

Profile of the Small High School

*A state study
relates certain factors
to school size.*

FOR the past many years rural educators have been calculating the cost in dollars of operating small high schools. They frequently have been frustrated in efforts to weigh the educational programs of small high schools against the offerings of larger high school units.

One barrier to school reorganization is the rationale citizens often present for maintaining very small high schools. The claim may be that the small classes of the small high schools automatically guarantee each student a full measure of individual faculty attention. Other claims may center around the high school's being the social hub of the community; if the high school is lost through district reorganization, the community will disintegrate. Occasionally, citizens draw on the human logistics of athletics; in high schools with only 40 boys the chances of any boy's making the basketball team are better than his chances in schools numbering 300 boys.

Although there is nothing sacred about bigness or smallness as such, there is fast being fashioned in much of Ohio an image or stereotype of the small high

school. Presumably the staff is underpaid, lacking in graduate training, and relatively inexperienced. The image extends to include the community which is taxed to the hilt to keep the district alive.

Small high schools can have many of the positive characteristics of the larger high schools. Undoubtedly, some small high schools are superior to some large high schools. The question becomes one of probability. What are the odds against the small high school's equaling or excelling the large high school according to certain measurable indexes? If there is a distinct probability advantage resting with the large high school, then the good small high school of today is running a substantial risk of deteriorating tomorrow.

Differences Related to School Size

Recently data was collected from 103 school districts in Ohio in an effort to identify differences that may exist in high schools due to the size of the schools.¹ Although practically every district in Ohio operates one or more elementary

¹ The study was conducted under a grant from the Research Foundation of the University of Toledo and with the assistance of two Graduate Fellows, James R. Hays and Ellis Dunmyer.

school, reorganization pressures stem principally from the operation of high schools.

An examination of the 1958-59 *Educational Directory* published by the Ohio State Department of Education revealed a total of 49 high schools in the state with enrollments in the 500-700 range in grades 9-12. For the purposes of this investigation, these high schools were termed "large schools." A second group of high schools known as the "small schools" was also selected. High schools in this group included 54 high schools selected to include all areas within the state, suburban as well as rural.

Using these two groups of high schools, an attempt was made to see whether or not differences existed that were identifiable.

Before any detailed examination was undertaken certain assumptions were made:

1. High salaries tend to attract abler teachers.
2. Teachers with several years' experience tend to be superior to teachers with limited experience.
3. Teachers with graduate degrees tend to perform better than teachers without graduate degrees.
4. Districts which make substantial financial effort achieve better programs than do districts making less financial effort.

In determining whether or not a relationship existed between the size of the high schools and the salaries paid staff members, certain data were collected. A median salary of all full-time high school teachers was established in each of the 103 districts. No administrator's salary was included. The 103 median salaries were then ranked, and this ranking was divided into a top half and a bottom half and cast in a contingency table against size of school. The results

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showed that the median salaries paid in the large high schools clustered in the upper half of the ranking to an extent that could be attributed to chance less than once in a thousand instances.²

Using a similar procedure a median figure representing the total public school experience of staff members excluding administrators was calculated for each of the 103 districts. These medians were then ranked and divided into a top half and a bottom half. Again the teaching staffs of the larger high schools clustered high on the scale indicating that the median of experience in the large high schools exceeded its counterpart in the small high schools to a degree that could be attributed to chance less than once in 40 times.

Continuing with this format the faculty of each of the schools was checked to determine the number of teachers (no administrators included) who held masters degrees. Since the number of persons on the instructional staff of the 103 high schools varied markedly, a percentage of the instructional staff holding masters degrees was calculated for each school. These percentages were then ranked and divided into a top half and a bottom half. This grouping was then plotted against the size of the school. Here the big high schools employed a higher percentage of teachers with masters degrees to an extent that exceeded chance distribution 1000 to 1.

A review of these findings indicated a likelihood of a relationship existing between size of a high school and level

² The statistical device employed here and in later aspects of this study was Chi-Square.

of staff salary, extent of staff experience, and percentage of staff holding masters degrees. However, when individually applied to districts, exceptions were found in all three relationships. Some small schools paid their staffs well, some had well-experienced staffs and some staffs included a high percentage of teachers with masters degrees. The question then arose, could a single small school rank high in all these relationships? Or more broadly stated, was there a relationship between school size and ranking either high or low in all three indexes?

