

The Effects of School Enrollment Size in the Middle and Junior High School on Teacher and Student Attitude and Student Self Concept

CHERIE MAJOR FOSTER¹ AND IZAR MARTINEZ²

The study examined the relationship of enrollment size (200-1500) to teachers' and students' attitudes toward school and the self concepts of students in selected middle schools and junior high schools in the States of Idaho, Utah and Wyoming. Middle school teachers were found to favor small schools, and junior high teachers large schools. Student attitude toward school and self concept were not found to correlate with size.

INTRODUCTION

There has been considerable discussion and some research related to optimum school enrollment size. It appears that in general, practice has been to organize school districts and build schools on the basis of convenience to the community [4]. For many years, James Conant's [6] national study on school size greatly influenced educator's decisions related to optimum enrollments. He recommended that no secondary school should have a graduating class of fewer than 100 students. At the time of the Conant report only 30 percent of the high schools in the country were in this category. Subsequently, based on Conant's study and other recommendations [15], a national trend to consolidate small schools developed. By 1977, 50 percent of all the secondary schools in the country had graduating classes with 100 or more students.

Smaller school's alleged weaknesses are generally considered to be in the areas of curriculum, student achievement, staffing, morale, and cultural opportunities. These weaknesses tend to disappear as school enrollment approaches 700. Beckner and O'Neal [4] pointed out that curriculum offerings in small schools are limited, particularly in the vocational area and special programs for gifted, handicapped or students needing remedial help. Nevertheless, they contend that achievement has not, in any definitive way, been shown to be affected by school size. The greatest difficulty facing small schools is in the acquisition and retention of qualified staff.

Beckner and O'Neal [4] also note that in spite of the weaknesses existing in schools with small enrollments, they provide benefits larger schools cannot; for example: (a) a lower teacher-pupil ratio, (b) closer relations between teachers and students and between faculty and administration, and (c) greater student participation and

recognition. Each results in more human contact, reducing frustration and alienation.

Studies related to the effects of school enrollment size on student participation in co-curricular activities have consistently shown that students in small schools become more involved than students in larger schools [9; 10]. Barker and Gump [3] and Wicker [17] indicated in the summary of their findings on school size and experiences in co-curricular activities that:

(1) In terms of availability of extracurricular activities small schools are not significantly different from larger schools.

(2) In small schools, students are more likely to be involved in a wide range of activities. Also, students in small schools have more positions of responsibility than students in large schools.

(3) Students in small schools seem to derive more personal satisfaction from participating in extracurricular activities than do students in large schools.

(4) Students in small schools receive more encouragement to participate in extracurricular activities than do students in large schools.

Additionally, Baird [2] found, in a study with a national sample of 21,000 high school students, that students from small schools had greater achievement in leadership, music, speech and drama, and writing than students from large schools. He found no significant effect of school size in art or science achievement.

Downey [7] reported that college students from small high schools had a higher participation rate in activities but no significant difference was found in college academic performance between students from small and large high schools.

Student alienation and student participation in co-curricular activities have been found to be negatively cor-

¹Assistant Professor, Department of Professional Education, University of Southern Maine, 505 Bailey Hall, Gorham, ME 04038.

²Associate Dean, College of Education, Utah State University, UMC 28, Logan, UT 84321.

related [8; 10; 11; 13; 14]. In larger schools the number of students who are less likely to participate in school activities increases and, therefore, a greater degree of student alienation exists. Unfortunately, alienation affects confidence, self-esteem, and responsibility for self-direction [16].

In summary, small schools appear to experience difficulties in staffing and offering a wide variety of curricular options compared to schools with larger enrollments. On the other hand, students in schools with small enrollments seem to be more actively involved in activities that develop leadership qualities and close working relationships than those in schools with larger enrollments.

PURPOSE

Currently, schools which serve 10 to 14 year old students exhibit one of two organizational structures, junior high or middle school. The purpose of this study was to determine the effect, if any, enrollment size had on student's attitude toward school, their self concepts and on teacher's attitude toward school in these two organizational structures.

PROCEDURE

Because of the nature of the problem a three phase approach was used:

Phase I

Phase I consisted of a review of the literature to identify the variables and characteristics which most often distinguish middle schools from junior high schools. The curriculum components identified as the basis for the organizational dichotomy were: grade levels, teacher organization, scheduling, subject matter organization, guidance, sports, evaluation of students, teaching methods, curriculum electives, classroom structure and teacher preparation. Traditional differences between the middle school and junior high school organizational structure are described in Table 1.

