Unmet Needs of High School Students

A recent survey of the aptitudes, abilities and post-graduation plans of high school seniors reveals significant areas of unmet needs.

THE PURPOSE of this paper is to introduce its readers to a handicapped population in our schools. Unlike the blind, the deaf and the lame, whose handicaps are fairly noticeable, this population's handicaps are largely hidden. In most instances the handicaps are covered under a thick protective coating of conforming group behavior, contentment to be an average student, a workable compensation for lack of educational background; under the cloak of the inevitability of military training and the resiliency and buoyancy of youth which make it possible for this population to say, "Oh, we'll get along anyway."

Unlike the blind, the deaf and the lame, in most instances the handicaps of this group are situationally engendered, not congenitally or hereditarily derived. This group has been handicapped situationally by mass education in an almost totally verbal school, by crowded classrooms where learning deficiencies are accumulating, by narrow curriculum offerings, by misguided attitudes toward youth, by a lack of opportunity within present existing schools to develop aptitudes and abilities along lines of personal interest, financial possibility and employment opportunity. Also, unlike the blind, the deaf and the lame, in many instances we, the educators, are handicapping this group.

Education describes itself as a process whereby youth is prepared for effective living and for making a living. For many years, particularly in the secondary school, this process has been almost exclusively verbal, general and cultural, a preparation for the so-called next step into college or professional training. But two things are happening: first, not many of our students are taking the next step, some because they cannot, some because they will not, and many because they do not want to; and second, changes are occurring. Civilization today is a matter of new ideas, of new machines, of new ways to work, and new plans for living together. Science, mathematics and work are taking on new significance. The demand for trained workers increases daily. The secondary school is called upon to face up to a reevaluation of its function, its methods, its organization, and particularly its curriculum. Our schools must, like all other schools, face up to this
challenge. We must look again to cur-riculum revision in the high schools and the development of technical schools and programs for youth with aptitude along special lines and for whom opportunities for post-high school training are remote, if not impossible.

Plan for the Survey

With all this in mind a comprehensive study of the aptitudes, abilities and post-high school plans of high school seniors recently was undertaken. This study was devised to serve five purposes: first, to explore through the use of standardized tests the abilities of high school students in order to look objectively at the range of ability and aptitude of those who would graduate in June 1958, from the Allegheny County, Pennsylvania, public high schools; second, to consider their educational and work plans in order to sharpen the perceptions of counselors and teachers as to the wider significance of individual differences; third, to relate observed aptitudes to school plans and employment opportunities; fourth, to provide statistical data based not on a population in California, Kansas, or New York, but based on a real live population of our own adolescents in our own schools, to support the need for extending the offering of the secondary schools to include technical types of education; and fifth, to indicate areas, should such emerge, in which secondary education as a whole may need improvement.

Now, may I give you just a very brief description of the experimental setup? After a very exhaustive study of the literature on aptitude testing and a study of the manuals of aptitude tests, particularly as to their reliability and validity, and after a study of the local opportunities for employment and job finding in this area, a test battery was set up. This took three hours to administer and tested aptitudes in five general areas of aptitude which we believe to be significant for the youth of Allegheny County. Included in this battery were tests designed to measure scientific aptitude, as related to such courses as laboratory technician and nursing; artistic aptitude, as related to such courses as cosmetology for girls, design and construction for boys; verbal aptitude, as related to the application of learned principles to specific problems; clerical aptitude looking toward a better type of preparation for the students who go into the world of business; engineering aptitude, as related to the skilled and semi-skilled trades.

Fourteen high schools agreed to participate in this study and the students who participated were selected completely at random. There was no attempt to stack the cards either in favor of the good student or the poor student, in favor of the academic student or the commercial student or the vocational student. The fourteen participating high schools were asked to submit an alphabetical list of the names of the students who were graduating from high school in June 1958. Every fifth name on these lists was selected to participate. Thus, the students who are in this study are included on this random sampling basis by accident of initial of their surname. One high school in which the tests were scheduled to be administered in April and early May decided to withdraw from the study. Therefore the following data cover only 13 schools.

