs.

Hubert (1973) studied junior high and middle school teachers' attitudes toward the needs of the emerging adolescent. He reported most teachers agreed with the statement that "providing a school environment which specialized in helping the student make a smooth transition from childhood to adolescence is the primary purpose of the school for emerging adolescents."

Schafer (1974) assessed teacher attitudes toward students in differing junior high school organizational climates. His findings indicated that there was no significant difference between the open and closed climates. However, he found that teacher-student relationships were more positive in the open climates than in the closed climates.

Timmer (1977) conducted a survey to assess the amount of understanding that teachers in three middle schools and three junior high schools have about the developmental characteristics of the emerging adolescent. An analysis of the data indicated a "slightly favorable trend toward middle schools and toward teachers who choose to work with 10 to 14 year old students."

Hodges (1978) carried his study a little further. He assessed participants' perceptions of their own knowledge of the characteristics of transescents and of their classroom practices which were congruent with behaviors indicated as acceptable by experts in the field. Subjects
in the study were limited to those teachers who taught science, language arts, math and social studies. The greatest difference occurred when the knowledge which teachers professed that they possessed was compared with their implementation of classroom behaviors related to that knowledge. Math teachers appeared to be less informed and implemented classroom practices related to the emerging adolescents' characteristics less than teachers in other subject areas. Science teachers professed to most consistently correlate knowledge and implementation of all characteristics. Teachers in all four areas scored higher in correlating knowledge of intellectual characteristics with implementation of classroom behaviors related to those characteristics.

Bearden & Gillan (1980) conducted a survey of 45 middle school teachers certified to teach at the middle school level and 45 middle school teachers certified to teach at the elementary or secondary level. They were asked to supply information relative to employment, certification, and the middle school concept. Compared to the elementary or secondary certified teachers, middle school certified teachers had a more positive attitude toward the middle school concept, favored special preparation for middle school teachers, and expressed greater job satisfaction.

Alexander believes the purposes of both schools are similar, and points out that there are an increasing number of junior high schools that look like good middle schools, so perhaps a middle ground will be found that all can support (Journal interview, 1982).

Good schools are made by good teachers, regardless of level or organizational pattern. Parents, educators, and college professors must accept the fundamental truth that "fancy" organizations do not make good
schools for young adolescents (Hull, 1965). There may be little doubt that the junior high school has failed to fulfill its original function, but, on the other hand, the middle school has provided no concrete evidence that it affords the adolescent significantly improved education. Middle school proponents frequently interpret any criticism of the junior high school as an endorsement of the middle school (Sexton, 1967). By doing so, they ignore a major principle as cited by Johnson (1962) that junior high schools may be changed or altered, but the students remain and "who will teach them and what they will be taught" (p. 56) is more important.

THE TRANSESCENT

For the purposes of this research, particular attention is focused upon the functions of meeting the needs of the pre- and early adolescent learner. Therefore, a review of the literature as it pertains to the physical, social-emotional, and intellectual growth characteristics of the emerging adolescent is presented in order to understand the special developmental needs of this growing period, the period of transescence which encompasses the 10-14 age group.

Developmental Characteristics of the Transescent

In discussing the early adolescent in the United States, Havighurst (1965) states a child is more sophisticated than his counterpart of the twenties and thirties because of mass media, mobility, improved socio-economic conditions, better nutrition, up-graded health, and better educated parents. Even so, Bauer (1965) writes, "today's adolescent is fundamentally the same adolescent struggling with the same basic problems characteristic of the transescent period" (p. 15). Mead
(1965) notes that children of today mature earlier, and become taller than their parents, and parents are inclined to treat and expect them to act older than they are. She also notes that intermediate students are "more unlike each other than they have ever been before or ever will be again in the course of their lives" (p. 10). The seats in a typical intermediate classroom appear to be occupied by men, women, and children. During the period of transescence, many aspects of growth and development occur which are essential to a successful adult life; body size increases, proportions and contours change, more and more motor skills develop, secondary sex characteristics develop, the ability to establish and maintain peer relations is acquired, a positive (or negative) self-concept is formed, the ability to use hypothetical reasoning and make judgments emerges, and concept development is phenomenal. All of this makes it necessary to examine and understand what takes place within a child during the middle years of development—age 10 through 14 (Williams and Stith, 1974).

Gatewood's (1981) description of the transescent is more dramatic:

They must be moving and chattering constantly, but may suddenly become listless and doze off. Seeking an outlet for their curiosity and a challenge for their intellect, they love to explore. They suffer sharp emotional ups and downs. One moment they are exuberant, full of confidence and on top of the world, the next day they are depressed and unresponsive. They are social animals with an interest and need to interact with others and develop constructive peer relations. Yet they may be exceedingly shy. Quixotic? Disturbingly so. Contradictory? Beyond question. Transescents are all of these and more. (p. 26)

He further comments that any teacher who has taught in a middle school is well aware of the symptoms of transescent behavior, but he believes few know or understand their root causes. Consequently, many teachers perceive the normal and natural behavior of the transescent
stage as discipline problems and treat them accordingly. "Conforming to the rigid and strict controls generally imposed on them is simply not in the intellectual, physical, and social-emotional nature of the transescent" (p. 26).

In discussion of transescent characteristics, according to Williams and Stith (1974), "growth is usually interpreted as quantitative change i.e. increase in height, weight, vocabulary, humor, and imagination; whereas development connotes qualitative change i.e. progression toward maturity, and the integration of structures and functions" (p. 27).

**Physical Characteristics.** Emerging adolescents, both male and female, experience significant changes during the pre-puberty period and these changes distinguish them as a phenomenon in human development. The growth spurt and the rapid maturation of the reproductive system create a condition of continuous change for the middle school student after a period of relative stability (Curtis and Bidwell, 1977). In a study to determine the level of biological maturation and conditions of health of intermediate school students, Eichhorn (1973) found that "the variability in physical growth and level of sexual maturation at a particular chronological age were extremely broad" (p. 23). He also found that as physical maturation occurs, the attitudes, interests, and value patterns of children undergo comparable changes. In any one classroom there may be a tremendous range of maturity levels. Some 14-year-old boys may be biologically and physiologically ten years old, while some fourteen-year-old girls may appear to be both biologically and physiologically eighteen years old (Romano, Hedberg, and Lulich, 1973).
Bodily changes can occur anytime between the ages of eight and twenty-two. Bones lengthen, muscles increase although more slowly, and glands begin to secrete hormones. "These conditions are accompanied by increased height, weight, body breadth and depth, heart size, lung capacity, and other structural changes" (Curtis and Bidwell, 1977, p. 19). Nine of ten girls are pubescent by the time they are thirteen years of age, while only four out of five boys have reached pubescence by this age.

With the physical growth and change in anatomy come the growth of the reproductive system. Transescents' sexual development begins a few years prior to the onset of puberty (Eichhorn, 1968). The average intermediate school student develops strong sexual feelings and desires, the boy more frequently and acutely than the girl. There is an interest in securing information about sex and babies. Gesell, Ilg, and Ames (1956) point out that although middle school students are often given sex information when they were younger, "many seem to have forgotten the knowledge they received" (p. 45). In addition, because girls experience more rapid sexual (and social) development by observation of their menarche and breast development, it holds true that they are more sex-aware--but only at the pre-adolescent stage.

Boys frequently experience sexual arousal and tension which they urgently desire to discharge through orgasm according to Smart and Smart (1967). Kinsey (1953) maintains that adolescent boys greatly exceed adolescent girls with regard to number of orgasms of all kinds experienced; however, girls appear more responsive when sex feeling or arousal is taken into account. By age 13, 34 percent of girls have experienced sexual arousal.
Loomis (1964) summarizes sexual maturation as follows:

1. Children of this age develop a keen interest in their own bodies and in sex and sex processes, including human reproduction. There is a continued interest in other living organisms.

2. Puberty is accompanied by increasing sexual impulses with a desire to express affection by some physical means. Holding hands, walking with arms around one's companion, even fairly intense kissing remain for most young people expressions of friendship rather than erotic excitations.

3. At this age level, there is an increased desire for information about sex.

4. Masturbation may become a source of future personality difficulties if the matter is not properly handled.

5. Most children of these ages desire associations with the opposite sex. Some of the least mature children still respond without reference to sex. This tendency is more marked in boys than in girls.

6. Less mature youngsters tend to shy away from the opposite sex, and most youngsters are somewhat insecure in their relationships with the opposite sex.

7. Some adolescents experiment with sexual intimacies in order to allay unconscious self-doubt of their sexual adequacy. Sometimes, in a desire to assure himself and others of his adequacy, the adolescent may boast of sexual intimacies that he never experienced. Sometimes, an adolescent's mixed feelings about the ethical implications of his sexual impulses may lead him to find gratification in an eroticism that is devoid of companionship. (pp. 180-182)

Although growth patterns are the same for both sexes, the timing and magnitude of these changes vary tremendously from child to child; however, the sequential order in which they occur is relatively consistent in both sexes. According to Stolz and Stolz (1944), "the sequence lasts for from four and one-half to seven and one-half years and is completed somewhere between the ages of fifteen and eighteen years in girls; between seventeen and twenty years in boys" (p. 81). Romano et al. (1973) identify the major physical changes which occur during the onset of puberty:
1. Growth pattern is the same for all boys and girls, but there are wide variations in timing and degree of changes.

2. During this time, the greatest amount of physical (as well as psychological and social) change in an individual will occur.

3. Bones grow fast, muscles slower; legs and arms grow proportionately faster than the trunk.

4. Girls are usually taller and proportionately heavier than boys (ages 11-14). Some girls are mature; menstruation begins (12-13), and development of breasts and hips becomes noticeable.

5. Boys are growing broad-shouldered, deep chested and heavier with a voice change being more noticeable than with girls.

6. Facial proportions change as nose and chin become more prominent.

7. Secondary sex characteristics develop--hair appears on face and in genital area.

8. Poor posture and awkwardness become increasingly evident.

9. Endurance is usually not high, perhaps because of the rapid growth spurt. Preadolescents can over-tire themselves in exciting competition.

10. For many, this is a period of listlessness, possibly of an emotional or physical cause.

11. Pimples and excessive perspiration become problems as glands produce oily secretion.

12. Continues to enjoy comparative freedom from disease. (pp. 187-191)

Maturation creates wide differences between the sexes, as well as within them. Body development greatly influences outlook on life, self-concept, personality, and social adjustment. Variance in growth can cause serious emotional problems (Eichhorn, 1968).

The boy who is short, weak, or underdeveloped sexually is likely to lose status among his age mates and feel inferior (Eichhorn, 1968). Late maturing girls tend to feel inadequate, rejected by peers, and
suffer frustrations and embarrassments that are humiliating and
defeating (Jersild, 1963).

Although there is little in the literature on sensory growth,
English and Pearson (1955) believe that sensory growth during the
adolescent period is a factor contributing to the behavioral extremes of
the middle school student:

One day the individual is bright and alert, interested and apprecia-
tive of the world, reacting to it, feeling it, singing its praises. The
next day he may be apathetic, disinterested, unable to learn, often
unable apparently to hear the simplest statement or see the
most obvious detail. (p. 326)

Many children start to do poorly in school about the seventh
grade, and this decline may last the better part of a year, yet the next
year they may do excellent work. The effects of sensory growth appear to
be similar to those of physical growth, and the difficulties will pass as
the individual grows older (Vaugh, 1969).

