The increased rise of technology is rapidly building the image of vocational education as a legitimate endeavor of public education. The poor esteem in which vocational education has been held results from the combined attitudes of students, parents, and educators, and is especially evident among minority groups because of its second-class status. Data drawn from a vocational technical institution in New Mexico indicate that the number of high school youth choosing vocational education does not differ significantly with regard to ethnic characteristics. However, more Spanish-surnamed young adults are enrolled in post high school programs, such as the Albuquerque Technical-Vocational Institute, than are students with other surnames. Additionally, once enrolled in vocational technical programs, Spanish-surnamed students tend to be more successful than students having other surnames. (DA)
VOCATIONAL-TECHNICAL EDUCATION
AND THE MEXICAN-AMERICAN

by

Louis E. Saavedra

for

Southwestern Cooperative Educational Laboratory
Albuquerque, New Mexico

1970
It has been only ten years since American education has embraced the concept of vocational education despite historic references to such efforts since the inception of the American public school system. Americans have always been ambivalent about vocational education because its value has not always been clear. Until the coming of rapid technological change, it has always been possible for a man to obtain employment at an unskilled level. While unskilled employment was not particularly gainful, it provided subsistence and eventually an entry to other rungs in the career ladders. Vocational education did not become even moderately regarded until it became clear that without it, vast numbers of Americans would be unable to earn a livelihood. The precipitating factor was the technological revolution.

The technological revolution has taken many forms and its attack has typically been at the unskilled ranks. The stereotype of the flashing computer and the space-age automation are but a fragment of the revolution. The real revolution has been in seemingly minor improvements in the world of work that have increased the efficiency by which work is accomplished.

Some of these minor improvements that have typified the technological revolution are perhaps not even recognized as technological advances. An easily overlooked phenomenon is the move to the self-
service supermarket. The result has been the replacement of armies of store clerks with a relative handful of checkers, stockers, and bag boys. A second major innovation has been the advent of the copying machine. Previous to the wide acceptance of the copying machine, the only way by which a copy could be readily made was by retyping. Now the legions of copy typists have been replaced by the ubiquitous copying machine. Moving across the industrial front, another understated technological innovation was the widespread use of the power backhoe and the forklift. The two machines eradicated the preponderance of ditch digging jobs and warehouse labor.

The recitation of some of the technological changes is useful because it begins to develop an appreciation for the reasons underlying vocational education's belated acceptance.

The impetus for vocational education did not begin to materialize until 1946, when the Congress adopted a policy of full employment. Using the tools of Keynesian economics, the nation moved to a rapid expansion of the Gross National Product which was accompanied by a reduction in the unemployment rate.

Despite a rapidly accelerating economy, however, economists found that there continued to be a persistent number of persons who were unemployed even when there seemed to be many jobs. Closer examination revealed that the major cause was structural unemployment and frictional unemployment—persons available but not qualified for the jobs available or persons qualified but located some distance from and geographically separated from the jobs available.

The phenomenon of an abundance of jobs and persistent unemployment was looked upon as a national calamity and economists placed the
blame on the education system which failed to prepare the people for the jobs. This collective assessment led to the passage of the Vocational Education Act of 1963 and the appropriation of massive federal aid for vocational education.

The national emphasis on vocational education did little to change the image that vocational education had accumulated over eight decades of its existence on the American scene. The image was one of an educational program outside the mainstream of public education, and by its separateness suffered the image of a "second-class" kind of education.
II

THE FAILURE OF VOCATIONAL EDUCATION

"During the decades 1890-1910, vocationalism was one of the hottest issues in education, and the failure of educators during that period to agree on the place of vocationalism in the schools was to leave a heavy mark on the kind of vocational education which, inevitably, was put in the schools. It was a problem to which John Dewey directed some of his most penetrating thought. Sensing the inherent danger of developing dualism in the educational system, Dewey strongly urged the integration of vocational education into the general school program, stressing the benefits that would accrue to both forms of education, to the worker-citizen and to the democratization of industry. But Dewey's voice was to no avail. The traditionalists refused to bend on such matters as the necessity of an academic curriculum for all students and requirements for teacher certification; many simply cringed at the sound of hammers and saws in the school. Many of the more pragmatic vocationalists begin to advocate a separate public vocational high school system, one accommodating a separate kind of education in which, quite candidly, work efficiency in an industrial democracy would be held more important than the cultural values of education."

