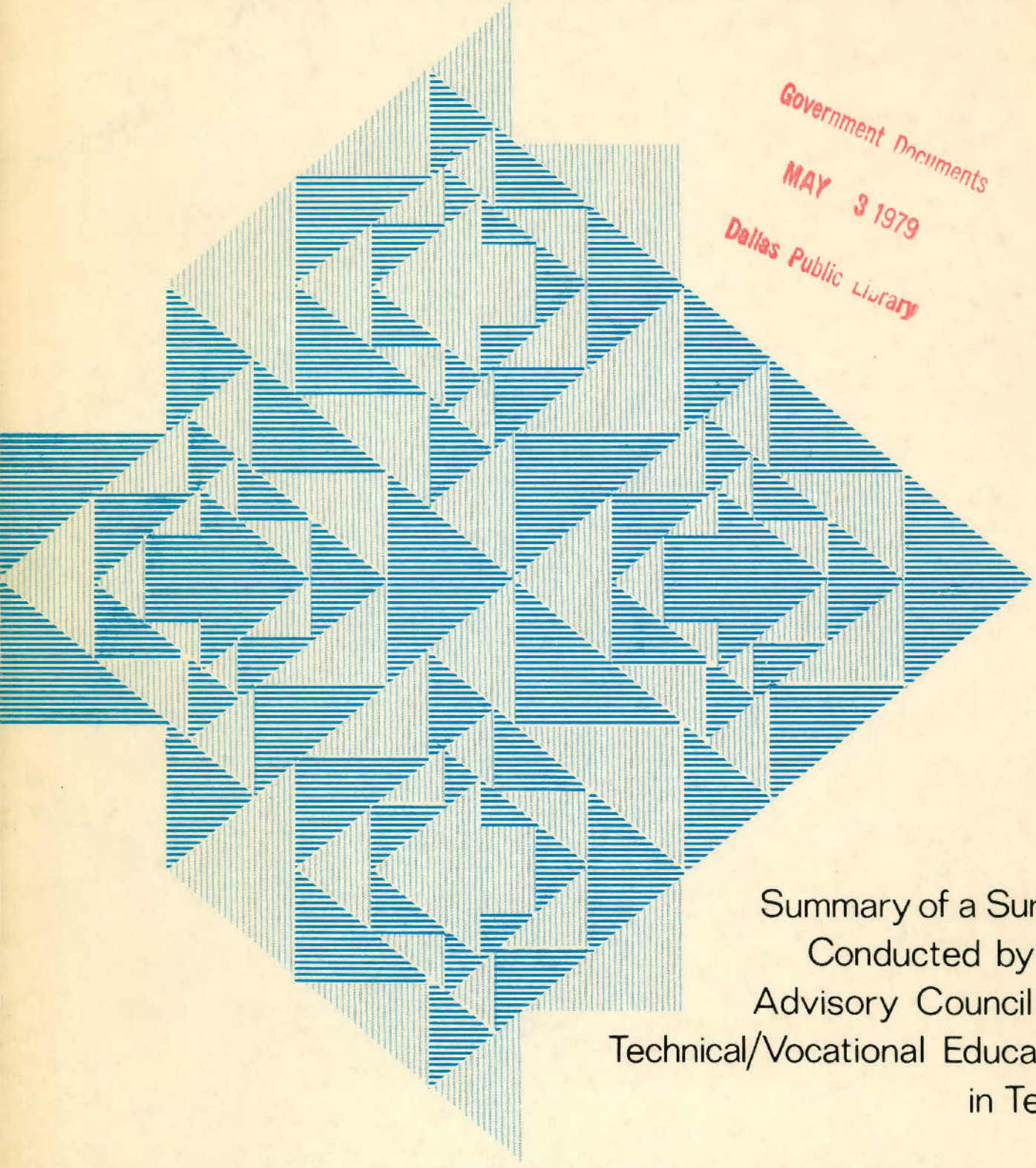
LEARNING BY VOCATIONS

VIEWS ON VOCATIONAL EDUCATION BY FORMER HIGH SCHOOL STUDENTS AFTER FIVE YEARS OF REAL-LIFE EXPERIENCES



Summary of a Survey
Conducted by the
Advisory Council for
Technical/Vocational Education
in Texas

October 31, 1978

To Educators and Fellow Texans:

Vocational education in Texas is chiefly helpful as a way to learn by doing and understanding what was done; for developing good attitudes toward work; and to prepare for the first job after high school—in the opinions of vocational students who have been out of high school and on their own for five years.

A definite need for better education in reading, writing, and mathematics along with training for occupational skills was evident in their assessments. They believed vocational education is good for all students—the "college bound" as well as the "work bound" following high school. Resentment over being sometimes regarded as "second class" scholars showed up among former vocational students.

Such opinions surfaced in responses to a survey conducted by the Advisory Council. The survey focused on a stratified sample of senior-level students in vocational programs in the 1972-73 school year, randomly selected but proportional to sizes of school districts and to geographical regions represented by Education Service Centers.

Despite the lack of current mail addresses, a gross total of 2,062 former vocational students responded in the survey for a return rate of 16.5%. However, only 1,931 responses were received prior to the cut-off date for computer summaries and analyses. The responses summarized in this volume represent a return rate of 15.4%

Under its legal responsibility to evaluate technical/vocational education in Texas, the Advisory Council's survey of former high school vocational students had three primary purposes:

- To identify any gains or advantages from vocational education other than job-placement in an occupation related to that training, and the salaries earned. Those standard measures have been and will continue to be useful to the Advisory Council, but they may be too simplistic.
- To identify any unmet educational needs among former vocational students five years out of high school.
- To examine the match-up of students' actual experiences with their original expectations.

For educators, students, and other citizens concerned with technical/vocational education in Texas, survey results may be as useful for what they do not show as for what they do show. For examples, there was no evidence in the survey results of interest in training for the care and handling of hazardous materials; or for the training of seamen for both ocean-going ships from Texas ports and crew ships to and from off-shore exploration rigs.

This summary is confined to what the survey did show. Rather than relying entirely on statistical tables and charts, the first five chapters are interspersed with quoted comments in an effort to let the former vocational students tell their own story in their own ways. For any readers interested in survey techniques, the appendices offer more detailed information about the conduct of the survey and analytical methods used.

Members of the Advisory Council and its staff are deeply grateful to persons who took the time and trouble to answer survey questions, and especially for the candor of their replies. Our thanks are extended also to hundreds of vocational teachers and administrators who took the time in a busy school year to select randomly names and whatever addresses were available in 1972-73 senior vocational students for purposes of the survey.

Gratefully,

Bill Elkins

Bill Elkins, Chairman
The Advisory Council for Technical-Vocational Education in Texas

RATINGS OF VOCATIONAL EDUCATION

Chapter 1

Vocational programs are valuable chiefly as an instructional method for learning by doing and understanding what was done — in the opinion of a random sample of former vocational students surveyed five years after graduating from Texas high schools.