There appears to be a definite relationship between the biological
changes (or the lack of them) that occur during the transescent period
and emerging adolescent behavior. Internal and external pressures over
which there is little control create anxieties and tensions that are
reflected in classroom behaviors. Changing cultural expectations com-
pound the difficulties experienced by the transescent. Student behavior
is not necessarily a lack of respect for the teacher, learning, or
society; but, in all probability, is directly related to the developmen-
tal physical, growth changes characteristic of the age group (Howard,
1968).

Social-Emotional Characteristics. The association between
physical growth and social-emotional development appears to be a strong
bond (Eichhorn, 1968; Klingele, 1979; Gold & Douvan, 1969; and Vaugh,
1969). It is clear, at least physically, that students are entering the early phases of adulthood at an earlier age (Wattenberg, 1965).

The growth spurt and the rapid maturation of the reproductive system cause changes in the way that transescents are expected to behave, particularly in social interaction (Gold and Douvan, 1969). Mead (1965) states adolescents are expected to mimic the ways of adults, long before they are emotionally ready. There is a steady spread downwards in age level of dating, going steady, and pairing off rather than one-sex friendships. Competitive athletics in lower grades is common even though the body of informed opinion, both medical and educational, remains against interscholastic competition at the middle school levels (Romano et al., 1973; Timmer, 1977).

Williams (1968) states he has "not yet found that middle school or that junior high school with convincing evidence that inter-scholastic athletics were necessary to provide for the personal development of needs of the young learner" (p. 41). He believes there is too much pressure on the child and the school. Redfearn (1981) comments that no one societal expectation has so completely dominated children as has their role in athletic competition. He further comments that the need of the community is being met, not the need of the child.

Criticism has grown since the early 1970's by education specialists, medical professionals, behaviorists, and elements of the lay public regarding not only the physiological, but the psychological negative impact of sports upon the growth and development cycle of children.

Physical and psychological growth have been shown to be related in many studies. Early maturers are self-confident, independent, and
socially capable while late maturers often have negative concepts of themselves; feelings of inadequacy, rejection, and dependency, and a rebellious attitude toward parents and authority figures. Early maturers consistently present a more favorable personality development with regard to important social variables than do late maturers (Curtis and Bidwell, 1977; Vaugh, 1969).

According to Offer (1982) "adolescent turmoil is defined as an emotional condition that represents significant disruption in psychological equilibrium leading to fluctuation in moods, confusion in thought, rebellion against one's parents, and changeable and unpredictable behavior" (p. 29). Typical, or normal, adolescents need to experience these confusions and frustrations to develop their sense of identity.

Perhaps Erickson (1959), in his work on social identity, has written best about the differentiating aspects of development in adolescence. He sees human development consisting of a series of eight crises psycho-social stages, which follow each other in a fixed sequence. Although the ages at which individuals go through the stages may vary, each stage must be successfully completed before the next one is entered. The transescent must "find ways to integrate what he feels he is with, what his society allows him to be, at a time when he is not altogether sure what he is or what he is allowed to be" (p. 257).

Similar is Kohlberg's well-known work on moral judgment. His moral stage theories often require a painful evaluation of one's personal beliefs and may be a long period of conflicting values in which the adolescent may reject all cultural values. Until the adolescent can sort out the moral principles of his society, the transition from
"conventional" morality to "principled" morality is a painful process. Once the transition takes place, a stable identity emerges that can withstand the multiple pressures and demands of a complex society (Kohlberg & Gilligan, 1971).

Havighurst (1951) also has a stage theory of developmental tasks, including seven stages of life from infancy through later maturity. He defines a developmental task as "midway between an individual need and a societal demand" (p. 4). The adolescent must move from a self-centered emphasis toward meeting some demands of society; as a result, Havighurst sees the three major tasks for the early adolescent as:

1. Organizing one's knowledge of social and physical reality,
2. Learning to work well in the peer group, and
3. Becoming an independent person.

Havighurst observes that if the individual fails to grasp a given task, it will result in the inability to handle more difficult tasks and will cause increased anxiety and social disapproval. He sees the necessity of the individual becoming more emotionally independent of the family while at the same time beginning to establish good relationships with those of like age of the opposite sex.

Both Coleman (1961) and Bauer (1965) describe changes in society that affect teenagers, particularly those concerning family life and the stresses that make them look to each other rather than the adult community for their social rewards. The peer influence is extremely strong at the middle school level and provides a psychological security, a psychological closeness that today's emerging adolescents seem to need because the family no longer satisfies these needs as it
once did. Bauer sees the basic conflict of adolescence as the struggle
to become independent while still needing to be dependent at the same
time.

Adolescent friendships have special qualities and are no longer
a contest for exchanging material goods, favors, or help, as during the
childhood years. Sullivan (1953) called that special quality "chumship,"
which was an "important shelter from the pressures of parent and school
and served as the building block for psychological health and maturity"
(p. 58).

Social status and peer relationships as they relate to perfor-
mance, behavior and attitudes in the classroom were observed by Johnson
and McCann (1980). They found popularity may be related to physical
appearance, and low social status appeared to be related to low rates of
verbal participation. They further found that a good class climate
existed when the teacher supported the group's social system. In
addition, peer opinion may support or impede a student's involvement in
a class, both academically and socially.

Maslow (1970), in his theory of growth and motivation, proposes
a hierarchy of needs consisting of "deficiency" needs and "growth"
needs. The lower deficiency needs of physiological, safety, belonging-
ness, and love, and esteem can be satisfied only by other people,
whereas the growth needs of self-actualization, knowing and under-
standing, and aesthetic are satisfied autonomously and tend to make one
self-directed. Maslow's concept has implications for teachers because
it helps explain why some students are more motivated to learn than
others and why some are better adjusted than others. Satisfying the
lower needs of students becomes an important consideration so they can
function at the higher levels.

In the same vein, Combs (1982) believes that teachers who practice affective education will help their students learn anything better, including time-honored basics. Modern thought and research has contributed four major ideas:

1. That we have meaning-oriented brains, not merely a stimulus-response organ or a "fact" storage container;

2. Learning is the personal discovery of meaning--crucial aspects of learning lie in the subjective experience of the learner.

3. Feeling and emotion are indicators of meaning--the degree to which something is personally relevant to the behavior; and

4. Four highly affective factors are known to influence the learning process critically. All are matters of personal belief and feeling. They are:
   a. self-concept
   b. feelings of challenge or threat
   c. values
   d. feelings of belonging or being cared for. (pp. 495-496)

In classrooms, self-concepts determine the quality of the students' learning. The reverse is also true; student experience in the classroom vitally affects the self-concepts formed about abilities to learn. "What we now know about self-concept and its effect on learning processes has been demonstrated beyond question" (Combs, 1982, p. 496).

Much of the interest in self-concept and esteem seems to grow out of their reported relationship to academic achievement (Brookover, Thomas, and Paterson, 1964; Purkey, 1970); however, a substantial and growing body of empirical evidence suggests that self perceptions are related to various aspects of schooling, including achievement, social status, participation, completion, and perceptions of others (Beane and Lipka, 1981).
A good summary of transescent social characteristics is found in a booklet published by the Michigan Association of School Boards (1965).

An emerging adolescent:
1. Needs to be a member of a peer group
2. Seeks prestige rather than adult approval
3. Respects good sportsmanship, but is highly competitive
4. Develops an interest in a worthy-self
5. Wants a stable environment
6. Attempts to break away from the family but is lost without security
7. Is noisy and restless
8. Often does not attend to responsibilities. (p. 6)

Romano et al. (1973) identify the social-emotional characteristics of the transescent as follows:

1. Critical of others
2. Has strong positive feelings toward ideals that are effectively presented. Frustrations grow out of conflicts with parents or peers, an awareness of lack of social skills, or in failure to move as rapidly as others. Anger is common and may grow out of feelings of inadequacy, fatigue, or rejections
3. Begins to view parents and peers more realistically
4. Group is all important and will imitate the dress, language, and behavior of other members. Often fights in group but may make up quickly.
5. Works reasonably well with others but ground rules are needed
6. Fears are in form of worries: worry over grades, exams, promotion, and peer criticism and acceptance. Boys worry over money, physical ability, and facial blemishes. Girls worry about development (too fast or too slow), belonging and later acceptance by the opposite sex.
7. Exhibits strong feelings about fairness, honesty and values in adults but may "relax" their own. Want fair teacher and are quick to challenge anyone unfair.
8. Want independence but may feel anxiety when parents' expectations are not met. May look for adults other than parent for help in understanding complexities of life.

9. Has a competitive spirit and the will to excel is strong. Team play is understood and practiced. (pp. 188-211)

A transescents social development is characterized by a striving for independence from the family, often accompanied by erratic behavior. As a child moves away from adults in his search for independence, he enters the sub-culture of his peers with its traditions, games, values, loyalties, and rules, separate and apart from the adult society in which it exists (Williams and Stith, 1974).

Bondi (1973) advises that "during the middle school years, the child will need guidance in working with his peers within the classroom, with other people outside the classrooms, and in adjusting to the opposite sex. As he grows independent of his family, he will need guidance in family adjustment" (p. 21).

Although it is difficult to define personality, perhaps at no other time in life do behavior and personality make a person so vulnerable to acceptance by his peer group (Bondi, 1973). According to Hawes and Pease (1962), personality is dynamic, developmental, and socially oriented. The transescent period is characterized by much instability and an intense desire to leave childhood behind.

Research by Gesell et al. (1956) provides insight into the specific emotional characteristics of this difficult period.

Transescents:

1. Have difficulty controlling their emotions,

2. Have strong feelings about fairness,

3. Are very self-critical,
4. Appreciate humor,
5. Often have a strong sense of humor themselves,
6. Experience extreme shifts of behavior between childishness and sophistication,
7. Are quick to show anger,
8. Experience dramatic shifts in moods often for no apparent reason,
9. Are very fearful, and
10. Experience a wide variety of fears. (pp. 329-353)

As emerging adolescents, students are inclined to question values. Though society has made today's student more sophisticated, he is confronted with more choices, a broader array of alternatives to choose from, than any previous generations. Choosing is infinitely more difficult and school is the logical place to gain insight into the attitudes and values which form the basis for opinions, decisions, and actions (Creamor and Creamor, 1978).

The interacting of the biological maturation changes and the expectancies and pressures of our particular culture or sub-culture create problems and adjustments for the emerging adolescent. The general characteristics of intellectual development also fluctuate widely during this period of extreme physical and emotional change.

**Intellectual Characteristics.** Just as great variation existed among transescents physically and socially, there is a concurrent diversity of intellectual development. Because learning skills accelerate during the middle school years, mental abilities vary widely depending upon the stage of development of the adolescent (Loomis, 1964).
Although rates of mental development differ, the processes follow similar patterns (Lindberg and Swedlow, 1980). The world of the emerging adolescent widens with each succeeding experience. In 1960, Bruner stated that "research on the intellectual development of the child highlights the fact that at each stage of development the child has a characteristic way of viewing the world and exploring it to himself" (p. 33). Bruner further characterized the intellectual growth of 10 to 14 year olds as follows:

1. An increasing independence of response from the immediate nature of the stimulus.

2. Internalizing events into a storage system that corresponds to the environment.

3. Intellectual growth involves an increasing capacity to say to oneself and others, by means of words or symbols, what one has done or will do.

