Transescence is marked not only by disrupting acceleration in physical development and physiological change, but also by emotional and social pressures resulting from the transfer of authority from the family to the peer group. At no time in the schooling of our children do we find greater differences in the physical, social, emotional, and intellectual development of youngsters than we do during the middle years of ten to fourteen years of age. To give an understanding of the middle school student, this report looks closely at each one of the four areas of development. (Author)
"The Nature of the Transescent as it Affects Middle School Program Evaluation." Dr. Joseph C. Bondi, Associate Professor, University of South Florida, Tampa, and Dr. Thomas S. Tocco, Pinellas County School System.

"Transescence is marked not only by disrupting acceleration in physical development and physiological change, but also by emotional and social pressures resulting from the transfer of authority from the family to the peer group. Rapidly changing cultural conditions widen the gap in understanding between parents and transescent youngsters, thrusting more responsibility for social adaptation on the school. Demands for academic achievement and peer conformity add to the difficulties of adjustment.

"The transescent youngster is intensely curious. His intellectual and physical restlessness suggest the appropriateness of an active and individualized program of instruction, combining the freedom of the self-contained elementary classroom with the intellectual opportunities of the departmentalized high school."¹

At no time in the schooling of our children do we find greater differences in the physical, social, emotional and intellectual development of youngsters than during the middle years of ten to fourteen years of age. To understand the middle school student, we must look closely at each one of the four areas of development.

**PHYSICAL CHARACTERISTICS OF MIDDLE SCHOOL STUDENT**

There is increasing opinion and evidence that the onset of puberty is occurring earlier in today's youth than in past generations. If this is true, it suggests a new grade arrangement of 6-8 or 5-8 rather than the present arrangement of grades 7-9 found in the typical junior high school.

A study conducted by Tanner suggests that the age at which pubescence occurs has been gradually decreasing. Tanner found that the average age of menarche in the United States was 12.5 to 13 years as compared to 14 years in 1900.

Margaret Mead states that children today mature earlier and become taller than their parents. She believes this earlier physical maturity is coupled with precocies including a pattern of earlier dating, pairing off, going steady, competitive athletics, and permission to spend money on a lavish scale.

Havighurst has observed that the adolescent of today is more precocious and more complex than his parents. He states that today's junior high youth is more sophisticated and has become acquainted with things earlier because of television and other mass media.

There is some danger in basing the change from the junior high to middle school solely on the theory that today's children mature physically more rapidly than in the past. Most of the studies reporting that children reach adolescence at an earlier age than they did a few years ago are based on the actual age at the onset of puberty of girls today as compared with the estimated age for their mothers and grandmothers. It has been pointed out that the estimate for the older generations is not too accurate. Advocates of the middle school are ceasing to use the justification of early adolescent and are describing the school as being for the "pre-and-early-adolescent child."

In describing the physical development of the middle school child the "key" word is diversity. Each child is maturing in his own way and in his own time. Awareness of physical changes of middle school pupils and the diversity of physical maturation suggests that the "typical child" does not exist and we should plan the curriculum accordingly.
EMOTIONAL ASPECTS OF THE MIDDLE SCHOOL GROUP

In describing the emotional pattern of the ten to fourteen group, we should use the term "hectic" because the body changes taking place inevitably produce tension and turbulent emotions.

The pre-adolescent is characterized by mood instability. Rapid change in mood is typical of youngsters traveling the road from childhood to adolescent. Such unpredictability of mood is, of course, evidence of inner tensions. A single success may bring elations; one setback among many successes—despondency. Sometimes the mood seems unrelated to any observable immediate stimulus.

The pre-adolescent is a study in ambivalence between sophistication and childishness. The pre-adolescent does not want to be bossed; but, on the other hand, he does not want to be looked after and taken care of. Any time of personality reorganization is a time for regression as well as a time for growth. The junior high school typically looks upon the pupil as almost an adult. The pre-adolescent needs an atmosphere in which he can, without penalty, work, play games, and have social events that are not quite grown up. The ten-year-old girl has put away her dolls but not so that they are forever inaccessible. The ten-year-old boy has put away the toy guns, but he can easily be drawn into the fray if a small band of neighborhood guerilla fighters happen to sweep by, hard on the trail of an imaginary enemy. The middle school should accept this characteristic of ambivalence and recognize it when formulating the requirements for a special type of school atmosphere and curriculum.

THE SOCIAL DEVELOPMENT OF THE MIDDLE SCHOOL PUPIL

A child’s social development may be defined as the ability to adjust to those around him. During the middle school years the child will need guidance in working with his peers within the classroom,
with other people outside the classroom, and in adjusting to the opposite sex. As he grows more independent of his family, he will need guidance in family adjustment.

