

Duke University's Talent Identification Program*



*Revised version of a speech given by Dr. Robert N. Sawyer at the Tenth Annual Hyman J. Blumberg Symposium On Research in Early Childhood Education at The Johns Hopkins University, Nov. 14-16, 1980.



by Robert N. Sawyer
and Lynn M. Daggett

In November of 1979 the senior author travelled to The Johns Hopkins University to observe the activities of the Study of Mathematically Precocious Youths (SMPY) and the Office of Talent Identification and Development (OTID) and investigate the possibility of Duke University's conducting a search similar to that of SMPY and OTID and developing programs for talented youths in the southeastern portion of the United States.

The decision was made that Duke should move ahead as swiftly as possible to identify verbally and mathematically talented youths in a thirteen-state area. The goals of the Duke program were set forth as follows:

- 1) identification of gifted youths;
- 2) development of the intellectual potential of the students identified;
- 3) assistance in the placement of these youths in institutions of higher education with programs consistent with the students' interests and capabilities; and
- 4) research pertaining to the identification of the gifted, nature of giftedness, and curriculum for the gifted.

In May 1980 Provost William Bevan announced the intention of Duke University to conduct its initial talent identification program in the fall and winter of 1980-81. The senior author was named to direct the effort.

The Search Area

The area for the initial search encompassed 891,612 square miles and (as of the 1970 Census of Population) had an estimated population of 912,000 12-year-olds in the States of Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas. The target area represents 25% of the United States and approximately 28% of the 12-year-olds in the United States. The 1982 Talent Search will also include the States of Iowa, Kansas, and Nebraska.

Identification

After returning from Hopkins, some thought was given to ways in which TIP might improve on the SMPY-OTID identification procedure. While most of the process was kept the same, a decision to computerize as much of the Talent Search as possible was made. School addresses for the 13 states were either obtained on computer tapes or keypunched and placed in the TIP computer data base. A computer terminal was acquired. OTID forms were revised and the application and questionnaire were made machine-readable. Hundreds of thousands of forms and envelopes were printed.

In the summer of 1980 contact was made with the 13 state-level gifted and talented coordinators. Their help and cooperation has been essential to TIP's success. A working relationship with Educational Testing Service was also established.

In September 1980 information and a Talent Search application were mailed to each of the 3,577 superintendents and coordinators of the gifted program in the search area. Two weeks later mailings were made to the principals, counselors, English chairpersons and mathematics chairpersons in each of the 11,584 public, private, and parochial 7th grades in the search area. Many other mailings were also made. Our first completed application arrived in the TIP office on October 8, 1980. Over 11,000 more followed it.

Qualified applicants were mailed College Board information, a TIP questionnaire, and other materials. On January 24 and 25, 1981 over 8,000 TIP participants took the Scholastic Aptitude Test (SAT) at its regular administration.

The results of TIP's first talent search demonstrate that the SAT is a valid instrument for measuring mathematical and verbal reasoning ability in gifted seventh-graders. The 8000+ participants in the talent search held their own when compared with the high school students who normally take the tests. On the mathematics portion (SAT-M), the average score for the boys was 404, while for the girls it was 375. The average high school junior or senior scores 416 if male, and 390 if female. On the verbal test (SAT-V), the boys scored an average of 372 and the girls 363. The average high school junior or senior scores 368. More than 380 participants obtained combined SAT(M+V) scores greater than 1000. The highest scoring youngster received a combined SAT (M+V) score of 1400. Finally, on the Test of Standard

Written English (TSWE), the mean score for the boys was 37, while for the girls it was 39. The mean score for college-bound high school seniors is 43. Forty-two percent of the TIP participants scored better than the average college-bound senior on at least one of the three sections of the test.

During May and June of 1981 awards ceremonies for high-scoring talent search participants were held in each of the 13 states in the search area. There, students were awarded Certificates of Merit for their high scores. Also, a Grand Awards Ceremony for the highest-scoring students was held at Duke University. These very high scorers were awarded prizes such as books, encyclopedias, hand-held computers, and one-course tuition scholarships for classes at nearby colleges. The attendance at the 14 ceremonies was estimated to be 14,000 students, parents, other relatives, friends and teachers.

For obvious reasons, the majority of our efforts to date have been directed toward the identification phase of our program. We at TIP hope that the talent search identification procedure will be fairly mechanical in the years to come.

Development

The real challenge we face is to develop and to assist others to develop or continue to develop suitable educational opportunities for those youths who score well in the Talent Search on at least one of the three parts of the SAT: verbal reading and reasoning, mathematical reasoning, and mechanics of composition (Test of Standard Written English). This may be our most important work. We have developed lists of local and state resources to forward to the participants, but in some cases not many programs exist. Further, some of our participants reside as far as 2,000 miles from Duke University.

