A SURVEY OF SCIENTIFIC EDUCATION IN SECONDARY INDEPENDENT SCHOOLS

AN ABSTRACT OF

A THESIS

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The purpose of this study is to endeavor to understand the place and characteristics of science education in the Secondary Independent Schools of today, and to tabulate the information as found in their catalogues in order to learn more of their science programs. A Secondary Independent School is defined by this paper as a non-tax supported school which is selective in its enrollment and encompasses at least grades nine through twelve.

The writer randomly selected a sample of 150 Independent Secondary Schools from two standard reference books listing such schools. Each of the schools was written asking for its published catalogue. After three such mailings, 137 schools had responded by sending suitable catalogues. Information pertaining to general characteristics of the school, its faculty, laboratories and curriculum were abstracted on to five-by-eight cards. The information was then tabulated and certain measures of central tendency reported.

Notable among the general characteristics of the schools was the total number of students, approximately 34,000, giving an average of approximately 250 per school. Ninety-two of the schools accepted boarding students. All schools accepted day students. Eighty-two of the schools were located in the

northeast quadrant of the United States. Sixty were accredited by their regional accrediting association.

The faculty-student ratio was found to be 1 to 7.6 while the science faculty-student ratio was found to average 1 to 69.7. Of the total faculty 8.3 percent had no degrees, 50 percent had Bachelors' degrees, 38.6 had Masters' degrees, and 3.1 percent Doctorates. Of the science faculty 1.7 percent had no degrees, 54.5 had Bachelors' degrees, 40.4 percent had Masters' degrees, and 3.4 percent had Doctroates.

Of particular interest were the findings in the area of science curriculum. It was found that almost all schools offered the three basic sciences, and these in the order biology, chemistry, and physics. Over 60 percent of the schools offered at least one additional science course. Advanced science courses were offered in 30 percent of the schools. Seventy-two percent of the text books reported were found to be those developed by the National Science Foundation curriculum studies. Over two-thirds of the schools required at least one year of science for their college preparatory diploma.

Few schools listed specific facilities, laboratories, or equipment in their catalogues. In general, it was found that boys' schools were more apt to report such equipment than girls' schools, and the larger schools were also more likely to report such specialized facilities. Boys' schools were also more likely to have wider science course offerings, more science-related clubs, and require more science courses than girls' schools. No correlation was observed between

the size of the school and the number or kind of courses offered or required.

The conclusion to the paper includes a listing of the characteristics of a "typical school" based on the results of the study. In the section: "Some Problems Faced," it was pointed out that the catalogues many times failed to list specific information required. In "Suggestions for Further Investigations," the need for more study of Independent Schools is stressed.