Vocational education was rated "helpful" as a **learning method** by 86.8% of the respondents. (54% thought it was "very helpful.")

Developing good attitudes toward work was the second most valuable gain from vocational programs, with 85.4% of the respondents believing it "helpful." (54.9% rated it "very helpful.")

Preparing for the first job after high school ranked third among the former vocational students, with 83.7% rating it "helpful" and 52.1% rating it "very helpful."

The ratings were based on 1,931 responses by former vocational students in a survey conducted by the Advisory Council on a statewide, stratified sample of school districts by enrollment sizes and by Education Service Center regions. All respondents were seniors during the 1972-73 school year who had taken a vocational education program.

One of the purposes of the Council's survey was to obtain evaluations by former students on gains from vocational education other than the standard measure of learning occupational skills. Ten possible gains were listed, including preparation for the first job after leaving high school.

Ranked by aggregate "helpful ratings in the frequency of responses, the 10 possible gains from vocational education listed in the survey instrument were.

	Very Helpful	Some Help	Don't Know	Very Little Help	No Help At All	Not Answered
Learning by doing and understanding what was done	54.0%	32.8%	4.2%	5.6%	2.1%	1.3%
Developing good attitudes toward work	54.9%	30.5%	5.1%	6.0%	2.6%	.8%
Preparing for first job after leaving school	52.1%	31.6%	1.8%	7.7%	6.1%	.7%
Learning how to get along with other persons, on and off the job	48.6%	34.6%	4.7%	7.1%	3.6%	1.4%
Understanding the world of work	44.6%	37.1%	3.9%	9.5%	3.8%	1.1%
Understanding your own interests, abilities, values, and potential	49.1%	31.9%	5.3%	8.2%	4.2%	1.3%
Developing decision-making skills, or how to get and organize information, examine alternatives and their consequences, decide, and evaluate your decision	39.6%	34.6%	8.2%	11.5%	5.3%	.8%
Exploring possible career opportunities available to you	39.3%	33.1%	6.9%	12.3%	7.2%	1.2%
Becoming an effective and responsible citizen in your community	29.3%	38.7%	12.8%	11.5%	6.4%	1.2%
Becoming aware of your role as a consumer in our economy	31.0%	36.1%	9.1%	14.5%	8.4%	.8%

Some individual responses: *"Actual on job work experience was my most valuable part of high school education,"* commented a white male who listed his occupation as a furniture salesman in a department store. *"Everyone should have on the job experience in at least one field of work."*

"Make it (high school) a desirable place to go," urged a white female. *"I felt I was attending high school because it was a law, not because I was getting anything out of it. The most I got out of it was my senior year when I was in VICA and actually learned by doing."*

"Make vocational courses required, so that students will have at least some grasp of how the world functions after high school," suggested a respondent who works as a supervisor of retail sales.

In a similar vein, a manager at a financial institution comments, *"If it were not for CVAE and the instructor (teacher named), I would not be where I am today. I think vocational eduction should be a requirement to graduate from high school."*

From a mother working as a dental assistant, while studying for a degree in nursing: *"I got everything I needed from the program (health related occupations) I was in. Loved it."*

From a secretary in an oil company: *"VOE is an excellent course which has opened doors to me. I have found an exciting career opportunity. My VOE job in a law office was good experience and made my second, (and present job) possible. I now realize I should have pursued math further in high school."*

On the negative side, respondents in the survey thought vocational education was least helpful in preparing them for their roles as consumers in an economic society.

On that point, 8.4% thought their vocational courses were of no help at all, and 14.5% thought such courses were of very little help. By contrast, 67.1% thought they were helpful.

Effectiveness of vocational education in preparing persons for citizenship accounted for the most "don't knows," 12.8%, although 68% thought it was helpful in this area.

Below are some typical negative comments on vocational education:

"It shouldn't be an excuse to get out of school for one-half day, which I feel is the major abuse of the program" observed a white female working as a supervisor in a textile manufacturing plant.

An independent paint contractor in a major Texas city rated vocational education as "no help at all" and wrote, *"The vocations in high school were a farce and an easy way to leave school early . . .Every teacher I had didn't know half of what was going on in the real world . . . They only taught what they were taught, and that helps about as much as learning to apply a Band-aid."*

"The vocational course I took in high school (CVAE) was like another study hall," observed a

"Actual on-the-job work experience was the most valuable part of my high school education."

woman retail sales clerk. *"We need to learn more about how to select a career and the right one for you. Also to find out just how the world of work is out there; some idea of how payrolls work in different companies; the pros and cons of employment agencies; about workmen's compensation and how insurance is handled."*

A secretary in a real estate office wrote that she sometimes thinks *"employers only hire students to maintain their community status and do little to aid in training the student properly. The student also represents good, cheap labor to some employers."*

Wrote another secretary working for a vice president of a company manufacturing electronic equipment, about her VOE course: *"In the classroom, instructors should concentrate more on preparation for employment and put less emphasis on contests (competing against other schools in typing, shorthand, etc.)."*

A woman business reporter for a daily newspaper in another state wrote: *"I am a little bit worried about the growing trend to emphasize vocational education. Had I only taken office education while I was in high school, I would now be a secretary instead of a journalist . . . Looking back at my high school and college education, I strongly believe in the merits of a well-rounded, broad education. To me, it has meant freedom, freedom to develop my potential and freedom to pursue a wider range of opportunities. I feel vocational education can limit development of an individual. It tends to package some people too neatly into certain slots. And some of those people may be more valuable to society in other areas. To be fair though, learning to type has proved a valuable asset in my present job. Vocational education is OK as a voluntary supplement to a classic education."*

"Make vocational courses required, so that students will have at least some grasp of how the world functions after high school."

Nearly one-fifth of the respondents judged vocational courses they took to be of little or no help in career exploration, compared to 72.4% who thought them helpful to some degree.

Some representative comments on career exploration and selection:

"I thoroughly enjoyed my data processing class," wrote a student nurse. *"However, I felt I didn't want to make it a career. I feel there should be more information made available to the student regarding possible careers. I went through four major changes in college and four years of wasted effort because I didn't know or have the slightest idea of what I wanted to do. I wish there had been a program in high school that focused on different career areas."*

A woman working as a laboratory assistant, while studying part-time at a university to become a registered medical technologist, wrote: *"I have cursed my high school VOE teacher and counselors since I got out of secretarial work. Not one person suggested to me that I was capable of other work. No one encouraged me to seek other career information on higher education. Our high school counselors have done a lousy job as far as I am concerned. In four years of*

high school I saw a counselor twice, because it was mandatory. I was allotted about two minutes. With help, I might have seen that secretarial work was not for me, that I wouldn't enjoy being cooped in an office in front of a typewriter or hustling coffee for some chauvinistic male. Four years after graduation, and two secretarial jobs behind me, I am on the way to doing what I will truly be happy doing."

