

# Middle School Accountability

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**L**ITTLE research is yet available as to the merits of a middle school organization. The "middle school," a hybrid, is emerging as one of the most revolutionary changes in the U.S. public school organization since the establishment of the junior high schools some 60 years ago (5). Critics of the middle school can no longer ignore the fact that the middle school movement is gaining momentum and has validated its existence through recognized channels of accountability.

The term "middle school" means many things to educators and non-educators today. Many definitions of the term are very general, and this leads to misinterpretation and further confusion. The junior high school earlier was vulnerable for this very reason. As Popper stated, "As a first step, let it be clearly marked that no substantive meaning attaches to the name junior high school. The name is an accident of history" (7).

The authors believe that the following characteristics best describe the middle school organization:

1. A middle school takes full cognizance of the dynamic physical, social, and intellectual

changes that are occurring in young people during the 10- to 14-year-old age span, and provides a program with the major purpose of creating a facilitative climate so that the transcendent (2) can understand himself and the changes that are occurring within and around him.

2. Middle schools generally locate the ninth grade, with the awesome influence of the Carnegie unit, in senior high school settings. The rationale supporting this decision is usually that ninth graders are more like tenth, eleventh, and twelfth grade students than like seventh and eighth grade students.

3. Middle schools provide opportunities for innovation. Such innovations might include team teaching, individualized instruction, flexible scheduling, and some form of continuous progress. Flexible rearrangements of time, space, materials, and people give evidence to the value of the true middle school.

4. Middle schools de-emphasize the sophisticated activities that are commonly found

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in the junior high school, such as marching bands, interscholastic athletics, and sophisticated dances. The program of activities which is provided permits each child to participate and is based on the personal development of the student rather than the enhancement of the school's prestige.

5. Middle schools provide opportunities for exploratory study and enrichment activities earlier than do conventional elementary schools.

6. Middle school instructional staffs combine the usual talents developed by teachers trained and oriented in the elementary school with the ability to specialize in a given field, so often a "characteristic" of a secondary teacher.

## Middle School Research

Research specifically related to the middle school, as defined by the authors, is extremely limited. There has been little effort on the part of individuals, school systems, or outside agencies to evaluate the middle school. Recently some research studies,

mainly doctoral dissertations, have contributed to a better understanding of the middle school; but in most cases the research leaves unanswered the question of whether or not the middle school is providing a better education for its students than is received by comparable students in the junior high schools.

Mooney (6) and Trauschke (11), at the conclusion of a year's study at the University of Florida as participants in a Middle School Institute, returned to the Dade County, Florida, school system, where they tested several hypotheses in a functioning middle school. Results of these studies are discussed in this article. Miami Edison Middle School was identified as the experimental school for purposes of their studies.

The aged physical plant of the experimental school was not renovated for the conversion to a middle school. Some proponents of the middle school suggest that a middle school and a new physical facility are synonymous. While the middle schools of Center-

ville, Ohio, and Mount Kisco, New York, are exemplary, they do not provide a model for hard-pressed urban areas where inadequate capital outlay budgets, burgeoning populations, and desegregation demand a reorganization and restructuring of outmoded school practices—especially the questionable use of time, space, personnel, and materials. Creative, relevant, functional use of existing school resources is a challenge of the seventies.

## A Study of Achievement

The reorganization of the Miami Edison Middle School was achieved using the same instructional staff allocation as junior high schools in the Dade County school system. The staff was organized into interdisciplinary teams, each team composed of four teachers (math, science, social studies, and language arts). Approximately 140 students were assigned heterogeneously to the team for a five-hour block of time. The block of time permitted flexibility because it enabled the team to group and regroup and to utilize large group and small group instruction.

The extended period also permitted time to provide more appropriate learning opportunities and experiences for the individual child. For example, a child deficient in certain math skills could take more than the 55 minutes per day in math at the discretion of the team. Planning was limited to one hour daily. The team shared a common planning period; unfortunately, a second personal planning period was not provided.