Phase II

A questionnaire designed to distinguish between the two organizational structures was developed and mailed to a random sample of 50 middle school and junior high school principals from the states of Idaho, Utah and Wyoming. Each returned questionnaire was analyzed to determine the extent to which a particular school exhibited either the middle school or junior high school organizational structure. The goal was to select middle schools and junior high schools that were representative of the two organizational structures, omitting schools that utilized a combination of the two organizational structures. Six middle schools and six junior high schools, those exhibiting the highest percentage of their respective organizational structure (65% +), were selected for

TABLE 1
Junior High School and Middle School
Organization and Curriculum

Area	Description
Grades	JHS: Usually includes grades 7, 8, and 9. MS: 6, 7, and 8 are the typical grades although middle schools do include any grade combination 5 through 9.
Staff Patterns	JHS: A single teacher in a self-contained classroom, teaching a single subject, one preparation period per day. MS: A combination of 2 to 5 teachers in a team, teaching two or more subjects. Common planning time, some subject matter specialist usually in the related arts.
Organization of Students	JHS: Students rotate every hour from single subject classrooms with 25-30 students per room. MS: "Planned Gradualism" relates to a transitional organization when entering students spent most of their day with a teacher or team of teachers. The second year the students rotate $\frac{1}{2}$ to $\frac{3}{4}$ of their day and the third and final year rotate each hour in preparation for high school.
Teacher Role	JHS: Single subject matter specialist. MS: Competent in two or three subjects, advisor to 25-30 students.
Student Role	JHS: Autonomous recipient of information in a competitively structured classroom. MS: Active planner and participant in a success-oriented flexible classroom.
Role of parent	JHS: Parent input on curriculum planning. MS: Parent input on curriculum planning. Volunteer program and two-way communication emphasized.
Subjects	JHS: Departmentalized refers to a single subject taught for one hour, usually daily. MS: Departmentalized and interdisciplinary (two or more subjects taught in relation to a single topic or unit of instruction).
Teaching methods	JHS: Primarily lecture and textbook MS: A variety of methods including some self-paced curriculum, contract and discovery learning, a more hands-on exploratory approach.
Curriculum	JHS: Traditional courses and electives. MS: Continued emphasis in basic skills (math and language literacy). Interdisciplinary units, life skills, values clarification, and mini-exploratory courses.
Sports	JHS: Extramural program which involves 10 to 20 percent of the students. MS: Extensive intramural program that involves 75 to 100 percent of the students.
Guidance	JHS: One or two counselors per school who provide career counseling, testing and help solve student problems. Homeroom teacher who serves as a liaison to the home. MS: A teacher centered advisement program where each teacher is a liaison between the home and school for 25 to 30 students. The guidance counselor role shifts to teacher trainer and is available for severe student problems.

TABLE 1 Continued
Junior High School and Middle School
Organization and Curriculum

Area	Description
Evaluation	JHS: Letter grades, academic progress, teacher input only, limited student evaluation of program.
	MS: Descriptive and letter grades in academic, behavioral and social development. Student input on school rules and evaluation.
Role of the Community	JHS: Cooperative relationship with social agencies to help problem students. Utilization of the building during non-school time.
	MS: Environment for learning and instruction sources, use of social service agencies and building utilization by community.

further study. The selected schools were matched by enrollment size. The middle school site enrollments were: 1,500, 600, 500, 510, 480 and 264. The junior high school site enrollments were: 1,140, 850, 620, 630, 350 and 220.

Phase III

The collection and analysis of the teacher and student data from the 12 selected schools was carried out in Phase III.

The attitudes of the teachers were assessed with the *Purdue Teacher Opinionnaire* (PTO) [5] which yields a score indicating a general morale level. Nine or ten teachers from each of the 12 schools were randomly selected and administered the PTO (Total $N=117$).

The attitudes of the students were assessed with the *Na-*

tional Study of School Evaluation Opinion Inventory [12] which yields a general measure of student attitude toward the school program. Three classrooms from each of the twelve sites were randomly selected and the students were administered the opinion inventory (Total $N=892$).

The same students were also given the *What I Think Scale* [1] which yields a general self-concept score in relation to peers and the school program.