"I think vocational education should be a requirement to graduate from high school."

A man working as a stocker for a hardware company *"would allow the students to have more different types of work experiences instead of forcing them to stay in one career field. Also allow them to switch from one program to another such as distributive education to office education without the student losing credits."*

A carpenter for a construction firm, who took vocational agriculture in high school, believed *"more emphasis should be put on preparing students for skilled jobs instead of trying to make students feel they must attend college to be successful . . . It seems to me that too many graduates of high school run to college, major in some field only to graduate and attain a job in some field unrelated to their college major. A good vocational program should give them a good start in their decision for a future career."*

A medical transcriptionist in a clinic believed *"an elective course exploring possible careers and professions would be most helpful, including occasional guests who would answer questions, etc. Too often people graduate with no idea of what they would like to do, or if they do have something in mind, they know very little of what might be involved to obtain their goal."*

A licensed vocational nurse working in a hospital wrote: *"The main thing I would change is the stress on the importance of a vocation. I was advised not to go to college because I was not 'college material.' I went to L.V.N. school and am presently in college working on a nursing degree. I have a 4.0 average. (High school: 70-75). People work for what they want. I want my degree badly, but was put off for many years because I was not 'college material' and 'could not make it.' I am making it now, and I'm proud of my achievements and goals."*

A young woman currently studying at a southern state university, who favorably rated her high school VOE program wrote: *"I'm not sure there is any way to prepare a person, emotionally and psychologically, for 'life after high school.' Perhaps the best that can be done in this is to encourage the student to develop his skills as fully as possible. Skills should (theoretically) give confidence, and confidence is probably the best preparer for anything one wants to do.*

"I believe there should be a de-emphasis on choosing a career while still in high school. A student can be interested in many things and wish to get a taste of all kinds of learning. By forcing (or pushing — I think the word counselors use is 'encouraging') the student to choose a career, that student may feel that he must take

courses which apply to his career only. (Perhaps this complaint is more applicable to college than high school, but I believe the push to choose a career begins in high school — and is where it should not be.)

"I feel I should make one thing clear. I did not take VOE because I had chosen a career. I took VOE to improve and increase my office skills and knowledge so that I could get a good job, while I decided what I wanted to do."

"I feel vocational education can limit development of an individual."

UNMET NEEDS AND WANTS

Chapter 2

The choice of vocational education as a method of instruction by former students related to learning the basic academic skills of reading, writing, and calculating, as well as learning occupational skills. Their responses showed a wide recognition that literacy, as well as knowing how to do a job, is basic to survival in contemporary society.

A random example: a mechanic in an automobile dealership complained about his inability to spell. If he could not correctly spell "carburetor" on a service worksheet, he feared some customers might think he could not adjust or repair one.

Twenty-eight percent of the respondents in the survey chose either reading, writing, or mathematics as the subject in which they would like *most* to have additional training if they were back in high school. Mathematics was selected by 17.3% of the respondents; reading and writing by 10.7%.

"I would like to see the students of the future have more than a diploma," wrote a male Mexican-American police officer. *"I would like to see them with an education to go with that diploma."*

A retail store salesman working his way through college with the goal of becoming a dentist commented: *"Get back to the basics, reading, writing, and arithmetic! Do not pass* ***anyone*** *who cannot do all three* ***well.*** *Design courses to help prepare students to function and cope with everyday life. Put less emphasis on football team and drill team. Schools care more about a football game than academic excellence. These social groups tend to isolate too many individuals. (No prejudice because I was in football and track both.)"*

A female secretary/bookkeeper for a real estate developer noted that she could have used some business mathematics instead of two years of algebra. She also observed: *". . . the chance to work and go to school at the same time gave me the work experience I needed to get started in life. If I could go back to high school, I'd take* ***more*** *academic courses (languages, math, etc.) and* ***less*** *extracurricular activities (drill team, newspaper staff) even though I enjoyed these activities."*

"Get back to the basics—reading, writing and arithmetic. Do not pass *anyone* who cannot do all three *well*."

A white male working as an independent contractor to get through medical school rated his DE teacher as an "excellent" instructor and "understanding" counselor, but: *"I feel the DE program in high school did little to prepare me for a business career. I feel more emphasis should be placed upon mathematics, English, and the sciences. This would provide the student with a wider, more useful educational experience which would allow the student more versatility in choosing a career."*

A railroad foreman urged public schools *". . . when you get an F, put it on the card. I had to learn to read and wright (sic) and spell after I got out of school just because they wood (sic) rather give you an A for effect."*

A male insulation installer for a home improvement company *"would make sure that all people know all the basic fundamentals, —spelling, math, reading, writhing (sic), and scientce (sic). Because I can barely spell, read, and write."*

"Too much emphasis is put on hair and dress codes," thought a male service manager in an automobile engine manufacturing plant, *"and not on whether the graduating senior can read and write as he should be able to by graduation."*

And from a male machinist: *"I think high schools should require students to achieve greater skills in reading and mathematics **before** they graduate. Also I wish **all** high schools could have vocational courses. Believe me, they are a help."*

Education for Life-Coping Skills

Such emphasis on academic basics by former vocational students may indirectly account for their prime preference for more training in life-coping skills. As a sheetmetal worker for air-conditioning systems expressed it: *"Don't just keep passing students. Make sure they can read, write, and/or think for themselves. There are too many graduates who can't balance a checkbook, read an application, make change, or (perform) any normal functions."*

" . . . the chance to work and go to school at the same time gave me the work experience I needed to get started in life."

The particular question in the survey instrument, and the distribution of responses to it, were:

" If you were back in high school, in which one of the following areas would you like most to have more training?" (Please check one.)

Reading	6.5%
Writing	4.2%
Mathematics	17.3%
Preparing for a job	5.6%
Exploring career possibilities and choosing your own career	23.3%
Knowing how our economy works	6.6%
Understanding government and politics	3.5%
Dealing with things like buying a car or a home, airline schedules, job applications, and income tax returns	26.1%

Some other area you think of (describe briefly) _____

_____

_____

That question was not answered by 6.9% of the respondents. Many former students who did not reply were unable to restrict their answers to one area they would like "most" to have more training.

The last alternative in the question, "Some other area," was utilized by 21.5% of the respondents. Some particular aspect of "career exploration and choice" and of "personal development" were most frequently mentioned.

Typical comments on the need for life-coping skills were: *"When I got out of school, I knew absolutely nothing about*

car loans, interest, or finance of any type. If courses could be taught helping people learn about taxes and getting credit established, it would help more than anything I learned," commented a female radiologic technologist who had taken homemaking in high school.

"Don't just keep passing students. Make sure they can read, write and/or think for themselves."