4. Intellectual development depends upon a systematic and contingent interaction between a tutor and a learner.

5. Teaching is vastly facilitated by the medium of language, which ends by being not only the medium for exchange, but the instrument the learner can use himself in bringing order into the environment.

6. Intellectual development is marked by increasing capacity to deal with several alternatives simultaneously. (pp. 5-6)

Bruner's work is based in part on the developmental studies of Piaget whose research forms the foundations for the majority of modern thought on cognitive development. Transescents are characterized by both the concrete operational and formal operational stages of Piaget's developmental theory (Inhelder and Piaget, 1958).

In the concrete operational stage (ages 7 to 11), individuals are capable of operations such as increased control in thinking and understanding the relationships of symbols to situations, but are
restricted to concrete experiences, whereas those in the formal operational stage (ages 11 to 14) can deal with abstractions, form hypotheses, and consider possibilities (Piaget, 1950). While mastery of formal thought causes the adolescent to concentrate more on possibilities than on realities, this is the ability that Erickson (1959) suggests leads to problems at the state of "Identity VS. Role Confusion" (p. 7).

The adolescent's level of thinking may be high and viewpoints may be broad, but a "close connection between intellectual thought and its application to life is characteristically absent" (Gold & Douvan, 1969, p. 10).

Elkind (1976) suggest that unrestrained theorizing about ideals without complete understanding of realities tends to make the growing adolescent a militant rebel with little patience with parents or other authority figures who fail to find quick solutions to personal, social, and other problems. Guided discussion is essential for understanding results when the adolescent begins to grasp the complexities of interpersonal relationships, economics, and social problems. Elkind also believes that adolescent egocentrism explains why the peer group becomes such a potent force in the teen years.

Educators need to be aware of the vast differences between and within individuals and to plan and develop curricula that will meet the needs of various levels of intellectual development (Vaugh, 1969). The facts that influence growth are largely genetically determined; however, the factors that influence learning are generally determined by experience in the person's living environment (Gayne, 1965).

Homogeneous grouping, tracking, main-streaming, or various other school practices to accommodate levels of ability seem to have little
effect on achievement. Today, comparatively few educators advocate ability grouping (Biehler, 1974) because most of the research demonstrates that unmotivated students get no motivation being placed with other non-motivated students; and conversely, that highly motivated students have a positive effect on others in their group.

More important may be the influence of teacher expectations on student achievement, particularly if positive encouragement is consistent. Braun's (1976) review of teacher expectation articles based on the self-fulfilling prophecy reaction or pygmalion effect found contradictory results; however, he concluded that teacher perceptions and reactions could influence pupil behavior. A positive student response is more likely if a teacher is warm, enthusiastic, and has high expectations for all class members.

Although each child differs from the next in his rate of mental development, some common intellectual characteristics of the transescent summarized by Timmer (1977) are as follows:

1. Is into the period of critical thinking.
2. Can deal with cause and effect relationships.
3. Is interested in man's relationship to man.
4. Needs individual learning activities.
5. Can test hypotheses.
6. Moves from the world of fantasy and begins dealing with the real and possible.
7. Is intellectually curious.
8. Can assume much responsibility for his/her own work.
9. Can memorize facts. (p. 32)

Intellectual characteristics of the transescent as identified by Romano et al. (1973) include:

1. Is capable of making judgements. Can make generalizations and do reflective thinking.
2. Lacks experience in solving adult problems.
3. Have reading rates that are often adult-like.
4. Have a wide variety of interests.
5. Individual differences in creative ability are pronounced. (pp. 106-112)

Developmental Needs of the Transescent

In the previously cited literature, the important physical, social-emotional, and intellectual characteristics of the transescent were identified. From this discussion, a few thoughts stand out clearly. The meshing of dynamic physical, mental, and social-emotional growth characteristics within each individual makes for a very complex child. These complex children have very special needs that must be met if educators are to help them through the difficult growth period called transcence. These needs are the topic of this section.

Physical Needs. Much time and research has been devoted to the description of physical needs and the different ways in which transescents indicate satisfaction or frustration in relation to them. The more commonly observed physical needs of the emerging adolescent are discussed in this section.

Pre- and early adolescents have a need for a special kind of sex education program. Lawrence and Lawrence (1956) write that

because of early bodily and sexual maturation, and the resulting roles that are expected, the young adolescents' dilemma, therefore, gives us some indication of the kind of sex education program that does not leave him isolated in his own confusion, that does not uncover or probe into his helpless feelings or arouse feelings of incompetence. (p. 38)

Transescents need sex education programs that both guide and inform. They need a teacher, preferably of the same sex, to whom they can turn to get accurate and honest information concerning bodily change and other sexual related topics. According to Vaugh (1969) children get
much of their sex information outside of the school and the home and much of it is not accurate.

Because the rate of maturation differs substantially in both sexes, the interest in, or the readiness for, sexual information also varies. Girls may need menstrual information at the age of ten, while boys at this same age having few visible changes, may be less interested in obtaining sexual information. Thus, transescents need single-sex classes when being provided sexual information (Vaugh, 1969).

Vaugh (1969) advocates separating the sexes in all classes. Vaugh writes "classes for separate sexes in intermediate schools could reduce some of the emotional and social anxiety and tensions which are created by the students external forces" (p. 116). He further comments that transescents need physical education classes that are:

1. No larger than regular academic classes,
2. Taught by carefully screened and well-motivated instructors, and
3. Arranged so that students with the most compatible physical characteristics are grouped together. (p. 112)

Romano et al. (1973) suggest that physical education teachers, as well as regular classroom teachers, should take into consideration transescents needs when planning various physical activities and developing motor skills. Some of these needs are:

1. Periodic rest especially during highly competitive sports,
2. Free play time,
3. Teacher-directed activities rather than trial-and-error methods in physical activities,
4. A balance between mental and physical activities,
5. Group games and individual activities of a self-testing nature,
6. Adequate shower time,
7. Health education programs presented by a team of teachers explaining complexity of the transescents' physical development and how emotions affect mental health, and

8. Health instruction emphasizing good eating habits, a combination of exercise and rest, and exercising for good posture. (pp. 188-191)

Emerging adolescents have a need to learn about, and a right to become accustomed to, new bodily changes. These young people, with their newly developed bodies, are constantly making comparisons between themselves and their companions. The differences may very well create feelings of anxiety and inadequacy. For both boys and girls, any "bodily condition which is not in keeping with what is considered the 'norm' will cause some anxiety" (McCarthy, 1977, p. 95). Thus, this creates a need for:

1. Close relationships between students and staff, so that, in an atmosphere of friendliness, these young people are able to seek advice vital to their comprehension of strange and rapid growth processes.

2. Activities that do not stress physical standards which can be attained only by the physically talented. It must be understood that there are emotional and physical dangers facing transescents who are incapable of meeting exceptional standards.

3. Opportunities for physical activity, both during and after the regular school day.

4. Assignments that allow for physical activity on the part of the student, rather than lengthy written work.

5. Avoidance of situations where students are exposed physically to each other such as in group showers. (McCarthy, p. 95)

Romano et al. (1973) write that there is a need for instruction relative to the growth of the body. This is necessary, the authors claim, so that transescents will understand changes in themselves and other students, will help them make the "best of what they are, and will help them be prepared for future changes and problems" (p. 187).
In addition to understanding that there is a variation in physical growth, emerging adolescents also need to understand that they vary in physical strength.

Curtis and Bidwell (1977) state

Not only can they be expected to perform poorly on psychomotor skills, but that some damage to internal organs can be a result from over stress on certain physical activities. When muscles, heart, and lungs are growing at disproportionate rates, as they do at this period, heavy physical tension and stress can well result in weakness or interference with development within the physical body creating either present or later physical problems. An emerging adolescent might well become exhausted following a rigorous educational activity. (p. 30)

Emerging adolescents have a great need for "exercise and utilization of bones and muscles" (Curtis & Bidwell, 1977, p. 30). They cannot sit for extended periods of time not engaged in some physical activity. Classroom instruction should include projects and activities that allow the student to move about occasionally.

Sports can be a source of enjoyable, as well as a healthy, physical activity for the young transescent. Most intermediate schools are providing either intramural or interscholastic sports for students of this age group. However, many educators question the middle school and the junior high school sponsorship of competitive sports (Redfearn, 1981). Too much emphasis has been placed upon interscholastic sports.

Vaugh (1969) claims that interscholastic sports should be avoided in favor of intramural programs so that all students can participate and perhaps achieve. He states "transescents need intramural programs concurrent with, and derived from, the classroom program of physical instruction, with intramural activities providing the competitive, but low pressure aspect to team sports (p. 113)."
Gatewood and Mills (1975) contend that physical activities should avoid contests based on physical achievement. They write:

If interscholastic sport programs do exist in some schools the number of games should be limited and most should be held in the afternoon after school hours. Boosters' clubs should be discouraged, publicity minimized, and awards de-emphasized. League championships and tournaments should not be permitted. (p. 30)

Social-Emotional Needs. Transescents have special social-emotional needs which educators must provide for in order to help them establish a comfortable and secure position in the social environment. Various psychologists and educators (Bondi, 1973; Curtis & Bidwell, 1977; Gatewood & Mills, 1975; Havighurst, 1968) are in general agreement that there are four specific social-emotional needs which must be provided for during the middle years of schooling. These needs, which are discussed in this section, are as follows:

1. The need to build affective peer relationships,
2. The need to establish independence and develop responsibility,
3. The need to learn correct social behavior, and
4. The need to develop knowledge and skills toward social and emotional sophistication.

It is essential for emerging adolescents to identify with and become a part of a peer group. Very few things are as important to them as acceptance and approval by their peers. Curtis and Bidwell (1977) claim that the degree to which an individual is able to accept, and be accepted by, his/her peer group may "determine the future mental health of the individual" (p. 40).

The peer group answers another important need. According to Tryon (1955) "the peer society is crucial as the major training institution for adolescents in American society" (p. 218). It is within
the peer society that transescents learn to develop new relationships; acquire new skills, behaviors, and insights; gain personal independence; and learn how to enjoy life and group activities (Kindred, 1968). In addition, the group is also a role model for learning behavioral standards and different societal roles.

The peer group can have a negative influence on young people. Transescents need to take into account the strong influence the group exerts in molding their social behavior. Conforming to the group in dress, language, and behavior may be a normal characteristic of group membership; however, youngsters need to realize that some group behavior may not always be acceptable to society and that they should sort out desirable and undesirable group traits (Kindred, 1968). Suggestions for helping transescents build effective peer relationships, as well as establishing independence from the group, include:

1. Wholesome group activities being planned and carried out with sufficient student involvement to capitalize on the youngsters' desire to be a part of the group,

2. Discussion groups in which students learn that nonconformity can be acceptable,

3. Activities in which diversity is rewarded or encouraged,

4. Opportunities for students to assume greater responsibility for their own actions,

5. Out-of-school assignments that will expose them to the adult world. (McCarthy, 1977, p. 73)

6. A program to help students understand and adapt to the expectations of the group, to learn social skills that will make it possible for them to conform to peer standards yet still gain prestige. (Curtis & Bidwell, 1977, p. 42)

Emerging adolescents have a need to establish independence not only from the peer group, but also from parents and other adults, because this is one way of demonstrating to others that they are
growing up. As youngsters grow older "their concerns become more societal rather than individual" (McCarthy, 1977, p. 73) and they tend to turn to people other than their parents for emotional and social security. The transition from complete dependence upon parents at home to independence within their peer society can be difficult (Curtis & Bidwell, 1977). Thus transescents need:

1. Other individuals or groups to assume the behavior influencing role of the parents.

2. Adults who realize that, while early adolescents seek behavioral independence from them, the transescent come to rely more and more on those adults from whom they are seeking to become independent, and

3. Teachers to help them become more behaviorally independent and to help them establish good relationships with their age-mates. (McCarthy, 1977, p. 73)

To facilitate independence, it is necessary that "family ties based on authority be broken" (Stone & Church, 1957, p. 276). Transescents should be given the opportunity to question authority, to make decisions, and to take responsibility for their results (McCarthy, 1977).