It is interesting to note that the battle for vocational education was lost not in post-war America but at the turn of the century when today's technological society was but a gleam in our future. The progress which has been made in recent years must be measured against this item in history.

The history of the first four years of the new vocational education, beginning in 1963, has been one in which vocational schools begin to rise throughout the country. Some vocational schools are part of secondary school systems, but the major thrust of the effort has been the area vocational school catering to the young adult. The major participation has been by the post-high adult, not the teen-age learner.

Local and national statistics indicate that vocational training programs reach the young adult rather than the teenage learner.

**CHARACTERISTICS OF TRAINEES ENROLLED IN INSTITUTIONAL TRAINING PROGRAMS**

**(286,400 Trainees)**

<table>
<thead>
<tr>
<th>Age</th>
<th>Per Cont</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 19</td>
<td>15.0</td>
</tr>
<tr>
<td>19 to 21</td>
<td>23.5</td>
</tr>
<tr>
<td>22 to 34</td>
<td>34.5</td>
</tr>
<tr>
<td>35 to 44</td>
<td>14.9</td>
</tr>
<tr>
<td>45 and up</td>
<td>11.1</td>
</tr>
</tbody>
</table>

Statistics from local educational institutions verify the same national trend. The average age of students reported at the Albuquerque (N.M.) Technical-Vocational Institute shows that most students at that institution were young adults and older.

**AVERAGE AGE OF STUDENTS AT THE ALBUQUERQUE TECHNICAL-VOCATIONAL INSTITUTE**

**(Spring Trimester)**

<table>
<thead>
<tr>
<th>Number</th>
<th>Division</th>
<th>Year</th>
<th>Avg. Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>737</td>
<td>Day</td>
<td>1966</td>
<td>27.8</td>
</tr>
<tr>
<td>1,251</td>
<td>Night</td>
<td>1966</td>
<td>33.1</td>
</tr>
<tr>
<td>857</td>
<td>Day</td>
<td>1967</td>
<td>27.2</td>
</tr>
<tr>
<td>2,355</td>
<td>Night</td>
<td>1967</td>
<td>31.2</td>
</tr>
<tr>
<td>1,088</td>
<td>Day</td>
<td>1968</td>
<td>26.4</td>
</tr>
<tr>
<td>2,672</td>
<td>Night</td>
<td>1968</td>
<td>31.6</td>
</tr>
<tr>
<td>1,148</td>
<td>Day</td>
<td>1969</td>
<td>24.2</td>
</tr>
<tr>
<td>2,783</td>
<td>Night</td>
<td>1969</td>
<td>32.5</td>
</tr>
</tbody>
</table>

The pattern illustrated by these data indicate that the young person is not attracted to vocational education. We can surmise that

---

the young person prefers to strike out into the world of work upon leaving a secondary school program and it is only after he has confronted failure in his various attempts does he seek out vocational education. Nor is this profile necessarily illustrative of the poor choice which the young person makes. It would make sense that if the young person can enter the world of work and find a satisfactory level of employment that it would not be necessary for him to seek vocational education.

The fact that a youth could avoid the heartbreak of failure in the world of work by entering vocational education is not dramatized enough for our youth. The realization of failure and its consequences comes to him only after he has attempted to enter the world of work and, lacking skills, fails to achieve employment or succeeds in finding little but marginal employment.