From a male university student, who took trades and industries in high school and is preparing to become a teacher of distributive education: *"Students should become aware that it takes money and work to survive. The main things which should be stressed are those which are actually relevant to . . . the working, living world — such as what are different interest rates on savings and borrowing; how not to lose your shirt or make foolish mistakes."*

A dental assistant observed *" If there were a required class pertaining to specifics like proper dress when going for an interview, filling out job applications, how to conduct yourself in a businesslike manner, how to get along with other people in your work and with the public, filing income tax returns, etc., it would be a big advantage to the entire student body when they go out in the working world — since we all have to do this at one point in our lives."*

A woman who had taken VOE in high school thought, *"It would be nice if there were 'How to Deal With . . .' type courses given. Such as 'How to deal with a grouchy boss,' or other situations which arise which may put a worker on the spot. In other words, a course on how to deal with bad situations; how to watch for possible pitfalls; and also how to see when a new duty is a responsibility which, when handled correctly, may help advancement . . ."*

More Information on Career Possibilities

Representative comments on wider career explorations and choices included: *"I feel more elective subjects should be offered covering a wide range of subjects and skills,"* wrote a licensed vocational nurse working in a nursing home. She observed that "more now than ever the high school student is turning away from college and taking vocational programs."

"Students should become aware that it takes money and work to survive."

The owner-manager of a used-car lot wrote, *"The first thing I would change is the buying of workbooks that are so boring that the kids aren't interested in reading, and even if they did, I don't believe you can learn business or dealing with people from a book. The class should visit each student's job*

and allow the students to explain to the class the mechanics of their jobs."

A homemaker who had majored in speech pathology in college believed women especially need more alternative career goals. *"I feel that I had not set proper goals due to lack of interest in a career field. My goal in school was to get married. A family may come later in life for some. Women need something to fall back on."*

Wished-for Vocational Courses

Unmet needs and wants among former vocational students were approached another way by a separate item in the survey instrument, which asked: *"Can you think of vocational subjects you now wish you had taken, but which you did not choose or which were not even offered when you were in high school?"*

Respondents who could not think of any accounted for 53.1% of the total; 44.7% did identify some; and 2.2% did not answer the question.

Among those respondents who did identify a wished-for vocational subject, 38% were in the vocational office education field, possibly indicative of the number of job opportunities in that sector as our society moves out of an industrial into a service-oriented economy.

However, 24% of the affirmative replies identified courses normally associated with the trades and industries vocational program.

A possibly significant 23% of the affirmative responses concerned subjects and/or courses which the Advisory Council's analysts did not associate with existing vocational education programs, as generally conducted in Texas public schools. Health-related occupations, agriculture, distributive education, and homemaking tapered off the frequency of wished-for vocational courses.

Curious about those vocational topics which appeared to lie outside existing vocational programs, the Council's staff selected at random 175 affirmative responses for closer analysis than the macro-coding for computer analysis permitted.

Within the random sample, 81% of the wished-for vocational courses were within existing vocational education programs; 19% were vocational subjects which appeared to be outside existing programs as generally conducted.

Office education courses accounted for 39% of the wished-for demand within the random sample. Shorthand courses were most frequently mentioned; with accounting/bookkeeping and computer-related courses following closely in frequency. The need for skill in shorthand was not limited to respondents in office occupations; it showed up among university students, who considered it an essential skill for personal note taking.

One Mexican-American woman who had taken a VOE course and subsequently had married would *"make it mandatory that the student (in VOE) take at least one course in shorthand. Because now (in the real world) it's a requirement."*

Ranking second in demand within the random sample of wished-for courses were those in the field of trades and industries (29% of the total sample). "Powder-puff auto mechanics" led in frequency, and reflected a general trend

among women respondents for vocational alternatives outside of homemaking and teaching.

Courses in electronics, particularly radio and TV repair, were second in frequency of identification within trades and industries, followed by carpentry and cabinetmaking, welding, and electrical trades.

"What a tremendous need our nation has for qualified blue-collar workers," wrote an inspector for an oil field service company. *"The entire system of education is missing our generation."*

Within the random sample, health-related occupations again ranked third. Vocational agriculture, distributive education, and homemaking trailed off the frequency of mention in that order.

New Vocational Courses?

Within the sample's 19% desire for courses which appeared to lie outside existing vocational programs, most frequent mentions were for a vocational course in business management, including principles of organization, supervision, output measurements and quality control. A respondent who is a manager in a fast food service chain, and whose high school vocational course was in home economics — employable, expressed the need thusly: *"More on operating and controlling your own business instead of being an employee, as hopefully we will all be in a management position."*

Ranking second within the 19% demand outside of traditional programs were vocational courses in how to get along with others in homes and on-the-job sites; behavior modification other than child development; and preparation for becoming teachers' aides (social sciences).

In frequency of mention, there were also wished-for vocational courses in police sciences, fire protection, and enforcement of governmental regulations (public services and government); bilingual education expressly for office workers, and vocational art-related courses like ceramics (humanities); and vocational courses in energy production/conservation, calculation of energy efficiency ratios; and environmental protection (earth sciences and technology, not agriculture).

Formal Education Beyond High School

The survey instrument also asked former vocational students whether career advancement during their lifetimes would require more formal education beyond that which they had or were currently enrolled for. No need for additional education was foreseen by 62% of the respondents; 21.5% definitely believed more education would be needed to advance in their careers; and 15.4% were uncertain about what the future might require. About 1% of the respondents did not answer the question.

Business management again showed up as the principal

need (40.6%) for more formal education among respondents who specified the kinds of education they thought they would need during their lifetimes. Ranking second was the need for more education in engineering and technology (19.2%); followed by health professions (12.6%) and preparation for teaching and/or educational administration (8.6%).

More formal education for personal service occupations other than education and health professions was specified by 4.9% of the respondents in this group; in social behavioral sciences, by 4.5%; in mathematics and physical sciences, by 3.8%.

Among respondents specifying the kinds of additional formal education believed needed, agriculture and home economics were mentioned least.

Colleges and universities were specified most frequently as being the kinds of institutions in which the additional formal education would be sought (56.4%) followed by technical institutes (24.2%) and community colleges (12.7%). About 6.4% of those respondents thought inservice training would suffice for their future career advancement.

LIFESTYLES AND SELF-FULFILLMENT

Chapter 3

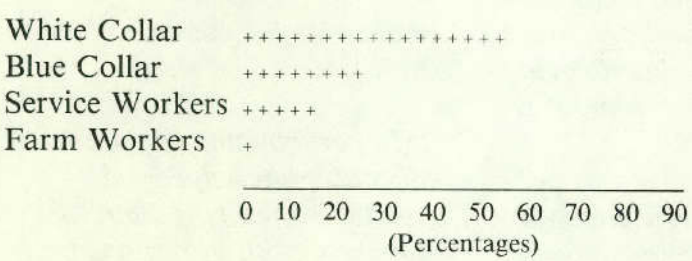
More than half of the respondents in the Advisory Council's survey of former vocational students were working in "white collar" occupations in 1978. Primary elements in that occupational category, and the Texas Employment Commission's estimated gains in numbers of workers between 1974 and 1985, are:

Managers and proprietors, 24.5%; sales workers, 20.8%; clerical workers, 36.8% — the fastest growing occupational group within the state's labor force.