Providing activities that will promote independence will help guide adolescent boys and girls to social and emotional stability. Approaches that will encourage independence include:

1. Student involvement in curriculum development,
2. Participation in student government,
3. Independent study (Curtis & Bidwell, 1977, p. 42),
4. Undertaking and completing school tasks,
5. Teacher-pupil assessment of class work,
6. Independent planning for self-improvement,
7. Some choice in subject content,
The early bodily and sexual maturation of the transescent "invokes changes in the way individuals are expected to behave, particularly in social interaction (Gold & Douvan, 1969, p. 1). The 10- to 14-year-old child needs and wants to learn the correct social behavior, particularly when interacting with his age-mates (Curtis & Bidwell, 1977). The satisfaction derived from successful peer interaction is more important to the emerging adolescent than is acquiring knowledge and developing academic skills (Kaback, 1955). Thus teachers should provide activities that will develop social skills and promote stable social-emotional development. Activities leading to successful and correct social behavior include:

1. Opportunities for students to play and "just talk,"
2. Social events that do not require dating,
3. Opportunities to engage in controlled, well-developed social activities such as games, group projects, socials, role playing, and team work,
4. Group Discussions concerning social behavior and peer interaction,
5. Activities that allow freedom to move and talk with classmates,
6. Instruction in manners and respect for others,
7. Subject-free activity periods,
8. Student-teacher interaction on an informal basis,

Successful peer interaction requires that transescents learn to recognize the differences between boys' and girls' sex roles in the social environment (Curtis & Bidwell, 1977). Pupils not achieving self-recognition and acceptance of their sex role in the intermediate grades will have serious social-emotional problems when they enter high school.
In a slightly different light, Maire (1969) adds, "the emerging adolescent needs to resolve his bisexual conflicts and eventually to feel identification with his own sex role" (p. 63). To help transescents achieve a successful social-sex role McCarthy (1977) suggests:

1. An environment within the school where students will feel comfortable in their contacts with members of the opposite sex,

2. Planned situations in which the student will see him/herself first as wholly male or female,

3. The presence of appropriate adult models within the school that can be of assistance to those youngsters experiencing any role confusion. (p. 92)

Emotional stability is important to all individuals. Transescents need to learn how to find solutions to their own problems, to gain insight into their own behavior, and to understand their emotional outbursts and concerns (Curtis & Bidwell, 1977). Allowing emerging adolescents class time to discuss and overcome their emotional problems will help develop emotional stability. Other approaches include:

1. Teachers who take part in guiding students,

2. Pupil-teacher guidance relative to family adjustment,

3. Opportunity for pent up energies to be released,

4. Grouping practices which take into consideration the social-emotional concerns of transescents,

5. Kindness in dealing with students who are self-conscious about their physical appearance,

6. Activities that allow students to role play, write about, or express feelings and talk about problems. (Curtis & Bidwell, 1977, pp. 11-15)

These approaches will help students more readily accept home and school responsibilities.

Beane (1982) writes that, in order to help learners establish self-identity, "the curriculum should lead toward clarification of the
values of self-concept, improvement of self-esteem, and clarification of the values upon which self-esteem is based" (p. 505). His suggestions for promoting self-identity in transescents include:

1. Involving learners in governance of school life,
2. Giving learners a say in curriculum planning,
3. Providing an opportunity for learners to pursue their own personal agendas,
4. Developing an "invitational" environment, and
5. Using problems and needs approaches. (p. 505)

These approaches help learners develop understanding and confidence in dealing with social problems and the immediate human needs they face in their everyday lives. Other activities that will enhance self-perceptions are:

1. Teacher-pupil planning,
2. Cooperative learning,
3. Peer tutoring,
4. Multi-age interaction,
5. Self-evaluation,

Placement of these activities and projects within the curriculum should be given serious consideration because they will encourage learners to think about themselves and to develop feelings of belonging and self-worth (Beane, 1982).

Values play an important role in the life of the transescent and in the learning process. There is a need for intensified and directed efforts to clarify attitudes and values, and their societal implications in the middle school. Although many teachers interpret students'
questioning of values as undermining the teacher's authority and demon-
strating a lack of respect for the teacher's values, restricting such
questioning limits knowledge and growth (Creamor & Creamor, 1978).

Students gain knowledge of most subject matter on three possible
levels: the fact level, the concept level, and the values level
(Creamor & Creamor, 1978). Teachers should keep this in mind when
instructing transescents who are forming attitudes and opinions about
society. Through problem analysis, reflective thinking, and decision
making, teachers can prepare middle school students to make value judg-
ments of their own. These processes can lead to self-growth and self-
fulfillment for the transescent.

Intellectual Needs. Mental abilities vary widely, depending
upon the stage of development of the emerging adolescent (Loomis, 1964).
Thus teachers need to be aware of the vast differences between and within
individuals and to plan classroom activities that will meet the needs of
various levels of intellectual development. The curriculum should be
based upon continuous progress (Georgiady & Romano, 1973; Moeller &
Valentine, 1981) permitting students, regardless of chronological age,
to move through sequential learning activities at their own individual
rate. Learning experiences should accommodate an easier transition from
the concrete stage of thought to the more advanced stage of formal
thought (Eichhorn, 1966). Thus the learner needs:

1. Independent movement through programs ranging from concrete
to abstract understandings,

2. A program especially designed for each student,

3. A variety of learning aids,
4. Resource centers geared to individual differences among students,
5. Time for independent study,
6. Depth study in all elective areas,
7. Remedial help when necessary,
8. Selected enrichment in content, rather than grade skipping, and

One of the characteristics of transescents is their strong interest in and curiosity about the world. To provide for this interest, the school needs to offer the learner electives as part of the school program. Students should be able to test their interest in the arts, foreign languages, home arts, and journalism, to name a few areas. Electives should be offered in short modules with few prerequisites. Elective courses help students develop interests which are best suited to his/her particular talents (Vaugh, 1969). To further self-interest and foster self-direction, transescents need activities that encourage exploring various subject areas, independent study, and good reading habits.

According to Piaget, cognitive development depends, in part, upon the richness and variety of experiences and activities to which a learner has been exposed. He contends that the organizational structure of the intellect develop "by assimilating experiences and then accommodating the results of their experience into further mental structures" (Inhelder & Piaget, 1958, p. 171). Thus, "transescents need a variety of experiences and activities, preferably short-term activities, in order to allow them time to investigate many subject areas" and to
enhance mental abilities (Klingele, 1979, p. 32).

Vaugh (1969) adds that enrichment activities are needed to help develop the students' concepts of themselves and the world around them. Students require activities that foster creativity and expression, such as drama programs, science and art exhibits, creative writing, lab freedom, and musical programs. Students also need experiences outside a self-contained classroom; therefore, independent movement from the classroom to learning centers or the library should be encouraged. They should also be allowed to use school-owned audio-visual equipment to enhance exploration of activities. Freedom to use this equipment "affirms to the student the faith adults have in his sense of responsibility and purpose" (Vaugh, 1969, p. 119).

With the wide variation in mental growth, many students in the middle years of schooling may not have mastered the basic skills in reading, writing, and arithmetic. Transescents need help particularly in developing reading skills. Georgiady & Romano (1973) write that a consistent problem facing middle school teachers today is the "inadequate reading skills of students" (p. 240). Many students receive little or no help at this stage in furthering their reading abilities. Clarke (1977) writes

Reading is a skill which affects personal success and happiness. Because middle school children are at the threshold of adolescence which opens the door to a vast new set of life functions, the middle school must regard the attainment of satisfactory reading skills as one of its more crucial functions. Indeed, since a child's success in all academic areas is so dependent upon reading, all teachers should regard the teaching of reading as a duty equal to that of teaching their specific academic discipline. (p. 18)

Moeller & Valentine (1981) suggest several approaches that may facilitate improvement in reading skills:
1. A multi-test approach,
2. Practice reading,
3. Remedial reading teachers,
4. Resource centers,
5. Learning activity packets. (p. 27)

Although mastering the basic skills is all important, equally important is how the student learns. In other words, students need to "learn how to learn" (Overly et al., 1972, p. 10).

It is vital that the middle school student develop certain key concepts and that he learn how to deal and cope with problems. The student should be helped to go beyond such fundamentals as reading, writing, and arithmetic. He must become an independent learner. He will learn to identify a problem--synthesize, sift, analyze, and collect data--finally, to derive some solution to stated problems. (p. 10)

Learning how to learn, according to Curtis and Bidwell (1977), also requires that:

pupils learn how to do "either/or" thinking. They should also be required to utilize multi-valued logic, where many alternatives and possibilities must be considered. They should learn not only content, but also the skills of using that content. They should learn listening as an aid to learning, but they should also develop the art of discussion. (p. 75)

Emerging adolescents require a learning environment which includes interdisciplinary teams of teachers to plan and interrelate subject matter. Georgiady and Romano (1973) state "team teaching approaches which utilize teacher strength in working with students individually and in groups is the logical way to meet the transescents needs" (p. 239). The team teaching approach helps students to recognize the inter-relationships among conventional school subjects, allows students to work in large and small group activities, and provides a flexible classroom environment.
Transescents need to be involved when their school work is being evaluated. They need a system of evaluation that is constructive, personal, and positive in nature. This creates a demand for individualized teacher-pupil evaluation on a regular basis, student self-assessment, and evaluation based upon their own past achievement (Vars, 1969).

THE INTERMEDIATE TEACHER

Not all educators share enthusiasm for the education of the children in the middle years of schooling, as the literature in general is quite pessimistic. Without doubt, many fine, dedicated, and committed teachers teach the emerging adolescent. But it is also true that teaching in the junior high school/middle school level is particularly challenging because of the growth characteristics and developmental needs of the transescent.

Conant (1960) recommends putting the best teachers available in the intermediate schools and retaining them since this is where teaching difficulties culminate. He further has substantiated that intermediate schools have long been proving grounds for secondary teachers and administrators. A winning coach is "promoted" to the high school; a successful administrator is offered the first high school opening; and by the same token, mediocre teachers who attract little attention run the risk of spending an entire career at the intermediate level.

Vars (1969) has pointed out that good education of young adolescents is provided by good teachers and a sound curriculum, and it doesn't matter whether they are in a junior high school, a middle school, or some other organizational arrangement. But he believes the junior
high is still "largely a school without teachers--that is, without teachers prepared specifically for work at this level" (p. 172).