The groups tested were made up of 433 seniors graduating from 13 high schools in a one-quarter segment of Alle-
gheny County. They were between the ages of seventeen years, one month and twenty years, ten months. They were generally physically fit—about 20 percent wore glasses, two said they had hearing losses, one said he had a cardiac condition, and one had an artificial limb. In most instances they were bright young people. They were well dressed, they were conforming, they were pleased with themselves; they were eager to participate, full of life, and ready to talk about life. They were ambitious in some cases, they were frustrated in many cases; they were uncertain about the future; they were seeking guidance. Some of them were able to blame their parents and their teachers, many of them were able to blame themselves. They were hunting answers to burning questions; they made up a good cross section of teen-agers as we know them today.

The tests administered to these 433 students fell in three general areas. There were ability tests, both of verbal and nonverbal general intelligence; tests of aptitude in five areas, mentioned previously; and tests of previous learning in terms of arithmetic and reading skills. Each student completed a questionnaire in which he described himself and rated himself as to his use of his abilities in the preceding years of school and gave a description of his future plans for further education and choices of jobs and professional opportunities.

Two Contrasts

Now I want you to meet two of the 433 and know them intimately. First meet Helen and consider with me the profile of her test scores. She is an academic student in a large high school and one of the eight students in the total 433 who rated herself above average. She has just passed her seventeenth birthday, is slight in build, well dressed, well groomed, an easy conversationalist, a fine type of teen-ager, is popular with both boys and girls of her age group, and physically strong. She is an only child. Her mother is a widow and she and Helen share a small apartment. Her mother is employed as a secretary. This mother and daughter read and play together and make many plans for Helen’s adult life. Helen would like to go to college but she knows it will be a financial struggle. She wants to be a social worker, a teacher or a nurse. Her test results show that she has aptitude in any area and could follow academic pursuits or technical pursuits and be successful in either field. The deciding factors for students like Helen should be their own personal interests. High schools would be different if all students were like Helen!

Now meet George, who is in an academic course with average and below-average grades. He cannot spell academic, “a-c-m-e-d-i-c-k.” He has repeated three grades and is now nineteen and a half years of age. He is out of step with his parents and with his teachers. His test scores show that he is high in terms of ability but low in terms of achievement, with little or no aptitude in any specific field. George wants to be an electronics engineer or, surprisingly, a high school English teacher.

And so it goes. Each student has his own constellation of ability and disability; each student has a need for guidance along lines of his own; many students need new courses, new direction, new
outlets if their potentials are to be developed and utilized profitably.

**Results of the Study**

All of the 433 students in this group now have high school diplomas. They vary widely. Test results indicate that the lowest verbal IQ was 72 and the highest was 159. One asks at once, if the high school met adequately the needs of the student with the IQ of 72, what happened to the student with an IQ of 159, and vice versa? Eleven of these students had verbal IQ's of less than 90; 252 had verbal IQ's between 90 and 110; and 120 had verbal IQ's from 110 to 160. This is most startling when one recalls that only eight of the group rated themselves above average in high school grades.

As we move into this technological age, we can no longer be content to measure ability in terms of verbal IQ alone. Therefore, it is necessary to consider the distribution of nonverbal, or performance IQ's. In this particular study the lowest nonverbal IQ was 59 and the highest was 164. Seventy-three of these students had nonverbal IQ's below 90; 256 had nonverbal IQ's between 90 and 110; and 104 had nonverbal IQ's between 110 and 165. Again, one is impressed by the range of ability indicated and the limited opportunities in the usual high school to meet the needs inherent in this range.

The results of this study indicate:

1. That 83 of these students showed, on selected tests, aptitude to do either academic or technical work; they are equally capable in both broad areas and able to make the choice of a professional or technical field in the light of personal interests and available opportunities;

2. That 196 of these students showed, on selected tests, outstanding technical abilities in one or more of the areas in which we tested;

3. That 71 of these students showed, on selected tests, average and below-average ability academically but have technical or vocational aptitude at the skilled trades level;

4. That 28 of these students showed, on selected tests, ability only at the semi-skilled trades level;

5. That 29 of these students showed exclusively verbal aptitude. This finding should be emblazoned in letters of red for it shows that of this total group of students graduating, to a large degree, from courses exclusively verbal, only seven percent are exclusively verbal students by aptitude!