"Blue collar" workers are mainly craftspersons, kindred workers, and operators of manufacturing machines and transportation equipment. Service workers include many in health-related occupations, such as nurses aides and orderlies, food service workers, protective service workers, and those in personal services, such as barbers and hairdressers. Farm workers include not only farmers, but tenants and hired-hands as well.

Distribution of survey respondents by those occupational categories was this:

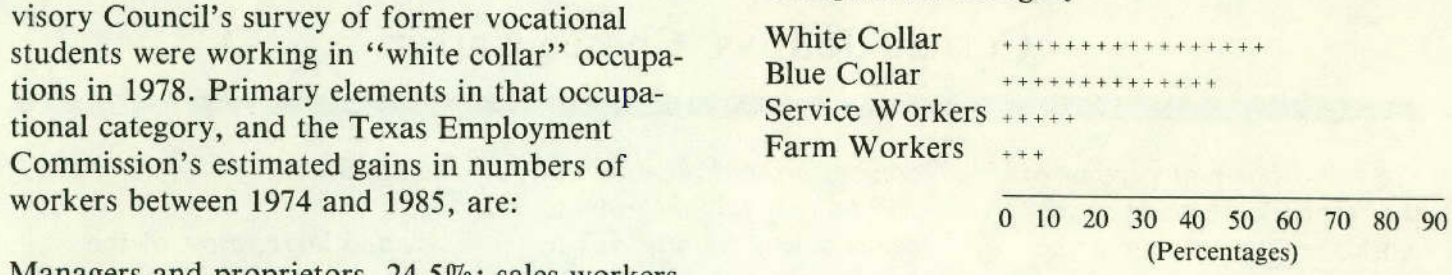
Occupational Category



Excluded from the data in the above chart were college and university students, unemployed persons, and respondents who did not answer the question (aggregating 8.3% of the replies).

By comparison, the distribution of Texas' work force in 1974 was this:

Occupational Category



Source: *Job Scene 1985,* p. 14, Texas Employment Commission, Austin, September 1977.

By type of industry worked in, there was less "match" between the actual distribution of the work force in 1974 (*Job Scene 1985,* p. 6) and the respondents in the sample of former vocational students in the Advisory Council's survey. The comparative data were:

	Distribution of Industry Employment in 1974	Distribution of Respondents in Survey, 1978
Not answered		9.9%
Agriculture, Forestry & Fisheries	4.5%	2.1%
Mining (inc. oil and gas production)	2.5%	5.5%
Construction	8.1%	7.1%
Manufacturing	16.9%	8.9%
Transportation, Communications & Public Utilities	6.7%	5.8%
Trade, Wholesale & Retail	23.7%	11.0%
Finance, Insurance and Real Estate	5.4%	9.4%
Public Administration	5.0%	9.0%
Services	27.2%	31.3%

Current Jobs vs. Chosen Careers

Sixty and one-half percent of the respondents believed the work they were doing at the time of the survey was related to their chosen careers. Negative responses to that question totaled 22.2%. About 16.4% of the respondents were uncertain, and 0.9% did not respond to the question.

"I can see now how important and educational it (VOE) has proven to be," observed a woman secretary in a legal firm that specializes in patents and trademarks. *"It has affected my career immensely and I am very glad I took it in high school. It has proven to be a very good decision and one of the best things I have done for myself."*

"Keep up the good work for me and others. Thank you," wrote a woman cashier in a retail store.

"Auto Mechanics I and II were the best classes of my school career," believed an automobile mechanic working in a dealership. *"They helped me in discovering what I wanted to do. I attend night courses around the area now. I feel that vocational training is the best way for students to go."*

A white male working as an electrician's helper wrote: *"Voc. ag. is one of the best damn things to happen to me."*

A woman student at a large university considered her vocational program to be *"the best thing I got out of high school. It was the only preparation for being on my own. It was realistic, educational, and a great experience for me."*

Not all respondents believed their vocational education was that supportive. A woman administrative secretary in a bank wrote, *"One cannot prepare someone else for the 'dog-eat-dog' world. Experiencing it is the best teacher."*

A driver of a concrete-mixing truck, who had taken auto mechanics in high school, wished *"they would go into bigger machinery than just cars and tractors. Diesel mechanics is a big demand. I wish they would try to teach a little on heavy equipment."*

By and large, most of the former vocational students responding in the survey believed their actual experiences had matched their original hopes and desires. Actual experiences had surpassed the hopes of 16.2% of the respondents, and had fulfilled most of the hopes of another 37.3% of the respondents. Some hopes, but not others, had been fulfilled for 29.8%; 5.2% believed their actual experiences had fulfilled few of their original hopes; 10.4% found their experiences to be totally different from their hopes; about 1.1% of the respondents failed to answer the question.

Representative comments included:

"My participating in vocational education has helped me greatly; however, if I am to 'advance' both in responsibility and in earnings, I believe higher education is essential. The 'world of work' needs the types of people trained by the vocational programs because of their discipline and basic

'working knowledge' of business; however, in hiring personnel (employers) look for the more educated."

A woman working in an insurance company noted: *"The eventual job you get can be very different from that which you prepared for or expected to attain. Nevertheless, my proficiency in typing proved itself in my present job; I am the best in my firm. I wish I had received better reading comprehension and English. Maybe (it was available), but it didn't register at the time. I am getting there the hard way. I suffer a handicap since birth, 50% loss of hearing. So, all in all, I believe I was as well prepared as could be expected — in fact, surpassed my hopes."*

VARIATIONS IN RESPONSES

Chapter 4

As an effective method of instruction and of preparing for the first job after high school, respondents who had taken courses in office and health related occupations rated their **vocational education** as more helpful than did statewide respondents generally. Former students in those same vocational programs, along with homemaking-employable, gave more "helpful" ratings on developing good attitudes toward work.

In learning how to get along with others on and off the job, homemaking-employable and distributive education led the vocational program array in frequency of "helpful" ratings; while health, office education, and distributive education were relatively high in developing an understanding of the world of work.

For discovery of their own interests, abilities, values, and potential, former vocational students rated trades and industries, office education, and vocational agriculture relatively high in helpfulness. Vocational agriculture and office education were relatively high in developing decision-making skills, while health and trades and industries vocational courses were high in helpfulness as ways to explore career opportunities.