Vaugh (1969) comments that "typically, the middle school teacher is an accident." Teachers are trained as high school subject matter specialists or as elementary school generalists. Intermediate programs could be significantly enhanced if teacher preparation programs were designed specifically for middle school/junior high school teachers.

Various writers (Baughman, 1982; Brown & Howard, 1972; Compton, 1968; Gatewood, 1981; Winchester, 1981) report the lack of specific educational training for the middle years. Colleges are unable to agree on what their programs should contain, and often programs initiated are discontinued due to lack of interest and low enrollment on the part of students.

Few states have certification requirements for the intermediate level only. In general, certification is for grades K-8 or 7-12. There are no requirements to gain a better understanding of the emerging adolescent, to be knowledgeable about the goals and purposes of the intermediate school level, or to be familiar with specific teaching methodology to meet developmental needs of the transescent. Until certification requirements change, it is unlikely that teacher training institutions will tailor programs designed especially for intermediate level teaching. Teacher college curricula are already bulging with requirements of many kinds, and it seems unlikely that the emerging adolescent will receive attention in the near future (Porter, 1967).

There is a need for greater emphasis on transescent characteristics and means of implementing classroom practices related to knowledge of characteristics (Weiser, 1969). The following areas were rated
essential to middle school teacher education by a majority of respondents in a study by Hunter (1976):

1. Discipline,
2. Developmental reading,
3. Pre/early adolescent growth/development,
4. Middle school curriculum,
5. Middle school philosophy,
6. Activity approach to classroom instruction,
7. Utilization of multi-media material,
8. Individualization of instruction, and
9. Orientation to instructional materials designed for the pre/early adolescent. (p. 2699A)

The lack of specific teacher preparation is a major problem and seems to be a blind spot in teacher education. Alexander (Journal interview, 1982) believes the most characteristic kind of preparation for teachers in the middle school is done on the in-service level. He states the profession needs education about children in the middle, and the public and parents need this education even more, but he would tend to put first emphasis on the understanding by the teacher of this age group.

Alexander further comments that:

We need strong support from Department of Education faculties who are interested in preparing people for teaching at the middle level, who are not resisting reorganization of their original bailiwicks of elementary and secondary education, and who through the force of their leadership are helping to build up the program of middle level schools. There are too few such departments and so I do not believe that we have really made the progress needed in teacher preparation. Middle level education needs much greater recognition and help by teacher education institutions, and also by teacher certification agencies. (p. 7)
Wattenberg (1965) stresses that teachers and administrators responsible for intermediate schools may have to be insistent on bringing their special needs forcefully to the attention of teacher-educating institutions. As Alexander (Journal interview, 1982) states, "our goal is not the glorification of the middle school, but the significant improvement in the education of children in the middle level" (p. 6).
CHAPTER 3

RESEARCH PROCEDURES AND METHODOLOGY

The primary purpose of this study was to compare the attitudes of middle school and junior high school teachers toward the physical, social-emotional, and intellectual needs of the transescent. Since the theoretical justification for both the middle school and the junior high school is to serve the special intellectual, social-emotional, and physical needs of the pre- and early adolescent, then intermediate teachers should be aware of those needs. The learner's development is influenced by the way teachers view the developmental needs of the learner. The attitudes of teachers toward the transescent are a critical factor in the transescent's learning environment. Therefore, it was important to examine the attitudes of teachers in selected middle schools and junior high schools to determine the implications for pre-service training, educational programs in the public schools, and in-service programs for teachers.

Specifically, this study attempted to gather evidence to determine if there was any significant difference between the middle school and junior high school teachers' attitudes toward the developmental needs of the transescent, and whether attitudes vary with teaching experience and educational certification.

The discussion of this chapter focuses on the selection and description of the population, the description of the survey instrument, and the methodology for collection, classification, description, and interpretation of the data.
DESCRIPTION OF THE POPULATION

Three middle schools and three junior high schools were selected from a metropolitan area in Indiana. The teachers in this area have participated in much educational research, thus the writer believed that the teachers were acutely aware of the importance of research and the final impact that such a study could have on the field of education.

The teaching situations and conditions, and thus teacher attitudes, in both the middle school and the junior high school often differ depending upon whether the school is located in a rural area, an urban area, or the inner city. The writer believed that this variable could be better controlled by selecting middle school teachers and junior high school teachers from similar geographic locations. Therefore, the subjects in this study were limited to teachers located in six urban middle and junior high schools.

The middle schools were administratively organized to meet the criteria of housing grades six, seven and eight, and the three junior high schools were administratively organized to meet the criteria of housing grades seven, eight, and nine. The subjects from these schools were limited to only those teachers who taught seventh and/or eighth grade classes. Eliminating the teachers who teach grade six in the middle schools and the teachers who teach grade nine in the junior high schools allowed the writer to utilize subjects who had students similar in age, characteristics, and needs.

Teacher attitudes in both school types often differ, depending upon how large a school may be. Therefore, further matching of subjects was accomplished by selecting middle school teachers and junior high school teachers from schools with school populations similar in size.
DEVELOPMENT OF THE INSTRUMENT

The instrument in this study was designed to provide data to determine the middle school and junior high school teachers' attitudes toward the educational and growth needs of the transescent.

A search of the literature and related research and a study of concepts and theories of behavioral psychologists and leading intermediate school authorities led to the establishment of four major needs categories of the transescent. Those categories that were initially identified and projected were: physical needs, intellectual needs, social needs, and emotional needs. With these categories in mind, forty statements were compiled that represented school-related activities that were supportive of and contributed to the fulfillment of transescent needs.

The Likert-type attitudinal scale was selected as a basic response format to measure the respondent's degree of acceptance for each statement. A six-point scale was selected with the response categories of strongly agree, agree, mildly agree, mildly disagree, disagree, and strongly disagree. The Likert six-point response scale was selected because it would allow for individual variation when expressing attitudes about the needs of students and the six-point response category would force the respondent to indicate a direction of attitude since the neutral category was omitted. In addition, varying degrees of acceptance could be plotted numerically. Thus, a response of "strongly agree" to a statement that was supportive of the transescent's needs would receive a value of 6 points while a response of "strongly disagree" would receive 1 point. However, to prevent a set response from developing in the respondents, twenty of the statements were cast in a negative direction. That is, while the statement dealt with one of the four identified
categories, it projected a school related activity that would not con-
tribute to helping meet the transescent's needs. Thus, for those
negatively projected statements a value of 6 points would be given for
the response of "strongly disagree" and 1 point for the response of
"strongly agree."

The forty items were then placed in random order on the question-
naire. In addition to the statements, items were placed on the question-
naire eliciting from the respondents their number of years of teaching
experience and their certification level. Preceding the statements were
directions for completing the instrument.

For the purpose of refining and validating the survey instrument
before it was used in obtaining the data for the final study, three
steps were taken:

1. A rough draft of the instrument was submitted to doctoral
students in a research class in secondary education at Indiana State
University. They were requested to review the statements for ease of
interpretation and clarity.

2. To further validate the needs attitude scale, suggestions of
five educators knowledgeable in the area of middle school and junior high
school instruction were solicited. The educators are professors in the
School of Education, Indiana State University, and have firsthand
experiences and theoretical knowledge of the needs of the transescent.
The instrument was administered to the professors to determine if their
selected Likert responses would agree with the writer's findings in the
literature and research. The professor responses to one item disagreed
with the writer's selected response; but upon further studying material
related to this item, the writer concluded the professor responses were in agreement with the literature.

3. To further validate the attitude scale, the initial instrument was field tested by conducting a pilot study in selected middle and junior high schools during the fall semester of 1982.

The data from the pilot study were processed using the Statistical Package for the Social Sciences at Indiana State University. The 40 items processed were grouped into four major subscales: social, emotional, physical, and intellectual. A Cronbach alpha reliability coefficient was computed for each subscale and for the total scale. In addition, inter-item correlations were obtained to determine which items were contributing to the reliability of each subscale and of the total scale.

The statistical treatment of the data from the pilot study revealed that the instrument lacked independence of factors. This lack of independence resulted in the collapse of the four subscales into three subscales—social-emotional, physical, and intellectual. The inter-item correlations of the three subscales and the total scale are reported in Table 3.1.

On the original 40-item instrument, 34 items contributed to the reliability of the overall scale. Seven items (2, 3, 6, 7, 26, 40) correlated with the intellectual subscale; five items (4, 8, 17, 18, 37) correlated with the physical subscale; six items (10, 23, 28, 30, 31, 34) correlated with the social-emotional subscale. Sixteen items did not appear to fit in any of the three major subscales; however, they were retained in the instrument because they contributed to the reliability of the total scale and they enhanced its face validity. Six items in the
Table 3.1
Inter-Item Correlations of the Social-Emotional,
Intellectual, Physical, and Total Scales

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item Subscale</th>
<th>Item to Subscale r</th>
<th>Item to Total r</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td>.27</td>
</tr>
<tr>
<td>2</td>
<td>I</td>
<td>.44</td>
<td>.32</td>
</tr>
<tr>
<td>3</td>
<td>I</td>
<td>.45</td>
<td>.59</td>
</tr>
<tr>
<td>4</td>
<td>P</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td>.09</td>
</tr>
<tr>
<td>6</td>
<td>I</td>
<td>.66</td>
<td>.49</td>
</tr>
<tr>
<td>7</td>
<td>I</td>
<td>.51</td>
<td>.43</td>
</tr>
<tr>
<td>8</td>
<td>P</td>
<td>.19</td>
<td>.41</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td>.25</td>
</tr>
<tr>
<td>10</td>
<td>SE</td>
<td>.53</td>
<td>.28</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
<td>.17</td>
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<tr>
<td>12</td>
<td></td>
<td></td>
<td>.44</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td>.28</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td></td>
<td>.18</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td>-.44a</td>
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<tr>
<td>16</td>
<td>I</td>
<td>.27</td>
<td>.23</td>
</tr>
<tr>
<td>17</td>
<td>P</td>
<td>.50</td>
<td>.20</td>
</tr>
<tr>
<td>18</td>
<td>P</td>
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<td>.30</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td></td>
<td>-.14a</td>
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<tr>
<td>20</td>
<td></td>
<td></td>
<td>-.35a</td>
</tr>
<tr>
<td>21</td>
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<td></td>
<td>.12</td>
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<tr>
<td>22</td>
<td></td>
<td></td>
<td>.21</td>
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<td>.47</td>
<td>.24</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td></td>
<td>-.18a</td>
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<td></td>
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<td>-.00a</td>
</tr>
<tr>
<td>26</td>
<td>I</td>
<td>.38</td>
<td>.52</td>
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<tr>
<td>27</td>
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<td></td>
<td>.17</td>
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<tr>
<td>28</td>
<td>SE</td>
<td>.35</td>
<td>.35</td>
</tr>
</tbody>
</table>
Table 3.1 continued

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>29</td>
<td></td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>SE</td>
<td>.31</td>
<td>.20</td>
</tr>
<tr>
<td>31</td>
<td>SE</td>
<td>.36</td>
<td>.30</td>
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<tr>
<td>32</td>
<td></td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td></td>
<td>.45</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>SE</td>
<td>.32</td>
<td>.21</td>
</tr>
<tr>
<td>35</td>
<td></td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td></td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>P</td>
<td>.26</td>
<td>.05</td>
</tr>
<tr>
<td>38</td>
<td></td>
<td>.07</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td></td>
<td>.00&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>I</td>
<td>.50</td>
<td>.46</td>
</tr>
</tbody>
</table>

<sup>a</sup>Items deleted from the instrument
initial instrument which apparently did not measure the intended 
variables were deleted from the instrument, leaving a total of 34 items. 
The resulting reliability coefficients of the three subscales and the total scale are reported in Table 3.2.