The statistical analyses utilized were simple regression and *t*-tests to determine whether differences existed between the middle school and junior high school correlations.

FINDINGS

Both middle school and junior high data were correlated with enrollment size separately and then compared with each other for significant differences between organizations.

The middle school teachers' attitudes were negatively correlated with enrollment size indicating a preference toward small schools. The junior high teachers' attitudes were positively correlated with enrollment size indicating a preference toward larger schools.

The attitude of students was very similar in each organization, middle school and junior high. There was no significant correlation with student attitude and enrollment size for either organization.

The correlation between self-concept and enrollment size was not significant for the junior high students. There was, however, increase in self concepts by the middle school students as enrollment size increased. It should be noted the percent of variance accounted for was small and the difference in correlations between organizations was not significant indicating any differences found were by chance.

SUMMARY

Student attitudes and student self concepts towards their respective schools did not seem to be affected by enrollment size in this study. This result is not consistent with the review of the literature where greater student alienation and lower student self concepts were indicative of larger schools. For this sample, students in both organizations seemed to be quite positive (based on national norms) about their school and its programs. Most students also had relatively high self concept scores.

However, teacher attitude changed as enrollment size changed. Middle school teachers preferred schools with smaller enrollments. Junior high teachers had a slight but significant preference for larger schools and the difference between the middle school and junior high correlations with size was significant, indicating a real difference between the two populations.

The schools selected for the study had a high percentage of middle school or junior high organizational structure. Middle school teachers for the most part were organized into interdisciplinary teams and junior high

TABLE 2
Correlations of Attitude and Self Concept
with Enrollment Size in Middle Schools
and Junior High Schools

	<i>r</i>	<i>t</i> -Test MS/JHS
Teacher Attitude & Size		
Middle School	-.47*	
Junior High	.35*	
MS/JHS		6.55*
Student Attitude & Size		
Middle School	-.0004	
Junior High	-.0014	
MS/JHS		-.98
Student Self-Concept & Size		
Middle School	.002	
Junior High	.001	
MS/JHS		.524

* $p < .05$

teachers were departmentalized. Further research needs to be conducted to determine if enrollment size alone or the organization of teachers as a result of enrollment size affects their attitude.

REFERENCES

1. Ascione, F.R., & Borg, W. *What I Think Scale*. Logan, Utah: Utah State University, 1979.
2. Baird, L. Big school small school: A critical examination of the hypothesis. *Journal of Educational Psychology*, 1969, 60, 253-276.
3. Barker, R.G., & Gump, P.V. *Big School, small school: High school size and student behavior*. Stanford, California: Stanford University Press, 1964.
4. Beckner, W., & O'Neal, L. A new view of smaller schools. *NASSP Bulletin*, October, 1980, 1-7.
5. Bentley, R., & Rempel, A. *The Purdue Teacher Opinionnaire*. Indiana: Purdue Research Foundation, 1970.
6. Conant, J.B. *The American high school today*, New York: McGraw-Hill Book Company, 1959.
7. Downey, R.G. Differences between entering freshmen from different size high schools. *Journal of College Student Personnel*, 1978, 19, 353-358.
8. Educational Research Services, Inc. *Research brief: Summary of research on size of schools and school districts*. Arlington, Virginia: Educational Research Services, Inc., 1974.
9. Huling, L. How school size affects student participation, alienation. *NASSP Bulletin*, October 1980, 13-17.
10. Kleinert, E.J. Effects of high school size on student activity participation. *NASSP Bulletin*, 1969, 53, 34-46.
11. Mehaffie, S. *A survey of current and future educational issues of small West-Texas secondary schools*. Lubbock, Texas: Texas Tech University, 1973.
12. National Study of School Evaluation. *Student Opinion Inventory*, Virginia, NSSE, 1974.
13. Palmer, K. Small is beautiful schools: as if kids mattered. *The Clearing House*, 1978, 51, 426-438.
14. Schoenholtz, J.B. Small high schools—panacea or malignancy. *Phi Delta Kappan*, 1972, 53, 577-578.
15. Stemnock, S.K. Summary of research on size of schools and school districts. *Educational Research Services*, 1974, 11, 49.
16. Turner, C. & Thrasher, J. *School size does make a difference*. San Diego: Institute for Educational Management, 1970.
17. Wicker, A.W. School size and students' experiences in extracurricular activities: Some possible implications for school planning. *Educational Technology*, 1969, 9, 44-46.