Several factors seem to dissuade youth from seeking vocational education. The assessment made by parents, peers, teachers, and even counselors, is that vocational education is a second class kind of education. An additional discouraging factor is the widespread belief that vocational education is for those persons who cannot succeed in other educational endeavors—a factor which tends to be self-defeating. The public in general still tends to characterize its understanding of vocational education by justifying such programs in terms such as, "It's nice that your school helps these dropouts learn to do something with their hands," as if hands were some appendage somehow unrelated to
a person's total being and triggered by some brainless mechanism and
that such education is somehow not fit for "normal" persons.

While it may be true that some minority groups in some states
may be so alienated from the mainstream of American life that they
are immune to the voice of society, it is unlikely that such is the
case of the Mexican-American in New Mexico nor is it likely to be
the case for the majority of minority group members throughout the
country.

The reasons why Anglos and other persons reject vocational
education will be exactly why Mexican-Americans reject vocational
education. If anything, the rejection is intensified to the extent
that the learner perceives that making a choice to enter vocational
education would be interpreted as his admission that he can only hope
to aspire to a "second rate" education or that he needs to resign
himself to "learn to work with his hands" because he lacks the intellec-
tual capacity to do otherwise.
III

PROFILE OF A VOCATIONAL STUDENT

None of the evidence on hand seems to indicate that vocational education is more attractive to Mexican-Americans than to Anglos. The per cent of Spanish surname students enrolling for vocational education tends to be slightly higher than the Spanish surname population in general, but this statistic alone does not prove or disprove that Mexican-Americans are more attracted to vocational education than Anglos. To make an accurate assessment of who enrolls in vocational education, it would be necessary that data be compiled that carefully revealed how many were available to make the choice for vocational education, what their ethnic makeup was, and what choices were made.

An index of the decisions made by youth may be derived from certain programs. In the spring of 1970, high school students were offered vocational enrichment classes which were completely voluntary and which were held "after school" after completion of "regular" high school programs. This pilot program in Albuquerque, N. M., had an initial offering of 83 classes and drew an enrollment of more than 1900 students. A sample showed the following results:

<table>
<thead>
<tr>
<th>Group</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish Surname</td>
<td>40</td>
</tr>
<tr>
<td>Indian Surname</td>
<td>2</td>
</tr>
<tr>
<td>Other Surname</td>
<td>58</td>
</tr>
</tbody>
</table>
Estimates of the per cent of Spanish surname population in the Albuquerque area range from 25% (Kirschner Associates, Jan. 1968) to estimates by school officials of 34%. Viewed in this light, the participation by Spanish surname students in the vocational enrichment classes may be regarded as average to moderately high. The fact that control of the variables is impossible makes it impossible to make a more accurate assessment.

It may even be concluded that there is no appreciable difference discernible between the Spanish surname and other surname students regarding their selection of vocational education because of the fact that a greater variety and larger quantity of classes were offered at high schools that had higher concentrations of Spanish surname students.
IV

PARTICIPATION OF MEXICAN-AMERICANS IN POST-HIGH VOCATIONAL EDUCATION

While little significant difference is seen in the participation of high school youth in vocational programs when examined as to Spanish surname and other surname, there does seem to be a significant difference in the participation of persons with Spanish surnames in post high education.

More than half of the students at the Albuquerque Technical-Vocational Institute have Spanish surnames as evidenced by enrollments during a three-year period.

SPANISH SURNAME STUDENTS
DAY DIVISION
ALBUQUERQUE TECHNICAL-VOCATIONAL INSTITUTE
(Fall Trimester)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Spanish</th>
<th>Other</th>
<th>% Sp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>622</td>
<td>329</td>
<td>293</td>
<td>52.9</td>
</tr>
<tr>
<td>1968</td>
<td>1057</td>
<td>534</td>
<td>533</td>
<td>50.0</td>
</tr>
<tr>
<td>1969</td>
<td>1078</td>
<td>570</td>
<td>508</td>
<td>52.8</td>
</tr>
</tbody>
</table>

An attempt was made to ascertain the reasons uncovering an interesting phenomenon about students at the Institute. A tabulation of data taken from application forms turned up a fact that may account for the significantly higher participation by Spanish surname students. The study, in 1968, revealed that 368, or 36.4%, of all students said that they last attended a school outside the county in which the Institute is located. The preponderance of these students came from rural areas
in northern New Mexico where the ratio of Spanish surnames is much higher than is found in New Mexico's only large metropolitan area.