Effort will be expended to assist in the development of programs where none exist and to expand efforts where programs already exist.

From June 28 - July 18, 1981 TIP held its first annual Summer Residential Program for Verbally and Mathematically Precocious Youths on the Duke campus. One hundred and fifty-one very high-scoring 12- and 13-year old students from 25 states completed an intensive, fast-paced course in either Mathematics, Expository Writing, American History, or German.

One hundred and eighteen students completed the fast-paced precalculus mathematics program. Their SAT scores at age 12 averaged 614 Math, 465 Verbal, and 48 TSWE. These scores represent the 87th, 63rd, and 63rd percentile ranks respectively for college-bound high school seniors. All but one completed at least one precalculus math course such as Algebra I in three weeks; some completed as

NATIONAL TALENT

The Study of Mathematically Precocious Youth (SMPY) at The Johns Hopkins University in Baltimore has announced the continuation and extension of its national talent search - " $\geq 700M$ Before Age 13" - for youths who demonstrate extraordinary ability in mathematical reasoning.

Begun in the fall of 1980 by Julian C. Stanley, director of SMPY, the nationwide search located during its first year 63 of the estimated 350 to 400 youngsters throughout the United States who can achieve a score of 700 or above on the math portion of the College Board's Scholastic Aptitude Test (SAT-M) before the age of 13. As an extension of its identification procedure, SMPY has now established a graduated qualifications process to permit boys and girls across the country to

be eligible until the day before age 13 years 10 months: for each month or fraction of a month beyond his/her 13th birthday the examinee must score 10 points beyond the minimum 700 score on SAT-M required before age 13. Thus, a person 13 years and almost 10 months old would qualify with a score of 800.

In addition to the SMPY search, the Johns Hopkins Office of Talent Identification and Development (OTID) has announced a national talent search - " $\geq 630V$ Before Age 13" - for youths who reason extremely well verbally.

The basic requirement for the verbal search is a score of at least 630 on the verbal part of the College Board's Scholastic Aptitude Test (SAT-V) before the youth's 13th birthday. Only about five percent of college-bound 12th graders, most of

whom are 17 or 18 years old, score that well. There is also a graduated system of score qualification which permits students to be eligible almost 17 months beyond the 13th birthday.

The national talent searches are complements to regional talent searches conducted annually by Johns Hopkins, Duke University, Arizona State University, and the Midwest Search Committee for youths of seventh-grade age. The search programs are designed to identify gifted youngsters and help them to enrich their education.

During the summer of 1981, 47 persons from all over the country who had scored at least 700 on SAT-Math before age 13 attended special fast-paced, residential academic programs conducted by Duke University in North Carolina or Johns Hopkins in Maryland. Each

many as four. The math program was set up in accordance with the Diagnostic Testing followed by Prescriptive Instruction (DT PI) model excellently outlined in Bartkovich and George (1980). Students were administered a diagnostic test in each precalculus subject before beginning their study of it; they then learned (at their own pace) only those topics they did not know. They were then given another standardized test to certify mastery of the course. Course certification was given only if the student scored better on the post-test than 85% of the students who had taken a year-long course in the same subject.

In the humanities and social sciences areas, twenty-four students completed the Expository Writing course, seven completed the American History course, and two completed the German course. These 33 students had average SAT scores at age 12 of 469 Math, 554 Verbal, and 52 TSWE. These scores

are the 50th, 87th, and 76th percentile ranks respectively for college-bound high school seniors. The Expository Writing course was taught on the level of a college freshman composition class. Students spent their mornings in large group discussions and lectures. Time was assigned in the middle of the day and the evening for writing. Afternoons were spent discussing each student's work in small group workshops. Tests were also administered to determine each student's level of grammar proficiency.

The American History course covered the period between World War I and World War II. The 7 participants studied this brief but important period of American History at a very advanced level. The students also examined the role of the historian and were instructed in research and library skills. In the summer of 1982 another period of American History will be examined

with an eye toward preparation for the Advanced Placement Examination in American History.

The 2 students in the intensive German course each completed a semester of college German at an excellent level. The total immersion method was employed. Students learned grammatical principles in class and completed grammar drills using the Computer Augmented Language Instruction System (CALIS). The course also included audio training in the language laboratory and emphasis on cultural aspects. Achievement was measured by frequent quizzes and performance on the standard Duke German I midterm and final exam.

All of the summer program students spent 5-6 hours per day in class Monday through Friday, and 3 hours on Saturdays. In the evenings and on weekends there were a number of social and recreational activities such as a guest speaker series, a film series, field trips, and

SEARCHES CONTINUE

student had been awarded partial or full scholarships by SMPY.

Most of these students completed the equivalent of four-and-one-half years of precalculus mathematics (that is, from Algebra I through Analytic Geometry) in three intensive weeks of study. During the summer of 1982 many of them will master a school year of biology, chemistry, and/or computer science in special summer programs.

