

SECTION E, SCIENCE EDUCATION

The Effectiveness of the Oklahoma Junior Academy in the Early Identification of Scholars

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The Oklahoma Junior Academy of Science was organized during the 1957-58 scholastic year. It assumed the name of a defunct organization of another format which had been sponsored by the Oklahoma Academy of Science. It was designed to supplement activities of science clubs, science fairs, and other such motivating activities in the secondary schools.

The Oklahoma Junior Academy of Science was somewhat unique in that emphasis was on the completed product, a properly prepared, publishable report of the applicant's individual research. While there are now other activities that require such a report, those who have administered the Junior Academy program have attempted to maintain it as a prestige organization for students of truly exceptional ability. Each submitted paper is first screened by the local teacher, after which it is further examined by at least two appropriate members of a screening committee made up of members of the Oklahoma Academy of Science and other sponsoring organizations. Suitable comments and constructive criticisms are returned to the applicant. A total of nearly 600 papers have been received from some 75 schools. Over 100 teachers have been involved, and 88 college scientists have helped in the selection of meritorious papers. Many of the selection panel have served every year since the beginning of the program. Each year, at the annual meeting of the Junior Academy, its new members have been received with suitable ceremony, having first presented their papers for public discussion. Thus far, all accepted papers have been printed in the "Transactions of the Oklahoma Junior Academy of Science" and distributed, without charge, to the various school libraries of the state.

The program has been directed by Dr. Robert C. Fite with the assistance of an advisory committee representing each of the state colleges, three universities, and eight scientific organizations (including the Oklahoma Academy of Science). The Oklahoma State University financed the first year of operation. Five annual grants from the National Science Foundation have since been added to this support. For the last two years, sustaining memberships to the Oklahoma Academy of Science have helped supplement a reducing grant from the National Science Foundation.

With the anticipation of further reduction in the support received in the form of Academy grants from the National Science Foundation and with the rise in the costs of publication and related activities, it seemed timely to conduct a survey in an attempt to determine the effectiveness of the program.

It was hoped that the information received would be helpful in planning, directing, and financing the future of the organization. Many of the students were still too young to have much to report; yet, had the effort been delayed, the outdated home addresses on file would have been even less effective for communication purposes. As was expected, communication was more difficult with the older members.

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TABLE I. ANALYSIS OF ACTIVITIES AND ACCOMPLISHMENTS OF FORMER
OKLAHOMA JUNIOR ACADEMY OF SCIENCE PARTICIPANTS

Year	New Members	Number Responding	Number Continuing Research	Number Publishing	Jr. HS	Current Status HS	Call	Degrees Earned Bachelor	Degrees Earned Master	Financial Aid
58	25	12	9	4			10	10	2	10
59	19	5	1				5	1		4
60	18	5	2	1			5			4
61	32	14	10	5		4	10			9
62	29	20	10	2	1	13	6			6
63	37	34	16	6	1	24	9			6
TOTAL	160	90	50	18	2	41	45	11	2	39

The instrument used was designed to collect data on the individual participants' accomplishments since attaining membership. The accompanying data (Table I) were extracted from the returned questionnaires. Members were tabulated on the chart by their first year of publication although many of the students submitted papers in subsequent years.

Many interesting items were pertinent but not suitable for tabulation. None of the respondents who had completed high school failed to enroll in college. They were attending thirty colleges, ranging geographically from Harvard to the University of California at Berkeley, and from Carleton College in Minnesota to Rice University. Only nineteen of the forty-three students who enrolled in college did so in Oklahoma. Ranked by frequency in enrollment, they had attended Oklahoma State University (8), Oklahoma University (5), Phillips University (2), Tulsa University (1), Central State College (1), Oklahoma City University (1), and St. Francis Seminary (1). Only two of the respondents had discontinued formal education after completing the bachelor's degree, one to work as a researcher in industry and one to teach in the Peace Corps. Two had graduated *magna cum laude*; two had been elected to Phi Beta Kappa; two had completed master's degrees. A participant of the 1959 program expected to receive the Ph.D. degree in June, 1964. A member from 1960 was competing in the finals for the Rhodes scholarship. Specific honors, medals, and awards were numerous.

At the time of writing, the results of this survey were still incomplete but certain conclusions seem valid. The Oklahoma Junior Academy of Science is quite effective in the early identification of capable scholars. Particularly significant is the number of participants who have received college scholarships. The Oklahoma Junior Academy had made no effort to provide scholarships or to actively assist the participants in obtaining them. Also significant is the high percentage of participants who attended colleges and universities in other states. These two factors may, and probably are, related. It is a well-known fact that Oklahoma colleges and universities have not been as active as comparable institutions in other states in providing scholarships at the freshman level for promising science students. This presents an area of concern which merits further investigation.