What the figures seem to show is that rural New Mexicans migrating to Albuquerque are less prepared to enter the world of work than are persons who go to school in Albuquerque. As a consequence, they spend some time looking for work and when they cannot find it, they turn to vocational education as a way by which they may enter the world of work.

It would seem that the rural environment more than the ethnic background contributed most to their disadvantage in comparison to urban residents. The disadvantage may not be any tangible cognitive set of factors, but rather, one of acculturation. This acculturation is not necessarily a complex thing having to do with values, orientation, and language. The basic problem may be characterized as "knowing their way around" a big city; having information about business and industry in the big city; how people go about obtaining jobs; and the poise necessary to overcome problems posed by sometimes disinterested employers who see many applicants and who quickly screen out those applicants who seem atypical.

If the applicant lacks "job hunting knowhow," and in addition does not have any particular training or skill, he will fail in finding a job. Even when he has a skill, he may be unemployable because of an inability to communicate in terms the employer finds relevant.
SUCCESS AS AN EQUATION

Whether Mexican-American persons are successful or not in vocational education is a function of the process. If the student's ability (not aptitude) is carefully charted and if his aptitude is not badly misjudged, there is every probability that the Mexican-American will succeed in a course of study. Prevailing practice in vocational-technical schools, including the one which is the focus of this report, is to make a careful assessment of ability and aptitude. Aptitude is far less important in the equation since a normal interest in an occupational field is frequently enough to sustain motivation when coupled with success in the cognitive and psychomotor aspects of the work.

To make this equation workable, a vocational school must provide enough vocational choices and enough entry levels to make the theory applicable. As a typical effort in vocational education, the Albuquerque Technical-Vocational Institute admits students who range in ability from those who cannot speak English to those who have college education and provides occupational choices in 13 or more vocational fields.

School personnel must be cognizant of the failure syndrome of many vocational school students. Because the student probably has failed in his efforts to enter the world of work and because he probably was unsuccessful in academic education in high school, the vocational counselor must recommend to the student those courses of study in which he is likely to be most successful. A failure by the student at this level may result in a permanent alienation from his society.
When given an opportunity to succeed, all students are likely to show an increase in sustained motivation. There is some reason to believe that because of experience in a failure situation as described above, the opportunity to succeed may be accompanied by the negative motivation that failure provides.

These combination of factors may operate in the education of Mexican-Americans.

Data from recent graduating classes at the Albuquerque Technical-Vocational Institute seems to support a finding that Mexican-Americans may tend to do slightly better than their fellow students with other surnames.

<table>
<thead>
<tr>
<th>GRADUATE SUMMARY</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALBUQUERQUE TECHNICAL-VOCATIONAL INSTITUTE</td>
</tr>
<tr>
<td>January, 1970</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Spanish surname</td>
</tr>
<tr>
<td>Per Cent</td>
</tr>
<tr>
<td>September, 1969</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Spanish surname</td>
</tr>
<tr>
<td>Per Cent</td>
</tr>
<tr>
<td>May, 1969</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td>Spanish surname</td>
</tr>
<tr>
<td>Per Cent</td>
</tr>
</tbody>
</table>

Previous data indicated that the ratio of Spanish surname students is seldom very much over 50% at the Institute. The ratio among graduates, however, seems to be consistently over 50%.

Allowing for a certain amount of coincidence and other factors
unrelated to ethnic origin of the students, there seems to be enough of a difference to support a conclusion that Mexican-Americans are more successful in completing a vocational program than groups with other surnames.

