

was to be expected, a simple scatter diagram revealed a very high correlation between this factor and school population increases. This factor appears to measure primarily growth and not quality; and it was therefore discarded.

The weighting problem is truly difficult. Who can confidently assess the relative importance of the number of teachers per 100 pupils, as compared to the number of high school credits offered by the school? Since no useful basis could be found to give each of the six factors specific differential weights, equal weights were used. Fortunately, with six components to the index, the weighting system is no longer so very crucial. Doubling the weights of any one or two of the components will not greatly affect the magnitude of the index numbers.

This simplified index was subjected to a test which sheds some light on its reliability. A number of educators who are well acquainted with public schools of the St. Louis city-county area were interviewed separately and asked to rate the various school districts in terms of excellent, good, medium, poor, and very poor. These ratings, when compared with the scope and quality index data, showed very close consistency. In no case was the school district with an index number above 1, i.e., average, given a subjective rating of poor or very poor, and vice versa. In the few cases with difference in the rating, the index number was equivalent to excellent and the subjective rating was good. Although this is a very simple validation procedure, it might well be that if there are inaccuracies in the index numbers, they are not in excess of from 5 to 10 percent either way. To the extent that discrepancies exist, they are likely to be randomly distributed and no bias appears to have crept into the index.

On the national level, the paucity of appropriate and consistent data, useful for such an analysis, is very great. Virtually all the data that are available, and that at first glance appear pertinent, are expressed in dollars. They pose serious problems of circularity. It is a simple tautology to state that high salaries, designed to reflect variety, scope, and quality of education, affect expenditures.

However, one measure, expressed in physical units and most likely an ingredient of good education, is the number of principals, superintendents, and consultants per 1,000 pupils in average daily attendance. These are the educational experts who evaluate the curriculum and introduce changes, provide guidance, supervise teachers, etc., and their number is considered to be as reliable an indication of the quality of education as can be obtained at present; superior to any other simple measure, as, for instance, teacher-pupil ratio. About the latter, Ralph Cordiner, of the General Electric Co., is reported to have made the controversial statement—

There are some educators who are actually proud of the declining ratio of students to faculty. * * * To my knowledge, there is no other field in human endeavor which actually prides itself on declining productivity.²²

Returning to the number of principals, superintendents, and consultants per 1,000 pupils in average daily attendance as a sole measure of the quality of education, in the narrow sense, the following assumptions should be kept in mind. Quality of output is highly

²² Quoted by J. A. Livingston in "Get With It, Professor, Your Show's Slipping," the Washington Post and Times Herald. Nov. 27, 1957.