6. That 26 of these students show no aptitude along technical, vocational or academic lines.

There are data, also, to indicate that this group is not only handicapped by limited opportunity to elect courses in line of aptitude, but is also handicapped in other significant ways—the handicaps of unrealized opportunities. Seventy percent of the 433 students in this study read below the forty-fifth percentile for twelfth grade students. This means that three and one-half out of five were reading somewhere below the tenth grade level. Also, 46 percent of these 433 were in the same dilemma as far as mathematics was concerned. These findings are sobering; they are serious. They cause us to stop and reflect on what we have done with ourselves, but more particularly on what we have done to those upon whom the doors of the school have already swung shut.

In other academic skills we see still more signs of unrealized opportunity. Two of the students in this study could not spell correctly the name of the high school from which they were graduating; 11 of them spelled incorrectly their district of residence; 75 of them spelled in-
correctly the job which they hoped to take when they leave school, and included in this 75 are 3 who said that they want to be teachers. Forty of them could not spell the name of the course from which they were graduating.

Stated in still another way, the findings indicate that 18 percent of the 433 could do anything they wanted to academically or technically; 47 percent of them had special untapped ability in technical fields; 14 percent should have been in vocational schools; 7 percent were exclusively verbal; 7 percent function at a semiskilled level; and 7 percent showed no aptitude for either academic, vocational, or technical work. This, too, is staggering, when we realize that for a hundred years the high school has existed for the academic student, and it is further staggering to see how many of these students might have been much more profitably spending their time in some other area of education more suited to their abilities and more in line with their personal interests.

Up to this point the reader may be saying, “Oh, well, they’ll go on to college and college will make up for everything we haven’t given them.” In this regard, consider with me some of the data concerning the educational plans of students with aptitude for academic and technical pursuits. This represents the three ablest groups—those with aptitude in every area, those with specific aptitude along technical lines, and those with exclusively verbal aptitudes. Of the 83 students who have aptitude in every area, 23, or one in four, expect to go to college; 14 of them, or one in five of these ablest students expect to go into some kind of post-high school training at the noncollege level—comptometer schools, beauty schools, secretarial schools, schools of nursing, armed forces; but of this segment of our high school population, 46 students, 50 percent or one in two, will go directly from the door of the high school to the door of an employer.

In our second ablest group, those students with outstanding technical ability, 24 percent, or one in four, plan to go to college; 27 percent to a trade school of some type; and, again one out of every two will walk from the school door to that of employment.

In the group which is exclusively verbal, only 13 percent plan to go to college. Of these, 19 percent plan to go into trade schools or the armed forces, and 68 percent, almost three out of four, will walk from the school door to that of industry.

Recommendations

This detailed study of the aptitudes, abilities, and ambitions of 433 students just about to graduate from our high schools shows that these young people are leaving school with many unmet needs. What are some recommendations growing out of this survey?

I. We can no longer postpone the extension of the reading program into the secondary school. The great amount of reading retardation indicated here stresses again the fact that reading instruction is both an elementary and a secondary school problem and, therefore, both an elementary and a secondary program are exceedingly important. The elementary school makes use of textbooks and grouping to structure itself for the teaching of reading. Children step out of that atmosphere into an unstructured situation where they are supposed to perform independently with skills that are not yet consolidated. The figures showing that 70 percent of this group are graduating below average in reading skills call for new approaches to the reading problem. What is required in the high
school is an extension of the developmental reading program and not merely a remedial one.

2. We need the same type of improvement in mathematics, again not remedial, but developmental, in terms of a better foundation for the scientific and business careers which are the goals and ultimate opportunities for many of the students graduating from our schools. This is the scientific age and mathematics is an essential tool in the mastery of science; we must meet this need.