Verbally talented students will be able to enroll during the summer for courses such as Writing Skills, Latin (to include etymology), and modern foreign languages. Participation in these courses provides students a solid foundation in the humanities at a level commensurate with their intellectual abilities. These programs are a part of the Summer Residential Institutes for Talented Youth

sponsored by Johns Hopkins, Duke, and Arizona State.

Youths interested in participating in the national talent searches should take the entire SAT - that is, the math and verbal portions as well as the Test of Standard Written English - at a regularly scheduled testing date in their communities. A free practice booklet ("Taking the SAT") and SAT registration materials may be secured from the college counselor in any senior high school or by writing the College Board, Princeton, New Jersey 08541. Those intending to take the SAT examination are urged to study the practice booklet thoroughly.

SMPY and OTID look forward to receiving SAT score reports from persons who qualify. To speed up the transmission of the SAT score report, youngsters should use

OTID's National Talent Identification College Board code number, 5335, in Item No. 14 of the SAT registration form. For the Mathematics Search, youngsters should send a copy of the SAT score report directly to Dr. Julian C. Stanley, SMPY, 125 Ames Hall, The Johns Hopkins University, Baltimore, Maryland 21218. For the Verbal Search the score report should be sent to Mr. William C. George, Director of Talent Identification, OTID, Merryman Hall 104, The Johns Hopkins University, Baltimore, Maryland 21218.

Questions about the national mathematics search may be addressed to Dr. Julian C. Stanley. Those seeking more information about the national verbal search should contact Mr. William C. George.

parties. Students were well-supervised outside of class by Resident Advisors.

The program held during 1981 was part of a multi-year package designed to develop the potential of some of our highest-scoring students. For 1982, Duke will offer a similar 3-week residential summer program to very high-scoring 1982 Talent Search participants, as well as more advanced offerings such as a college credit course in computer science, a course in the quantitative aspects of physics and chemistry, a course in symbolic logic, perhaps a course in quantitative biology, and advanced humanities and social science courses for returning students.

During the 1981-1982 academic year, TIP sponsored a Saturday commuter program in the Humanities for verbally gifted students who were within commuting distance of Duke. Eligible students selected one or two of three college-level humanities courses: Writing Skills, Etymologies, and Latin.

Research

The TIP data management system will help facilitate research. We shall be careful not to let the program's research effort adversely effect the important development phase. We presently have several research questions to answer. A flow of high quality research from our program can be expected. Research helping facilitate the intellectually talented youths educationally will be favored.

Summary

We at TIP look forward to expanded efforts in the development and research areas, as well as the development of a counseling package for our students and their families. We do not have any "pat" answers when asked what will happen to a gifted student who attends a summer or commuter program and returns to his or her school to face the same nonchallenging environment he or she left behind a few weeks earlier. We encourage acceleration where appropriate, enrichment where appropriate, and early college admission where appropriate, and always nurture the

discovered talent. We shall continue to strive to develop bright, well-adjusted, and talented adults.

Reference

- Bartkovich, K.G. & George, W.C. Teaching the gifted and talented in the mathematics classroom. Washington, D.C.: National Educational Association, 1980.

Robert N. Sawyer is Director of Duke University's Talent Identification Program. *Assisting Dr. Sawyer as Summer Program Coordinator and Project Associate is co-author Lynn M. Daggett.* Ms. Daggett is currently enrolled in a joint Ph.D.-J.D. program at Duke. She anticipates specializing in the legal rights of the gifted. This article marks the first appearance for the authors.

Students Find Creative Way To Complete Assignment

by Margaret Malsam

Thinking of a unique alternative method to complete a difficult word building assignment earned three gifted junior high school students national publicity.

When given as assignment in an accelerated Power Reading Class to find 25 different words used in a newspaper or publication, three ingenious Northeast Junior High students in Northglenn, Colorado, simply took the list and placed the words it contained in the "Personals" column in the classified ad section of *The Denver Post*.

Their teacher, Karol Scott, expected them to find only a few of the words on the list, which included such unusual items as "sagacious", "apiary", "acumen", "obtuse". "Finding at least four of these words in three days would have earned them an A," she said.

Three enterprising ninth graders, Kerwin Brook, Bob Starling and

Bruce Dingwall, called in an ad, listing all 25 words, which cost them \$11.25. The creative completion of a most challenging "skimming and scanning" assignment was picked up as a human interest story by the father of one of the students in the class who works for United Press. The story was then printed in newspapers around the country and broadcast on local and national radio and television.

One of the objectives of education for gifted students is teaching them to think through problems to find creative solutions. These students certainly earned an A in thinking skills, also.

Margaret Malsam is Public Relations Specialist for School District 12, Adams County (CO). G/C/T thanks Ms. Malsam for sharing this creative approach to assignment completion.