Mooney (6) and Trauschke (11) addressed themselves to the achievement of middle school students in grades 5-6-7-8 when compared with that of students in grades 5 and 6 in elementary and grades 7 and 8 in junior high, using the same control and experimental groups. Student attitudes and self-concepts were also examined to determine the impact of the middle school on the affective dimension of development. Further, these studies compared attendance of middle school students with that of students in conventional school organizations. As a final test, the graduates of the experi-

mental middle school were compared in the ninth grade (four-year senior high setting) to ninth graders in the control 7-8-9 junior high school.

Of the 395 ninth graders enrolled during the 1969-70 school year, 222 former middle school students from Miami Edison Middle School were the subjects of this study. The racial composition of this group was 50 percent Negro, 22 percent of Spanish origin, and 28 percent others.

The three schools used as the control schools were in close proximity to the middle school. The schools were selected after a study of population reports, meetings with representatives of the district office, and the involvement of the research and development section and the testing section of the central county office.

The following five hypotheses were tested:

1. "Achievement of middle school pupils on standardized test scores will equal or exceed that of pupils in elementary and junior high schools." A multiple linear regression—grade, race, and selected subtests of standardized tests—was the method of analysis used. With an experimental population of 1,048 and a control population of 947, comparisons were made. Using the .05 level of significance, 25 null hypotheses were not rejected, indicating no significant difference in achievement. Seven hypotheses indicated greater academic achievement for the students in the middle school when compared to students in the control schools (6).

2. "Middle school graduates will score as high or higher on the ninth-grade standardized test in the senior high setting as the ninth graders in the (control) junior high setting." The statistical treatment for this hypothesis was the same as the treatment used in testing the first hypothesis. With an experimental population of 188 and a control population of 207 and using a covariate IQ, 12 cell comparisons of achievement were made. Nine of the 12 null hypotheses tested were not rejected indicating no significant difference in academic achievement between students in the experimental and control schools. Three null hypotheses indicating greater achievement for students in the experimental school were rejected (6).

3. "The average daily attendance of middle school pupils will be higher than pupil attendance in elementary and junior high schools." Percent of attendance data for seven 20-day reporting periods, September-March, were analyzed by the sign test. Twenty-seven of the 28 comparisons made favored the experimental school. Data were also tested by a multivariate analysis of variance, using the following variables: treatment, grade, and month. Five of the six sources of variance were significant beyond the .01 level (6).

4. "Pupils in the middle school will have more favorable attitudes toward school than will pupils in elementary and junior high schools." Students at each grade level in the middle school were compared with students at each grade level in conventional school using *Battle's Attitude Scale*, which has self factor, fellow following factor, school factor, and teacher-principal factor for purposes of comparison. Of the 30 comparisons there were 21 apparent differences favoring the middle school, and 8 significant differences favoring the middle school (11).

5. "Pupils in the middle school will have more adequate self-concepts than will students in elementary and junior high schools." This was tested using Gordon's *How I See Myself*

*Scale*, which included the following subtests: teacher-school factor, autonomy factor, peer factor, academic factor, emotions factor, and language adequacy factor. From 60 comparisons there were 28 apparent differences favoring the middle school, and 8 significant differences favoring the middle school. This hypothesis was accepted at the seventh grade level only (11).

Only through systematic long-term study can middle schools throughout the nation prove to be all that middle school proponents claim. Middle schools may overcome the shortcomings of the organizational and program failures of the school organizations which they are replacing; however, provision must be made to assess the effectiveness of ongoing middle schools. Without systematic evaluation we compound the problems prevalent in the elementary and the junior high schools.

School systems must include in their planning for middle schools guidelines for the evaluation of these schools. Unless stated objectives are clearly defined in measurable terms, the middle school movement will continue to be more of the same—schools which purport to change but revert to the familiar, outmoded models from which they departed.

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