3. We need to make better use of test results and test devices. We have been smug, in too many American schools, in our measurement merely of ability and achievement in narrow fields. We need to explore aptitudes, interests, and many phases of the individual growth and development of the students who crowd our doors. In many cases the incompatibilities in ability and achievement ratings have been a source of growing concern to many of us. Extension of testing to include many other phases of measurable characteristics may help us to understand these incompatibilities and to recognize that the role of school is not merely to measure, but to provide new offerings as a result of the measurement.

4. All of our students need better counseling and guidance, not only by guidance counselors, but by every teacher who touches, no matter how superficially, the life of the teen-ager. From us, their teachers and friends, they need not only greater familiarity with the world of work but they also need improved motivation toward better personal expression. All but 8 of these 433 students were apparently content to slip into the mediocrity of being average. Personal endeavor, personal standards for good work, personal feelings of sources seem to have been replaced by the pseudo-comfort of conforming to the average. Our students need more personal goals; they need some personal drive; they need creatively inspired teachers to stand behind them to give them encouragement, the help to rise above mediocrity and to dare to be an individual.

5. Members of this group need help in formulating more realistic plans for themselves both within and for after school life. These plans should be based upon as much personal insight as we can give to youth in terms of their abilities, their aptitudes, their ambitions, and availability of opportunity, and the sense of personal satisfaction and fulfillment.

6. There is need for a new and more enlightened individual approach on the part of the high school teacher—students are not alike, they cannot be alike, they must find outlets for themselves that are not alike. This need is closely related to the one which follows.

7. There is a need, particularly in the secondary school, to reassess, reevaluate, and reinterpret our thinking about the meaning of intelligence. We can no longer be content to measure and talk about a single thing we call intelligence which manifests itself in proficiency with books alone; there are intelligences and they manifest themselves in various ways—in technical pursuits, in sciences, in art, in work, as well as in words. We owe it to the students who come to school to us to know them, not only as verbal students, but along all lines which it is possible for us to consider and for which we can provide. This calls, too, for a more wholesome attitude toward their range of individual differences, rather than toward their lack of ability within the narrow limits of a prescribed plan.

8. There is a need for extended curricula at the local school level.

9. There is need to give support to
and help in developing a new type of school—a technical school at the secondary level, in line with demonstrated aptitudes, in line with current social needs, and in which students can express not only what they want to do but also what they need to do. Our contemporary way of life calls for this if we are to survive collectively; the aptitudes of youth call for this if they are to profit individually.

We, as educators, can and must strive to meet the needs of children. This is our professional, our moral and our democratic obligation. We can and we must meet the demands of modern life. Each day the press bombards us with information about the need for trained workers in many technological fields. This lack in our social structure is our concern. This, too, means to educators a professional, a moral and a democratic obligation. We dare not placidly turn these responsibilities away from our schools to the private trade schools or rest smugly on the hope that the pupils will go on to college—they often do not and many may not want to go.

Recently, in assuming the presidency of the Johns Hopkins University, Milton Eisenhower made these two statements: “The brains of American youth are our greatest national asset” and “In our American youth lies the balance of power for democracy.” We can and we must abandon our traditional academic narrowness. We can and we must seek new avenues of educational experience for children. We can and we must cherish youths’ strengths and help minimize their weaknesses. We can and we must experiment and explore with them a wider range of educational opportunity.

Christmas Is Near

A young coed
In the last row
Looked at the snow
And shook her head.

“My, how time flies!”
With yawns she thought
While the prof taught
Of Hitler’s rise.

“Christmas is near—
Look at that flake!
What should I take
With me this year?”

She held her pen
And wrote: “For home:
Blue skirt, hats, comb,
Ice skates . . .” But then,

She paused to get
The next girl’s notes.
Comments, and quotes
On Hitler; yet

All she saw there
Was: “Things for home:
Hat, hairclips, comb,
Coat, underwear . . .”

—PANOS D. BARDIS, Sociology Department, Albion College, Albion, Michigan.