Viewing the data from a conservative viewpoint, it can be safely stated that Mexican-Americans, as indicated by Spanish surname graduates, do not do any more poorly than do other groups in vocational education and there is some evidence, however slight, that they in fact do better.
VI.

SPECIAL CONSIDERATIONS IN THE VOCATIONAL EDUCATION
OF THE MEXICAN-AMERICAN

The failure syndrome is a major obstacle for the learner in vocational education. A student that has failed and expects to fail --usually does! A student who turns to vocational education frequently has a history of failure. Failure to get or hold a job and failure in traditional academic school programs. Some students have also suffered failures in their social life as well. The latter may best characterize the Mexican-American who has suffered rebuffs because of his ethnic origin or who has been victimized by prejudice and discrimination.

Any reoccurrence or presence of factors resembling those in the situation in which he failed, may precipitate an additional failure by the Mexican-American in vocational education.

It is not enough to avoid those factors that might lead to failure, one must also provide a ladder by which success may be obtained.

Vocational schools are typically very good at attacking the problem on the cognitive and psychomotor fronts. After all, that is their main business. The failure syndrome can be successfully overcome or circumvented, however, only if a school is sensitive to and does something about affective interrelationships of its students.

Activities in the affective realm may include the provision of good models for Mexican-Americans. The best "good models" are the successful graduates of a vocational school. It raises the aspirational level of new students and tends to combat the tendency toward self pity,
lack of confidence, extreme pessimism about success, and feelings of worthlessness.

A second example of good models for Mexican-American students is the employment of qualified Mexican-Americans in leadership positions in the school as well as in the classrooms. In a school that has a high percentage of Mexican-American students, such a staffing priority lends strength to the total instructional program. The key word is "qualified." No young adult has much patience for incompetence when it means that his investment in time and effort is being wasted. Competent instruction and enlightened leadership is always the priority; it is convenient and helpful if the ethnic makeup of the faculty supports the cultural awareness program of a school.

A third activity of much value is group problem solving--group counseling--in which the students meet regularly in small groups with a professional school counselor to discuss matters of mutual interest. As the group begins to find its identity, it begins to become more trusting, goal oriented, and ego involved. Such group work helps the student achieve the emotional and cultural maturity that permits him to succeed.
VII

SUMMARY

Vocational education in the United States has suffered from a bad image that has been in the making for almost a century. It is only the technological revolution that is forcing American society to embrace vocational education as a legitimate sector of public education.

The poor regard for vocational education is held equally by majority and minority groups with perhaps a greater rejection by minority groups because of its second-class status.

Vocational education is chosen not by the high school youth, but by the young adult who has attempted and failed to find a place in the world of work. Despite the poor regard in which vocational education is held by the public generally, the young adult who has failed to find success in the world of work perceives it as the only mechanism by which he may achieve entry into the world of work and the mainstream of American life.

The numbers of high school youth choosing vocational education do not differ significantly when compared by Spanish surname and other surname. The number of young adults enrolling in post high school vocational education tends to show a higher incidence of Spanish surnames than the population in general. Part of the difference is attributed to economic and non-ethnic acculturation factors.

Once enrolled in post high school vocational education programs, Spanish surname students tend to be more successful in their course of study than other surname students.
It is surmised that their failing experience in the world of work and in academic work tends to provide negative motivation. At the same time, a broad ranging and highly flexible curriculum tends to maximize the opportunity for success. Cultural awareness and activities contributing to a person's affective growth tend to enhance and support a student's performance in the cognitive and psychomotor areas.

**EPILOG**

Five years of national preoccupation with vocational education is helping to change the image of vocational education. The greatest force for change promises to come from youth itself, when it begins to demand opportunities in vocational education with greater vigor and more perception than do parents, teachers, and other adults. As adults are required to justify the relevance of existing educational programs to youth, some of the barriers to vocational education are expected to fall.