Vocational agriculture and health were rated relatively high in helpfulness as the means for educating for effective citizenship, while homemaking-employable and distributive education were chiefly helpful in developing awareness of consumer roles in the opinions of the respondents.

"Wished for" vocational subjects were somewhat higher among former students of homemaking-employable (example: 50.4% compared to 30.9% among former students of health occupations). The relationship of current job to chosen career also appeared relatively low among former students of homemaking-employable, and was highest among former students in health occupations.

The match of actual experiences with original hopes appeared somewhat higher among students of VOE and homemaking-useful than among respondents generally.

Pro and Con

Illustrative comments on vocational programs were:

"Looking back, I wish I had taken VOE more seriously. I should have taken advantage of ***all*** *the equipment and opportunities available at that time (dictaphones, copiers, etc.). It has helped me in finding summer work between school terms . . . I am* ***extremely*** *happy I was in the VOE program . . . Keep up the great system!"* wrote an elementary school teacher.

A secretary in a county clerk's office commented: *"In our high school, 1973 was the first year VOE was taught. The instructor was very poor, didn't know how to teach class, wasn't very qualified. We had no training on the job as they have now, which I feel is very beneficial. I also took typing, shorthand, and bookkeeping from another instructor and found those courses more helpful than the VOE class. I feel I was cheated and wasted a year in high school."*

"It (a DE course) was a great class. The teachers were very

concerned about each and every student," thought a woman machine operator. But a city fireman thought *"DE was full of silly programs which did not help on any job at all! New courses should be started that deal with the modern technical world, the 'real world'."*

A woman who listed her present occupation as "wife, mother, housekeeper, cook, waitress, psychologist, seamstress, etc., etc., etc.," wished for *"more courses on being a good wife and mother — specialized courses on cooking, child raising, budgeting money, more emphasis put on the importance of homemakers as opposed to career women. Importance of the Family Unit in our society."*

A rifle platoon leader in the U.S. Army who had studied vocational agriculture thought *"No changes needed. Learned things that would help anybody in any career. Much of the success of the program due to instructors."*

From a draftsman in a firm of consulting engineers: *"The high school I went to was a very poor school in regard to preparation for entering life as a useful citizen, unless I was to become a football player or farmer. More courses in technical subjects should be offered . . ."*

"I see the true purpose of high school as preparing students to cope with the working world."

A woman handling credit for a department store *"would like to see vocational education extended into more technical areas such as auto mechanics, electricity, and appliance repairs offered in all schools. I see the true purpose of high school is to prepare students to cope with the working world."*

Former vocational students in health related occupations most frequently designated senior colleges and universities as their choice for more formal education in the health professions. However, desires for more formal education appeared higher among former students in VOE, among whom business management was the most frequently desired subject; and among former students in trades and industries, in which technological developments apparently motivated the need for more education.

Sex and Ethnicity

Desires for more training in life-coping skills and for wider explorations of alternative career opportunities were more frequently mentioned by women respondents than by men. More training in mathematics ranked third in the choices among respondents, without much differentiation between men and women respondents.

In the 1972-73 school year, men and women were about equally divided within the total of 153,529 graduates of Texas high schools, including non-vocational students. In the Advisory Council's survey, women outnumbered men among the respondents. The comparative data were:

	Total Graduates	Survey Respondents
No Response		0.6%
Males	49.8%	40.4%
Females	50.2%	58.9%

The prevalence of sex-stereotyping probably provoked comments like these:

A black woman who had studied cosmetology, but was working as an accounts payable clerk in a manufacturing firm, wrote, *"If there were good teachers in our vocational classes, students would probably be more interested in trying to achieve a goal."*

A white woman working as an electrician in a diesel engine manufacturing plant wished *"that someone had taught me how to cope with my emotions, how to cope in a predominantly male job world."*

A woman court reporter who took VOE, but wished for auto mechanics and small engine repair (which were not offered to females when she was in high school), offered this appraisal: *"High school was very unchallenging for me. Instructors spent their time — exhausted their time — discipling unruly students, and were left very little time to be creative or innovative in structuring a course outline. The result was many students like myself were* ***bored silly.***"

A minor backlash was apparent among respondents to the item in the survey instrument requesting ethnic backgroud. Some commented that neither sex nor ethnic background should make any difference in the Advisory Council's concerns, and a few white respondents expressed resentment at being included under the term "Other, including White." Comparative data between total high school graduates in the 1972-73 year and survey respondents were:

	Total Graduates	Survey Respondents
No Response		0.8%
Blacks	12.3%	8.4%
Mexican-Americans	16.2%	12.1%
White and Other	71.5%	78.7%

Typical comments from respondents in racial minorities were:

"My vocational education was my base for becoming what I am now," wrote a Mexican-American male serving as a medical technician in the U.S. Army. *"When I was in school, I was working as a laboratory technician. In the Army I am still a lab tech., but in charge of the histology and morgue department. I am currently registered with American Medical Technologists and hold a medical laboratory technician qualification. All my goals were reached by hard work and because there was a great stepping stone at the beginning . . . I sign my name with pride . . ."*

Observed a black inspector for a pipeline company: *"When in school, most people were unable to advance in vocational classes simply because of no transportation. Most kids' parents were at work themselves, and unable to assist their kids.* ***Some*** *kind of transportation should be provided for those who wish to work, but because of the lack of transportation are unable to participate."*

From a black woman working as a bookkeeping clerk in a bank: *"There are lots of*

responsibilities, in vocational school, which help us a whole lot. Please keep up the good work, because without school there is no way in this wide world we would be able to make it. It was a big help. O.K."

A Mexican-American woman working as a substitute teacher in a public school *"would make government courses deal with more politics today, or current politics, to help students understand the importance of their role as citizens."*

Commenting on her vocational courses in cosmetology, a black woman wrote: *". . . I had a teacher that was somewhat prejudiced toward the blacks . . . we need better teachers that are not prejudiced, willing to take time out with the students, and (who will) make learning easier by giving out that special love atmosphere in the field of learning; then we would have more students proud to say that my vocational classes . . . got me job ready."*

Responses by School District Sizes

Responses to the Advisory Council's survey were grouped by sizes of school districts represented by the former vocational students, in an effort to find out whether there were significant differences. Statewide, the Texas Education Agency uses 12 size groupings in its management information system, ranging from districts with over 50,000 students in average daily attendance down to districts with 24 or less.

Because vocational programs are infrequent in the smallest school districts, the Advisory Council used the six largest size groups for its statewide survey. Those groups and the respective size ranges were:

I — 50,000 - over ADA
II — 10,000 - 49,999 ADA
III — 5,000 - 9,999 ADA
IV — 1,500 - 4,999 ADA
V — 1,000 - 1,499 ADA
VI — 500 - 999 ADA

Survey respondents as a whole rated vocational education chiefly as a helpful instructional method, for developing good attitudes toward work, and in preparing for the first job after high school.