Table 3.2
Reliability Coefficients of the Social-Emotional, 
Intellectual, Physical, and Total Scales

<table>
<thead>
<tr>
<th>Scale</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-emotional scale</td>
<td>.64</td>
</tr>
<tr>
<td>Physical scale</td>
<td>.59</td>
</tr>
<tr>
<td>Intellectual scale</td>
<td>.74</td>
</tr>
<tr>
<td>Total scale</td>
<td>.71</td>
</tr>
</tbody>
</table>

These coefficients suggest that the instrument was sufficiently reliable to detect differences in the attitudes of groups of teachers toward the developmental needs of transescents.

COLLECTION AND ANALYSIS OF THE DATA

The data were collected by administering the 34-item questionnaire to 207 teachers in three middle schools and three junior high schools in an Indiana metropolitan area during the spring of 1983. The survey form assessed the attitudes of the subjects regarding the social-emotional, physical, and intellectual needs of the transescent.

A letter explaining the significance of the study and requesting cooperation, with a copy of the survey form, was mailed to the super-
intendent of each selected school district. After an appropriate length of time, the superintendents were contacted by phone to make arrangements to deliver the instruments, cover letters, and return envelopes.

The data from the completed attitude survey form were prepared for computer analysis. The data were recorded for school type, years of teaching experience, educational certification, and responses to the items on the scale, and were then processed by computer at Indiana State University.

The problem statements in the study were analyzed and interpreted through the testing of twelve hypotheses. The difference between the mean scores for the two groups involved in each hypothesis was subjected to a test of significance using a t test. The .05 level of significance was used to accept or reject each hypothesis.

HYPOTHESES

The following statistical hypotheses were used to analyze and interpret the data:

\( H_1 \) There is no significant difference between the way middle school teachers and junior high school teachers view the social-emotional needs of the transescent.

\( H_2 \) There is no significant difference between the way middle school teachers and junior high school teachers view the physical needs of the transescent.

\( H_3 \) There is no significant difference between the way middle school teachers and junior high school teachers view the intellectual needs of the transescent.
$H_4$ There is no significant difference between the way middle school teachers and junior high school teachers view the developmental needs of the transescent.

$H_5$ There is no significant difference between the way intermediate school teachers with 6 or more years of teaching experience and intermediate school teachers with 5 or fewer years of teaching experience view the social-emotional needs of the transescent.

$H_6$ There is no significant difference between the way intermediate school teachers with 6 or more years of teaching experience and intermediate school teachers with 5 or fewer years of teaching experience view the physical needs of the transescent.

$H_7$ There is no significant difference between the way intermediate school teachers with 6 or more years of teaching experience and intermediate school teachers with 5 or fewer years of teaching experience view the intellectual needs of the transescent.

$H_8$ There is no significant difference between the way intermediate school teachers with 6 or more years of teaching experience and intermediate school teachers with 5 or fewer years of teaching experience view the developmental needs of the transescent.

$H_9$ There is no significant difference between the way intermediate school teachers with elementary level certification and intermediate school teachers with secondary level certification view the social-emotional needs of the transescent.

$H_{10}$ There is no significant difference between the way intermediate school teachers with elementary level certification and intermediate school teachers with secondary level certification view the physical needs of the transescent.
H_{11}  There is no significant difference between the way intermediate school teachers with elementary level certification and intermediate school teachers with secondary level certification view the intellectual needs of the transescent.

H_{12}  There is no significant difference between the way intermediate school teachers with elementary level certification and intermediate school teachers with secondary level certification view the developmental needs of the transescent.

The first three hypotheses were designed to test the difference between the middle school and junior high school teacher attitudes concerning specific types of developmental needs of the transescent. Using total survey data, hypothesis 4 compared teacher attitudes with the subjects divided by school type. The next three hypotheses were designed to compare the degree of acceptance of specific categories of transescent needs by teachers with 6 or more years of teaching experience with the degree of acceptance by teachers with 5 or fewer years of teaching experience. Using total survey data, hypothesis 8 compared teacher attitudes with the subjects divided into two levels of experience. The next three hypotheses compared the degree of acceptance of specific types of transescent needs by teachers with elementary level certification with the degree of acceptance by teachers with secondary level certification. Using total survey data, hypothesis 12 compared teacher attitudes with the subjects divided according to certification level. All hypotheses stated were null hypotheses.
CHAPTER 4

STATISTICAL ANALYSIS OF THE DATA

This study was undertaken to investigate three questions:
(1) Are there any differences in the way middle school and junior high school teachers view the developmental needs of the transescent?
(2) Will the teachers' years of teaching experience make any difference in the way in which they view the developmental needs of the transescent? and (3) Will the teachers' certification level make any difference in the way in which developmental needs of the transescent are viewed?

To answer these three basic questions, twelve hypotheses were established. Hypotheses 1, 2, and 3 were designed to test the difference between the middle school and junior high school teacher attitudes concerning specific types of developmental needs of the transescent. Using total survey data, hypothesis 4 compared teacher attitudes with the subjects divided by school type. The next three hypotheses were designed to compare the degree of acceptance of specific categories of transescent needs by teachers with 6 or more years of teaching experience with the degree of acceptance by teachers with 5 or fewer years of teaching experience. Using total survey data, hypothesis 8 compared teacher attitudes with the subjects divided into two levels of experience. Hypotheses 9, 10, 11 compared the degree of acceptance of specific types of transescent needs by teachers with elementary-level certification with the degree of acceptance by teachers with secondary level
certification. Using total survey data, hypothesis 12 compared teacher attitudes with the subjects divided according to certification level. All hypotheses stated were null hypotheses.

The interpretation of the data, appropriate tables and a discussion of the 12 hypotheses are presented as follows:

1. Number and percent of respondents by school type,
2. Number and percent of respondents by teaching experience,
3. Number and percent of respondents by certification level,
4. Reliability coefficient of the instrument,
5. Group means, standard deviations, \( t \) values, and significance levels related to the 12 hypotheses.

PRESENTATION OF THE DATA

The data were collected by means of a questionnaire administered to middle school and junior high school teachers in Indiana during the spring of 1983. Of the 323 questionnaires delivered to the teachers, 207 or 64.1 percent were returned by mail. Twelve of the instruments were rejected because they were incorrectly completed by the respondents. The virtually equivalent numbers of respondents and response rates for the two groups of teachers suggest that both groups were reliably represented in the total sample. The number and percent of respondents by school type are shown in Table 4.1.
Table 4.1
Number and Percent of Respondents to the Needs Survey Form by School Type

<table>
<thead>
<tr>
<th>School Type</th>
<th>Number Sent</th>
<th>Number Responding</th>
<th>Percent Responding</th>
<th>Percent of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle School</td>
<td>169</td>
<td>107</td>
<td>63.3</td>
<td>51.7</td>
</tr>
<tr>
<td>Junior High</td>
<td>154</td>
<td>100</td>
<td>64.9</td>
<td>48.3</td>
</tr>
<tr>
<td>Total</td>
<td>323</td>
<td>207</td>
<td>64.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Of the 207 teachers responding to the questionnaire, almost two thirds (64.7 percent) of the respondents had 6 or more years of teaching experience. Only 35.3 percent of the sample had 5 or fewer years of experience. The number and percent of subjects responding to the questionnaire by teaching experience are shown in Table 4.2.

Table 4.2
Number and Percent of Respondents to the Needs Survey Form by Teaching Experience

<table>
<thead>
<tr>
<th>Teaching Experience</th>
<th>Number of Cases</th>
<th>Percent of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 years</td>
<td>73</td>
<td>35.3</td>
</tr>
<tr>
<td>6-20 years</td>
<td>134</td>
<td>64.7</td>
</tr>
<tr>
<td>Total</td>
<td>207</td>
<td>100.0</td>
</tr>
</tbody>
</table>

The distribution by certification level shows that the largest segment of the sample (85.0 percent) were secondary-trained teachers. Only 15.0 percent were elementary-trained teachers. The number and
percent of respondents to the questionnaire by certification level are shown in Table 4.3.

Table 4.3
Number and Percent of Respondents to the Needs Survey Form by Certification Level

<table>
<thead>
<tr>
<th>Certification Level</th>
<th>Number of Cases</th>
<th>Percent of Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>31</td>
<td>15.0</td>
</tr>
<tr>
<td>Secondary</td>
<td>176</td>
<td>85.0</td>
</tr>
<tr>
<td>Total</td>
<td>207</td>
<td>100.0</td>
</tr>
</tbody>
</table>

To measure the variables of school type, teaching experience, and certification level, a Likert-type attitudinal scale was used. Responses were given values so that the ones most positively supporting the developmental needs of the transescent were assigned a value of six. The responses reflecting the most negative attitudes toward the developmental needs of the transescent were assigned a value of one.

To confirm the results of the pilot study, coefficients of reliability for the total scale and for each of the three subscales were obtained by using the Statistical Package for the Social Sciences. The resulting Cronbach alpha coefficients are shown in Table 4.4.
Table 4.4
Cronbach Alpha Coefficients for the Subscales and the Total Scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-emotional scale</td>
<td>.57</td>
</tr>
<tr>
<td>Physical scale</td>
<td>.37</td>
</tr>
<tr>
<td>Intellectual scale</td>
<td>.64</td>
</tr>
<tr>
<td>Total scale</td>
<td>.80</td>
</tr>
</tbody>
</table>

For each dependent variable, mean scores and standard deviations were obtained for the two levels of each dependent variable—school type, teaching experience, and certification level. The difference between each pair of means was computed, and the statistical significance of each difference was assessed using an independent t test. The resulting means, standard deviations, t values, and significance levels are shown in the tables that follow. These data were used in evaluating the twelve hypotheses of this study. A significance level of .05 was used in deciding whether to reject each hypothesis.

Hypothesis 1 states: There is no significant difference between the way middle school teachers and junior high school teachers view the social-emotional needs of the transescent.

As can be seen in Table 4.5, the results of the t test using data based on the social-emotional subscale indicate that hypothesis 1 should be rejected. In other words, there is evidence that middle school and junior high school teachers do differ in their attitudes toward the social-emotional needs of the transescent.
Table 4.5
Mean Scores, Standard Deviations, t Values, and Significance Levels for Subscales and Total Scale by School Type

<table>
<thead>
<tr>
<th>Scales</th>
<th>School Type</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t Value</th>
<th>2-Tail Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-Emotional</td>
<td>MS</td>
<td>21.97</td>
<td>3.56</td>
<td>2.84</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>JH</td>
<td>20.34</td>
<td>4.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>MS</td>
<td>19.96</td>
<td>3.34</td>
<td>.53</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>JH</td>
<td>17.92</td>
<td>3.21</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual</td>
<td>MS</td>
<td>29.52</td>
<td>4.36</td>
<td>.42</td>
<td>.67</td>
</tr>
<tr>
<td></td>
<td>JH</td>
<td>29.27</td>
<td>4.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>MS</td>
<td>134.69</td>
<td>12.52</td>
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<tr>
<td></td>
<td>JH</td>
<td>131.41</td>
<td>13.12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The other data in Table 4.5, involving school type as the independent variable give no evidence to reject hypotheses 2, 3, or 4. That is, the middle school and junior high school teachers in this study did not differ significantly in their attitudes toward the physical needs, toward the intellectual needs, or toward the overall developmental needs of the transescent.