Twenty-two of the 49 large high schools were located in the top half in each of the three rankings of the 103 high schools. The three rankings included median teachers salary, median years of teaching experience and percentage of faculty with masters degrees. One big high school ranked in the lower half in all three measures. No small high school ranked above the mid-point in all three measures but 20 of the 54 small high schools were below the mid-point in all three measures. Happenstance alone could account for a distribution of this type less than once in a thousand times.

In the stereotype of the small high school, there often is painted the picture of a small high school being kept alive through the heroic tax efforts of its citizens. As a test of this image, the tax rates for school operation of the districts in which the high schools were situated were ranked and the ranking was divided into a top half and a bottom half.

The results of this ranking were somewhat less conclusive. Twenty-nine large high schools and 21 small high schools were situated in districts which levied a higher tax for school operation than was the median tax rate for school operation of all 103 school districts. Although it appeared that the districts of the large

high schools tended to levy more taxes for school operation than did their smaller counterparts the disparity was small enough to occur in a chance distribution once in ten times.

Tax rates tend to be more meaningful when taxable wealth per pupil is also considered. As a test of the possibility that lower taxes for school operation in smaller districts might be due to higher valuations per pupil in sparsely settled districts, the valuation per pupil was calculated for 101 of the 103 districts and ranked. No data were available on two districts. The valuations per pupil were then divided into a top half and a bottom half and plotted against school size.

Again the larger schools outnumbered the small high schools in ranking high on a taxable-wealth-per-pupil scale but the difference was not great and there was one chance in ten that no real difference existed. However, if an indication did exist, it rested in favor of the larger district possessing a greater taxable wealth per pupil.

Most important in any assessment of an educational endeavor is the quality of the educational program being offered. Regretfully, one of the most difficult things to assess is the quality of an educational program, since to measure the program it is necessary to determine the nature and extent of that program's impact on the lives of boys and girls. The limited resources of this study precluded any attempt to relate aspects of the educational program to behavioral changes in teen-age Americans. Rather, one index of program as applied to the large high schools and the small high schools was sought. That index dealt with an aspect of secondary education which public policy was currently demanding—a guidance program.

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and games will provide many opportunities for pupils with special interests and abilities.

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Forty-eight of the 49 large high schools claimed to have in operation a guidance program whereas 34 of the 54 small schools claimed such a program. However, when a guidance program was defined as requiring that at least one staff member be assigned at least one period *per week* to work on the program, 36 large high schools and 10 small high schools met the test. When a guidance program was defined as requiring that at least one staff member be assigned at least one period *per day* to the program and recognizing that the staff member has no formal training in guidance, 19 large high schools and five small high schools could claim the existence of a

program. When a guidance program was defined as requiring the assignment of at least one period per day of a staff member who possessed some formal training in guidance, 17 large high schools and five small high schools could report such a program.

It is obvious that the large high schools could not claim a monopoly on guidance programs. Nevertheless, a distinct advantage seemed to lie with the large high school in attempts to give the guidance process some structure through a guidance program.

In summary, it is obvious that no profile can be constructed to fit all large high schools or all small high schools. However, after studying every Ohio high school listing 500-700 pupils in grades 9-12 and comparing certain educational aspects of those districts with an approximately equal number of systematically selected districts with grades 9-12 enrollments of less than 200, certain distinctions tend to appear.

In small high schools, according to the study, teachers receive lower salaries, have fewer years of experience and are less likely to hold graduate degrees when compared to their fellow staff members who serve large high schools.

Taxable wealth per pupil tends to be a little less in districts with small high schools when compared with districts containing large high schools. If the school tax rate for operation is an index of a community's educational effort the district of the small high school appears to make a little less effort than the district which includes a larger high school unit.

Finally, in at least one area of program, namely guidance, the small high school has more difficulty freeing staff for guidance activities and is less likely to attract a qualified guidance person.

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