When examined by size of the school districts represented by those respondents, vocational education got relatively more "very helpful" ratings as an instructional method from former students in size groups III and IV (58.9% and 59.0% respectively, compared to the statewide average of 54.0%). Fewest "very helpful" ratings came from the largest and the smallest of the size groups, 51.7% in Group I and 48.5% in Group VI.

For developing good attitudes toward work, the relationships by school district sizes were the same: high for Groups III and IV, low for Groups I and VI.

On preparing for the first job after high school, vocational education was rated "very helpful" by 52.1% of the respondents statewide. On this characteristic, size Group VI respondents were lowest

(38.8%), Group V second lowest (48.2%), and Group I third (51.5%). The "very helpful" rating appeared most frequently among respondents in size groups III (59.6%) and II (54.3%).

When respondents by school district size groupings were further subdivided, by vocational programs taken in high school, the numerical sample sizes in Groups V and VI were too small to be meaningful. For the other size groups, helpful ratings were more frequent among former students of VOE, with two exceptions.

Helpful ratings were dominant among former students of trades and industries in Group IV respecting vocational education as a way to learn and to develop good attitudes toward work. In size Group II, former students of homemaking-employable were the most favorable toward vocational education for developing good work attitudes.

Current work was most frequently related to selected career among respondents from school districts in size Group III (67.5%), and least in Group I (57.8%), compared to the statewide average of 60.5%. Uncertainty about that relationship was highest among respondents from school district sizes VI and III.

The match between actual experience and original hopes appeared closest among respondents from Group III sized school districts; it was least frequent among former students from schools in size Group VI. The fact that it was relatively infrequent among responding former students in the largest group, Group I, negated a hint in the data that the match might be related to sizes of school districts.

Biggest and Smallest Most Alike?

Most apparent was a tendency of respondents from the largest and the smallest school district size groups to make similar replies on some survey items. For example, Item 11 of the survey instrument invited suggested changes in high schools. Voluntary statements of satisfaction were relatively fewer among respondents from Groups I and VI; better teachers, counselors and courses were suggested more frequently by respondents in those same groups; better career information was suggested more frequently, and more on-the-job training less frequently, from such respondents.

The array of percentage distributions were like this:

"My vocational education was my base for becoming what I am now."

	State-Wide	School District Size Groups					
		I	II	III	IV	V	VI
No Suggestions	34.9%	35.3%	34.2%	34.4%	35.3%	38.6%	33.0%
Positive Satisfaction	13.4%	9.9%	15.6%	17.2%	14.9%	13.3%	10.7%
Better Teachers/Courses	16.2%	21.5%	12.2%	13.9%	14.3%	16.9%	18.4%
Better Career Information	9.5%	10.6%	9.7%	9.9%	7.3%	6.0%	10.7%
More Job Training	8.4%	7.5%	9.3%	7.3%	9.4%	8.4%	6.8%

Vocational **subjects** the respondents now wished they had taken in high school were most frequently indentified in replies from former students in Groups V and VI, with subjects most often falling in the program area of office education, followed by those in trades and industries; except that in Group V, trades and industries were more frequently identified than VOE.

However, when asked to designate the areas in which they would like **most** to have more training if they were back in high school, respondents most frequently chose life-coping skills, wider career explorations, and mathematics, regardless of school district sizes, with these exceptions: respondents from Group I school districts mentioned career exploration more frequently than life-coping skills; there were equal proportions for those two areas in the smallest sized group (VI); and more training in mathematics was desired more frequently than in career exploration among respondents in Group V.

The need for more formal education during their career lifetimes was most frequently affirmed among respondents from Group V school districts, the frequency being 28.9% compared to 21.5% statewide. The fewest affirmations were from respondents in Groups I and VI (20.9% and 20.1% respectively).

Business management was the most frequently named area of need for more formal education, regardless of school district size groupings, with engineering second in frequency (except among respondents from Group V school districts, where health professions was second in frequency of mention).

Variations by Education Service Regions

Identifying responses by the 20 Education Center regions in Texas resulted in sample sizes too small for significance in many geographical regions. Accordingly, the following effort to discern differences in responses by regions should be examined with particular skepticism about reliability.

Statewide, respondents rated vocational education chiefly helpful as a method of instruction, in developing good attitudes toward work, and in preparing for the first job after high school. On all three of those characteristics, "helpful" ratings were relatively high from respondents in ESC VII, (headquartered at Kilgore), in East Texas.

As an effective method of instruction, "helpful" ratings were relatively high in ESCs XI

(Fort Worth) in West Central Texas, and XVI (Amarillo) in the Texas Panhandle. On developing good work attitudes, "helpful" ratings were predominant in ESCs XVIII (Midland) in Southwest Texas, XI (Fort Worth), and VI (Huntsville) in East Central Texas.

"Wished for" vocational subjects were relatively high in frequency among respondents in Regions IV (Houston) and XIX (El Paso), with OE and T & I predominating. Current jobs were most often related to chosen careers in Regions II (Corpus Christi), VII (Kilgore), and XIX (El Paso).

The expressed need for more formal education during lifetime careers was most reliably evident in Regions X (Richardson) and XIII (Austin), with business management the most frequently identified field.

Respondents in "white collar" jobs were relatively high in Region XI (Fort Worth), with employment in personal service types of occupations predominating.

The match between actual experience and original hopes was relatively high in Regions II (Corpus Christi) and VII (Kilgore), and noticeably low among respondents from Region IV (Houston).

As might be expected from the state's demography, Mexican-American respondents were proportionally higher in Regions I (Edinburg) in the lower Rio Grande Valley; XIX (El Paso) in West Texas; II (Corpus Christi) in South Texas; and XIII (Austin) in Central Texas.

Black respondents were proportionally higher in Regions IV (Houston) in Southeast Texas, V (Beaumont) and VII (Kilgore) in East Texas.

Region IX (Wichita Falls) in North Texas was unique in that all respondents were white.

PLAIN TALK

Chapter 5

Vocational education is for college-bound students as well as for the workbound, and sharp reactions by former voc. ed. students against being regarded as "second class" were significant qualitative characteristics of comments by respondents who would make changes in their high schools if they could.

The question in the survey which evoked the comments read: *"We would welcome any comments about how to improve the courses you took in high school/ or the services provided there. In other words, how would you change high school if you could?"*

Quantitatively, almost 35% of the respondents did not feel strongly enough to suggest any changes. Another 13.4% took the time to write positive statements of satisfaction with their high school educations.

Among those who did suggest changes (51.7%), better teachers, counselors, and course content were most frequently mentioned. Better and broader information about job and career opportunities ranked second in frequency, followed by comments calling for more on-the-job involvement in the community; stricter discipline in high schools; and better equipment, machines, labs, books and materials for vocational education.

A miscellany of personal comments not elsewhere classifiable represented about 10% of total respondents.