Hypothesis 6 states: There is no significant difference between the way intermediate school teachers with 6 or more years of teaching experience and intermediate school teachers with 5 or fewer years of teaching experience view the intellectual needs of the transescent.
As can be seen in Table 4.6, the results of the t-test using data based on the physical subscale indicate that hypothesis 6 should be rejected. In other words, there is evidence that teachers with 5 or fewer years of experience and teachers with 6 or more years of experience do differ in their attitudes toward the physical needs of the transescent.

The other data in Table 4.6 involving teaching experience as the independent variable give no evidence to reject hypotheses 5, 7, or 8. That is, the teachers with 5 or fewer years of experience and the teachers with 6 or more years of experience in this study did not differ significantly in their attitudes toward the social-emotional needs, toward the intellectual needs, or toward the overall developmental needs of the transescent.

Table 4.6
Mean Scores, Standard Deviations, t Values, and Significance Levels for Subscales and Total Scale by Teaching Experience

<table>
<thead>
<tr>
<th>Scales</th>
<th>Teaching Experience</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t Value</th>
<th>2-Tail Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-Emotional</td>
<td>0-5 years</td>
<td>21.46</td>
<td>3.62</td>
<td>.71</td>
<td>.48</td>
</tr>
<tr>
<td></td>
<td>6-20 years</td>
<td>21.02</td>
<td>4.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>0-5 years</td>
<td>19.20</td>
<td>3.52</td>
<td>-2.09</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>6-20 years</td>
<td>20.19</td>
<td>3.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual</td>
<td>0-5 years</td>
<td>29.08</td>
<td>4.22</td>
<td>-.79</td>
<td>.45</td>
</tr>
<tr>
<td></td>
<td>6-20 years</td>
<td>29.57</td>
<td>4.32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0-5 years</td>
<td>132.43</td>
<td>12.46</td>
<td>-.55</td>
<td>.58</td>
</tr>
<tr>
<td></td>
<td>6-20 years</td>
<td>133.47</td>
<td>13.14</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
As can be seen in Table 4.7, the data involving certification levels as the independent variable provide no evidence to reject hypotheses 9, 10, 11 or 12. That is, the teachers with elementary level certification and the teachers with secondary level certification did not differ significantly in their attitudes toward the social-emotional needs, toward the physical needs, toward the intellectual needs, or toward the overall developmental needs of the transescent.

Table 4.7

Mean Scores, Standard Deviations, t Values, and Significance Levels for Subscales and Total Scale by Certification Level

<table>
<thead>
<tr>
<th>Scales</th>
<th>Certification</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t Value</th>
<th>2-Tail Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social-Emotional</td>
<td>Elementary</td>
<td>21.54</td>
<td>2.97</td>
<td>.52</td>
<td>.60</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>21.11</td>
<td>4.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>Elementary</td>
<td>19.38</td>
<td>3.77</td>
<td>-.84</td>
<td>.40</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>19.92</td>
<td>3.18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual</td>
<td>Elementary</td>
<td>30.03</td>
<td>3.61</td>
<td>.89</td>
<td>.38</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>29.29</td>
<td>4.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>Elementary</td>
<td>133.03</td>
<td>12.32</td>
<td>-.03</td>
<td>.97</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>133.11</td>
<td>13.02</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CHAPTER 5

SUMMARY OF THE STUDY

SUMMARY

In the past few decades research has shown that pre- and early adolescents have social, emotional, physical, and intellectual characteristics and needs that should be of primary concern when planning an instructional program (Journal interview, 1982; Gatewood, 1970; Klingele, 1979; Vaugh, 1969). Any good intermediate school will have a program designed specifically to meet the developmental needs of the student in the 10 to 14 age group. However, no matter what kind of instructional program is provided, an effective education for young adolescents depends largely upon the teacher. The social-emotional, intellectual, and physical development of the transescent depends, in part, upon how teachers view the educational and growth needs of their pupils. The attitudes of teachers toward their pupils becomes a critical factor in the learning environment.

The advocates of the junior high school and of the middle school claim that the developmental needs of the transescent are being met; yet mounting research evidence continues to confirm that a significant gap between theory and practice exists in both types of schools. According to Alexander (Journal interview, 1982), one of the reasons for the gap is the lack of training programs for teachers of the pre- and early adolescent.
A review of the literature found little research concerning teacher attitude toward the needs of the transescent. The lack of research in this area suggested a need for further study. Accordingly, the problem in this study was to examine the attitudes of middle school and junior high school teachers toward the educational and growth needs of the transescent. More specifically, this investigation sought answers to the following questions:

1. Is there any difference in the way middle school teachers and junior high school teachers view the social-emotional, physical, or intellectual needs of the transescent?

2. Will teachers with six or more years of teaching experience reflect more positive attitudes toward transescent developmental needs than teachers with 5 or fewer years of teaching experience?

3. Will the attitudes of teachers certified at the elementary level reflect a greater degree of personal acceptance of transescent developmental needs than the attitudes of teachers certified at the secondary level?

The questionnaire in this study was developed by the writer and was administered to 207 Indiana middle school and junior high school teachers during the spring of 1983. The survey instrument attempted to determine similarities and differences in teacher attitudes toward the developmental needs of the transescent. In addition, the study also evaluated the relationship of school type, teaching experience, and certification level to developed attitudes toward the pre- and early adolescent.

For each dependent variable, mean scores and standard deviations were obtained for the two levels of each independent variable--school
type, teaching experience, and certification level. The difference between each pair of means was computed and the statistical significance of each difference was assessed using an independent t test. The results were used in evaluating the twelve hypotheses of this study. A significance level of .05 was used in deciding whether to reject each hypothesis.

The first four hypotheses were designed to compare the differences between the middle school and the junior high school teacher attitudes toward the social-emotional, the physical, the intellectual, and the overall developmental needs of the transescent. Hypothesis 1 was rejected because there was evidence that middle school and junior high school teachers do differ in their attitudes toward the social-emotional needs of the transescent. However, there was no evidence to reject hypotheses 2, 3, or 4.

Hypotheses 5, 6, 7, and 8 were designed to compare the degree of acceptance of the social-emotional, the physical, the intellectual, and the overall developmental needs of the transescent by teachers with 6 or more years of teaching experience with the degree of acceptance by teachers with 5 or fewer years of teaching experience. Hypothesis 6 was rejected because there was evidence that teachers with 6 or more years of teaching experience and ones with 5 or fewer years of teaching experience do differ in their attitudes toward the physical needs of the transescent. There was no evidence to reject hypotheses 5, 7, and 8.

The last four hypotheses were designed to compare the degree of acceptance of social-emotional, physical, intellectual, and overall developmental needs of the transescent by teachers with elementary level certification with the degree of acceptance by teachers with secondary
level certification. The results of the t tests gave no evidence to reject hypotheses 9, 10, 11, and 12.

The mean scores and significance levels for the entire sample of teachers in each category (teaching experience, school type, and certification level) seem to indicate a trend toward support of the null hypotheses tested. Thus, in general, this study concludes that middle school teachers and junior high school teachers are more alike in their attitudes toward the developmental needs of the transescent than they are different. However, information concerning the findings in this study should be investigated further before making decisions about in-service programs or placement.

CONCLUSIONS

The findings in this study support the following conclusions:

1. Middle school and junior high school teachers do differ in their attitudes toward the social-emotional needs of the transescent.

2. Middle school and junior high school teachers do not differ significantly in their attitudes toward the physical needs of the transescent.

3. Middle school and junior high school teachers do not differ significantly in their attitudes toward the intellectual needs of the transescent.

4. Middle school and junior high school teachers do not differ significantly in their attitudes toward the overall developmental needs of the transescent.

5. Intermediate school teachers with 5 or fewer years of teaching experience and ones with 6 or more years of teaching experience do
not differ significantly in their attitudes toward the social-emotional needs of the transescent.

6. Intermediate school teachers with 5 or fewer years of teaching experience and ones with 6 or more years of teaching experience do differ in their attitudes toward the physical needs of the transescent.

7. Intermediate school teachers with 5 or fewer years of teaching experience and ones with 6 or more years of teaching experience do not differ significantly in their attitudes toward the intellectual needs of the transescent.

8. Intermediate school teachers with 5 or fewer years of teaching experience and ones with 6 or more years of teaching experience do not differ significantly in their attitudes toward the overall needs of the transescent.

9. Intermediate school teachers with elementary-level certification and ones with secondary-level certification do not differ significantly in their attitudes toward the social-emotional needs of the transescent.

10. Intermediate school teachers with elementary-level certification and ones with secondary-level certification do not differ significantly in their attitudes toward the physical needs of the transescent.

11. Intermediate school teachers with elementary-level certification and ones with secondary-level certification do not differ significantly in their attitudes toward the intellectual needs of the transescent.

12. Intermediate school teachers with elementary-level certification and ones with secondary-level certification do not differ significantly in their attitudes toward the overall needs of the transescent.
DISCUSSION

In this section the findings related to the three variables of school type, teaching experience, and certification level will be analyzed and discussed.

The findings in this study show that middle school teachers scored significantly higher than junior high school teachers when attitudes toward the social-emotional needs of the transescent were evaluated. Only conjecture can be offered regarding reasons that a significant difference was found in the social-emotional category and not in the intellectual and physical categories. In the opinion of the writer, the difference in grade organization in the two school types (in particular, the placement of the sixth grade in the middle school and the ninth grade in the junior high school) may account for the difference in teacher attitudes toward social-emotional needs. In a school setting where ninth grade students are present, the seventh and eighth graders are often influenced by activities and events which are usually scheduled for ninth graders. With the removal of the ninth grade, it may be easier to avoid many of the sophisticated social activities and school affairs associated with older students.

Another reason for the difference in middle school and junior high school teacher attitudes toward the social-emotional needs of the transescent may be that junior high school teachers, according to advocates, tend to be more subject-oriented than child-oriented. Therefore, they are less involved in dealing with the social-emotional needs of the transescent.

According to the results of the study, teachers with 6 or more years of experience scored significantly higher than ones with 5 or fewer
years of teaching experience when attitudes toward the physical needs of the transescent were evaluated. Why the more experienced teachers scored higher on the physical needs category and not on the other two categories is difficult to analyze. Perhaps with the current interest and emphasis placed on sports and physical fitness in schools, more information concerning physical growth and development of children may be available. Thus the more experienced teachers may have developed attitudes about the transescent's physical needs while on the job.

No significant differences were found regarding any of the three developmental needs categories when certification level data were analyzed. This may be the result of the small number of elementary teachers tested. Only 15 per cent of the teachers tested were elementary teachers. Another explanation for these results may be that in their university teacher training programs there were few differences in the information that elementary teachers and secondary teachers were given regarding the developmental needs of students. According to the literature little is known about whether teacher training programs in colleges today provide up-to-date information concerning the developmental needs of the transescent (Journal interview, 1982; Johnston & McCann, 1980; Winchester, 1981).