The pre-adolescent wants to belong to and conform to his peers. He is reaching for independence. Striving for independence, he often comes into conflict with adults. The young child lives as a child in an adult world, wanting constant adult support and seeking adult approval. The pre-adolescent begins to shift his loyalties to peers. These years have been called the period of the clique and gang. The transfer of loyalties to peers is a forward stride in social development, but it can run counter to adult expectations and to the expectations of some teachers. The implications of this social reorientation are many. The middle school atmosphere should reflect an acceptance of this new social development and capitalize on it. The dynamics of the classroom should encourage the feeling of common purpose and let students do as they do in their neighborhood environment; namely, to learn, plan, work, socialize, and play together.

The middle school must help boys and girls make the transition at an appropriate age from their childhood interest in groups of their own sex to heterosexual groups. Consideration should be given to boy-girl relationship, or rather lack of relationship during the greater part of the ten to fourteen years; to the sexual awakening expressed in teasing and in the gawky chase, rather than in the more direct interest of the adolescent; and to the search for such symbols of adulthood as telling crude stories and smoking. We must pay attention to the needs of pupils who reach pre-adolescence without having developed their basic social skills to the point at which they can participate effectively in group planning and in independent work, study, and play.
INTELLECTUAL DEVELOPMENT OF THE MIDDLE SCHOOL PUPIL

The space age of the 1970's has brought a dynamic increase in the knowledge about the nature of intellectual development. Through the efforts of Jean Piaget and others we have a better understanding of the cognitive development of children. Piaget suggests that cognitive development is a progression through periods or stages. The periods are sequential and invariant in their sequence. The ten-eleven-year olds in Piaget's system are entering a period of greater ability to use abstract reasoning and are much different from children in the lower elementary years. They operate on much the same level as present junior high school students. It seems reasonable, then, that they be grouped with youngsters of similar intellectual development.

Although accepting Piaget's identification of developmental stages, most educators believe the only thing typical about the intellectual development of the early adolescent is that the pattern is unique. Practically all youngsters in the ten to fourteen age grouping make progress, but the gap between the good student and the poor student continually widens. Thus it is at this period in a child's development when chronological age should be of the least importance and each child should be allowed to travel toward his goal at his own rate of educational growth. Nowhere in schooling is an individualized program more necessary than during the middle school years.
The Pinellas County, Florida school system recognizes the unique needs of transescence youngsters. Accordingly, it has invested considerable capital on the development of a middle school faculty and program. The evaluation of that program in this, its initial year, focuses largely on the differential effect, if any, that the middle school has on traditional achievement areas. The school system recognizes the necessity to more comprehensively evaluate the overall middle school program in terms of its impact on the emotional, social and affective dimensions of youngsters' lives. But first, it must demonstrate to the taxpaying public that the middle school program equals or exceeds traditional junior high school programs in the various areas of academic achievement.

Hence, the major thrust of this year's evaluation includes the comparison of the middle school program to two traditional junior high schools chosen to be demographically and psychologically similar to the middle school. The 1970 Metropolitan Achievement Test Advanced Battery was administered to all children in grades 7 and 8 in all three schools during late September and early October of 1973. The same battery will be administered during late April and early May of 1974 to the same group of youngsters.

Multiple univariate one-way analyses of covariance will be used; one for each subtest and one for each aggregate score (total reading and total math) in grades seven and eight.
The dependent variables will be the various post-scores, while the covariates will be the associated pre-scores and Otis-Lennon Mental Ability Test (I.Q.) scores.

To evaluate some of the affective potential of the middle school, attitudinal questionnaires were co-developed by the middle school with consultant assistance from Research and Development and administered to: 1) students; 2) teachers; and 3) parents in March, 1974.

Selected questions from these same attitudinals were also administered to the two control junior high schools in March, 1974, by the Research and Development Department.

Anecdotal records are being kept by the middle school concerning discipline and other school-related incidents of social or individual student behavior.

While it is important to note that we fully recognize the inchoate nature of this preliminary evaluation, we must stand by the premise that, first and foremost, the middle school must not be found wanting in the cognitive areas if public support is to be continued.

Future plans for the evaluation of the middle school concept in Pinellas County call for longitudinal follow-ups on cognitive measures and such non-obtrusive measures as absentee rate and dropout rate. Also planned, and contingent upon temporal, fiscal and personnel resource availability, is a process evaluation which will focus upon the existence of differential methodologies between the traditional junior high and the emergent middle school.