RECOMMENDATIONS

The following recommendations for further study are suggested:

1. The findings in this study and in the literature indicate that the social-emotional needs of the early adolescent are difficult for certain groups of teachers to understand. This difficulty merits further study.
2. There was evidence in this study that teachers with 6 or more years of teaching and those with 5 or fewer years of teaching differ in their attitudes toward the physical needs of the transescent. This implies that the more experienced teachers may have developed attitudes while on the job. The teaching experience variable merits further investigation because it has implications for in-service programs, particularly for teachers with 5 or fewer years of teaching experience.

3. The findings in this study indicate that there is no significant difference in the way teachers with secondary-level certification and teachers with elementary-level certification view the developmental needs of the transescent. This implies that there were few differences in the information that elementary teachers and secondary teachers were given regarding the developmental needs of the pre- and early adolescent. The certification-level variable merits further study because it has implications for teacher placement and teacher-training programs.

4. Little research is available concerning teacher attitudes toward the developmental characteristics and needs of the emerging adolescent. Further research in this area is recommended.

5. This study was restricted to one metropolitan area; it is recommended that studies of a comparable nature be conducted in broader geographical areas.
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APPENDIX A
Dear School Administrator:

Research has shown that ten to fourteen-year-old children have special physical, intellectual, and social-emotional characteristics and needs that should be of primary concern when middle school and junior high school teachers plan instructional activities. How teachers view the developmental characteristics and needs of the young adolescent is an important factor in the learning environment: their attitudes could promote or hinder the instructional processes used to meet those needs.

In the interest of finding out how middle school and junior high school teachers view the developmental needs of the emerging adolescent, a doctoral study at Indiana State University is being undertaken. The questionnaire accompanying this letter is a part of the study to determine: (1) the difference in middle school and junior high school teacher attitudes toward the developmental needs of the emerging adolescent; and (2) if teacher's years of teaching experience and certification-level make any difference in the way they view the developmental needs of the emerging adolescent.

In order to complete this study, your cooperation and that of your seventh and eighth grade staff is greatly needed. With your permission, I would like to deliver the questionnaires, cover letters and return envelopes to the intermediate schools in your school district. I will contact your office by phone Monday, March __, 1983 for your reply.

The results of this study could have strong implications relative to in-service programs and/or the preparation of future middle and junior high school teachers.

The questionnaires are to be strictly anonymous. Neither the teachers nor the schools will be identified by name in the completed study. The results of the study will be shared with the participating intermediate schools.

Sincerely,

Janette M. Clemens
Ph.D. Candidate
Indiana State University

Enclosure: Questionnaire
Dear Fellow Educator:

Research in the past few decades has shown that ten to fourteen year old students have special developmental characteristics and needs that should be given primary consideration when developing an instructional program. Many educators, like yourself, may or may not agree with this theory and its educational implications. The enclosed questionnaire, which contains a series of statements relative to the educational needs of the early adolescent, gives you an opportunity to express your view on this subject.

The questionnaire will take approximately fifteen minutes to complete. Please return your copy of the questionnaire in the attached envelope as soon as possible, or before June 5, 1983. Confidentiality will be respected and maintained.

The results of this study will be available in your principal’s office upon request. Your participation in this study is greatly appreciated. Thank you for your time and efforts.

Sincerely yours,

Janette M. Clemens
DIRECTIONS: Below is a series of statements about the needs of the emerging adolescent—a child between the ages of eleven and fourteen. There are no correct answers for these statements. They have been set up in such a manner as to permit you to indicate the extent to which you agree or disagree with the ideas expressed. You will have a choice of six responses:

Strongly Agree--SA  Strongly Disagree--SD
Agree -- A  Disagree -- D
Mildly Agree --MA  Mildly Disagree --MD

Circle the abbreviation which best represents your attitude toward each statement.

1. A more effective guidance program can be provided for the emerging adolescent if teachers would take an active part in guiding them. SA A MA MD D SD

2. An appropriate learning environment for the emerging adolescent includes inter-disciplinary teams of teachers to plan and teach interrelated subject matter. SA A MA MD D SD

3. The open-classroom concept is better for emerging adolescents than the traditional classroom. SA A MA MD D SD

4. Emerging adolescents need to enjoy rather than participate in, marching bands and cheer-leading activities. SA A MA MD D SD

5. Instructions of emerging adolescents in one large group rather than several smaller groups is best. SA A MA MD D SD

6. Involving emerging adolescents in the instructional process by allowing them to share and each other facilitates learning. SA A MA MD D SD

7. Independent study, at one time or another, is good for all emerging adolescents. SA A MA MD D SD

8. Intramural sports are better for emerging adolescents than interscholastic sports. SA A MA MD D SD

9. Transfer of the emerging adolescents loyalties from adults to peers should be discouraged by teachers. SA A MA MD D SD
10. Emerging adolescents need time to play and "just talk" in some classroom activities.

11. Teaching emerging adolescents manners and respect for others is not a teacher's responsibility.

12. Competing with their own previously established standards rather than with group standards is best for emerging adolescents when developing physical skills.

13. Emerging adolescents can learn from each other as well as they learn from adults.

14. Grouping emerging adolescents homogeneously in classroom activities is better than grouping them heterogeneously.

15. Co-educational classes rather than single-sex physical education classes are best for emerging adolescents.

16. Allowing emerging adolescents to progress at their own rates in the various subject areas facilitates learning.

17. Developing mental abilities requires that emerging adolescents learn to maintain sedentary positions for at least forty minutes.

18. Emerging adolescents who are of the same grade level can be expected to perform the same physical activities.

19. Essential to the emerging adolescent's education are classroom activities that facilitate the development of skills in adapting to the expectations of peers.

20. Structured learning experiences are better for emerging adolescents than unstructured learning experiences.

21. Instructional activities in all classrooms must facilitate the development of motor skills.
22. Guidance relative to the emerging adolescent's understanding of family adjustment and/or problems is a task better provided by outside sources than by teachers.  

23. Emerging adolescents do not possess the ability or maturity to know what is best for them.  

24. Physical activities will alleviate the emerging adolescent's nervous energy.  

25. Emerging adolescents need a school atmosphere in which they are able to work and socialize in adult-like activities.  

26. Instructional activities must include opportunities for all transescents to be at least somewhat successful in any given course.  

27. Freedom to move about and talk during individualized instructional activities does not interfere with learning.  

28. Emerging adolescents need at least one subject-free activity period each week.  

29. Knowledge is best presented to the emerging adolescent in the separate subjects approach.  

30. Identification of the emerging adolescent's strengths and weaknesses is best done by the teacher rather than by the student.  

31. Emerging adolescents need to be given greater choices in what they learn and the way they will learn.  

32. The appropriate amount of time needed for the emerging adolescent's learning experience is approximately 55 minutes.  

33. Informal teacher/pupil interaction both within and outside the classroom must be eliminated.  

34. Emerging adolescents need social activities, such as formal dances, that will encourage the "growing up" process from childhood to adulthood.
35. Knowledge and understanding of health and physical maturation must be highly emphasized during the middle years of schooling. 

36. Instructional activities must be based on the interest of the students. 

37. The "trial and error" approach to developing motor skills benefits the emerging adolescent more than the teacher-directed approach. 

38. Each emerging adolescent must have a unique learning program. 

39. The time set aside for emerging adolescents to explore areas of interest is best limited to one subject at a time. 

40. A fully developed curriculum for the emerging adolescent must include a unified arts program (art, music, etc.). 

Please indicate:

Years of teaching experience

0-5 years 6 or more

Educational certifications

Elementary Secondary

I would like the results of this study posted in __________________ school.

(Name of School)
DIRECTIONS: Below is a series of statements about the needs of the emerging adolescent—a child between the ages of eleven and fourteen. There are no correct answers for these statements. They have been set up in such a manner as to permit you to indicate the extent to which you agree or disagree with the ideas expressed. You will have a choice of six responses:

- Strongly Agree--SA
- Agree -- A
- Mildly Agree --MA
- Disagree -- D
- Mildly Disagree --MD

Circle the abbreviation which best represents your attitude toward each statement.

1. A more effective guidance program can be provided for the emerging adolescent if teachers would take an active part in guiding them.

2. An appropriate learning environment for the emerging adolescent includes interdisciplinary teams of teachers to plan and teach interrelated subject matter.

3. The open-classroom concept is better for emerging adolescents than the traditional classroom.

4. Emerging adolescents need to enjoy rather than participate in, marching bands and cheer-leading activities.

5. Instructions of emerging adolescents in one large group rather than several smaller groups is best.

6. Involving preadolescents in the instructional process by allowing them to share and teach each other facilitates learning.

7. Independent study, at one time or another, is good for all emerging adolescents.

8. Intramural sports are better for emerging adolescents than interscholastic sports.

9. Transfer of the emerging adolescents loyalties from adults to peers should be discouraged by teachers.

10. Emerging adolescents need time to play and "just talk" in some classroom activities.
11. Teaching emerging adolescents manners and respect for others is not a teacher's responsibility.

12. Competing with their own previously established standards rather than with group standards is best for emerging adolescents when developing physical skill.

13. Emerging adolescents can learn from each other as well as they learn from adults.

14. Grouping emerging adolescents homogeneously in classroom activities is better than grouping them heterogeneously.

15. Allowing emerging adolescents to progress at their own rates in the various subject areas facilitates learning.

16. Developing mental abilities requires that emerging adolescents learn to maintain sedentary positions for at least forty minutes.

17. Emerging adolescents who are of the same grade level can be expected to perform the same physical activities.

18. Instructional activities in all classrooms must facilitate the development of motor skills.

19. Guidance relative to the emerging adolescent's understanding of family adjustment and/or problems is a task better provided by outside sources than by teachers.

20. Emerging adolescents do not possess the ability or maturity to know what is best for them.

21. Instructional activities must include opportunities for all transients to be at least somewhat successful in any given course.
22. Freedom to move about and talk during individualized instructional activities does not interfere with learning. SA A MA MD D SD

23. Emerging adolescents need at least one subject-free activity period each week. SA A MA MD D SD

24. Knowledge is best presented to the emerging adolescent in the separate subjects approach. SA A MA MD D SD

25. Identification of the emerging adolescent's strengths and weaknesses is best done by the teacher rather than by the student. SA A MA MD D SD

26. Emerging adolescents need to be given greater choices in what they learn and the way they will learn. SA A MA MD D SD

27. The appropriate amount of time needed for the emerging adolescent's learning experience is approximately 55 minutes. SA A MA MD D SD

28. Informal teacher/pupil interaction both within and outside the classroom must be eliminated. SA A MA MD D SD

29. Emerging adolescents need social activities such as formal dances, that will encourage the "growing up" process from childhood to adulthood. SA A MA MD D SD

30. Knowledge and understanding of health and physical maturation must be highly emphasized during the middle years of schooling. SA A MA MD D SD

31. Instructional activities must be based on the interest of the students. SA A MA MD D SD

32. The "trial and error" approach to developing motor skills benefits the emerging adolescent more than the teacher-directed approach. SA A MA MD D SD

33. Each emerging adolescent must have a unique learning program. SA A MA MD D SD

34. A fully developed curriculum for the emerging adolescent must include a unified arts program (art, music, etc.). SA A MA MD D SD
Please indicate:

Years of teaching experience  
0-5 years________  6 or more________

Educational certification  
Elementary________  Secondary________

I would like the results of this study posted in ________________school.