The frequency distribution was in the following pattern:

Category	Numerical Frequency	Relative Frequency (%)
No comments	673	34.9
Satisfaction	258	13.4
Better content	312	16.2
Stricter discipline	102	5.3
More career information	185	9.5
More on-the-job training	162	8.4
Better equipment/supplies	43	2.2
Personal comments, NEC	196	10.2

Pathways to Higher Education?

Typical of the opinion that vocational education is for all students, and should be supportive for the college-bound as well as those seeking post-high school jobs, were these:

A stockbroker and university graduate who had taken distributive education in high school commented that the *"course appeared to be aimed at those who do not choose to attend college. Should offer courses with emphasis on those who will attend a four-year college."*

An elementary school teacher who was happy with her voc. ed. course in child development observed, *"Although I was a good student (in high school), I did not know how to study or budget my time effectively . . . I was never taught how to study or to take notes — both necessary in college. It took me a full year to adjust to college . . . English was my weakest area."*

A black female student in a university thought *"The background in English (writing) was not supportive enough. It*

did not prepare me to meet college standards. I believe English is the subject most college students have trouble with."

From a secretary in a financial office: *"I feel I learned more in a shorthand course I took than in all my English courses put together."*

A white male student in a law school, who had taken a vocational course in health occupations and wished he could have had a course in automobile mechanics, thought *"Writing and reading should be stressed more in all subjects, and this includes research papers, themes, etc., and as much reading required as is allowable and time permits. ABOVE ALL PLEASE DO AWAY WITH OBJECTIVE TESTS . . . make the students express themselves and not just choose (A), (B), or (C)."*

A black woman working as a secretary in a firm handling real estate mortgages, in order to pay her way through medical school, commented on her VOE high school course this way: *"I feel that there should have possibly been one more teacher. — One who dealt with clerical problems and one for those interested in advancing to higher positions such as supervisors or managers in the particular area."*

From a white female office worker in wholesale trade: *"Stress that typing, bookkeeping, etc., are not just for career preparation. They are necessary courses for college."*

"I will soon be graduating with a B. S. degree from college," wrote a white male working with youths in a YMCA program. *"I found myself as well as my peers very deficient in mathematics and related courses."*

but high school really doesn't prepare students for college . . . Many freshmen have to take developmental courses in English and math before they are able to take (college-level) courses."

A Mexican-American male working as a lab technician in an industrial plant urged: *"Try to get these students to further their education when they get out of high school; because it isn't easy to get a good job with just an education from high school anymore."*

A white female homemaker who took VOE in high school called for more emphasis on reading, writing, and arthimetic, plus high school courses to prepare a student for college. Perhaps she summed it up in a single sentence: *"College gives you the brains; technical training gives you the skills."*

"If I had it to do all over again, I would fight for the front row seat in every class."

A female staff person for another non-profit organization wrote: *"D. E. was a fantastic method of learning for me . . .*

Second-Class Students?

Below are some typical criticisms of the tendency by many Texas high schools to stratify socially students who are "college bound" from those who are "work bound":

A white male who took radio and TV repair in high school, graduated from a university, and was working as an electronic design engineer in a firm manufacturing integrated circuits, wrote: *"Change the attitude of other teachers and students regarding voc. ed., i.e., many teachers thought that radio and TV, and auto mechanics were for the less intellectual, less motivated students. I felt that some thought we were the 'problem' students who probably had not the ability to do anything requiring 'college education'. I, and many others, have been exceptions to the rule in spite of the system. Regardless, I am proud of my accomplishments as a radio and TV grad., and would take voc. ed. again if I were to do it all over again. I think voc. ed. is good for the college-bound. It was good for me."*

From a Mexican-American male who took a vocational course in data processing in high school and currently was studying in a large university: *"The program on its merits was valuable. My criticism is that teachers hardly ever stressed college to students. Indeed students are told college is too hard and students are, in effect, channeled into technical schools. Whether they admit it or not, the teachers invaribly dash hopes of a college education. Especially to Mexican-Americans. The result: Chicanos remain a* **labor** *class; the economic status quo is perpetuated. I was told it was unwise to go to college . . . now I am in Law School."*

" . . . high school really doesn't prepare students for college."

A female electrician who took CVAE and was looking forward to further education in a college or a technical school wrote: *"My biggest complaint in high school is the categorization of students among themselves. Faculty should not let this practice continue. It does cause serious psychological problems for all types of students when, or after, they graduate. Kids are very cruel when they are young, and when responsible but overpaid adult teachers let them get away with it, they are being just as ignorant.*

"The way my school was set up on work programs, students who participated in them were looked down upon by a clique group of students and teachers . . . A lot of times a student has to hold a job as often as he can to provide extra income for his family. Yet, the whole time he is degraded because he is looked upon as a flunky or dummy because he's not on the honor roll. I think it starts with

teachers and the school board. If you could make work programs a good thing, maybe high schools could turn out better people instead of 18-year-old babies that have to grow up overnight or fail."

A white male working as a printer who took industrial cooperative training in high school, believed school administrators *"feel the only students involved in vocational training are those trying to get out of schoolwork or those who are not on the same level of intelligence as the other students. It is for this reason I feel that there is lack of support from the administration for vocational programs."*

A Mexican-American male who took a vocational course in bricklaying in high school, but was working as an aircraft mechanic in a helicopter manufacturing plant, wrote: *"We don't need someone who will tell some of the students that they'd be better off in a vocational program because their grades aren't too good and wouldn't survive in college. This is what happened to me. I was thinking of going to some kind of school, and my counselor said I wouldn't make it. I was still 'wet behind the ears' so I thought she knew what she was talking about, and she (I feel) discouraged me from going to college."*

Good Teachers May Take a Bow

Examples of positive statements of satisfaction with high school education included these:

"To be honest, I loved school and so for me there wouldn't be any changes," wrote a policy processing clerk in an insurance firm.

"On the whole, I had a good high school education, mainly because I was self-motivated in making the most of my education. Without it, no amount of skilled teaching would have made a difference," observed a white woman working as a dental assistant.

A man in a municipal fire department wrote: *"I sincerely believe that the education I received was the best offered at that time. All of my vocational teachers had a great influence on my life. I deeply admire these people and hope that some day or maybe already I can be of the same calibre a person they were. Dedicated to their jobs."*

A woman who listed her occupation as sales invoicing in an oil equipment company would make no changes. *"I had a very good teacher, and from what I have heard from students since then, the teacher has been a big difference in the outlook of the course."*

A man who had taken DE in high school, but currently was working as a degree plan evaluator for a university, commented: *"It was an excellent program and at this moment I can think of nothing that would improve the program a great deal."*

From a Mexican-American woman who had taken VOE and currently was working as a secretary in a CPA firm: *"When I was in high school, all my teachers were equally helpful. They taught very well and I have no complaints."*

A floor finisher for a large paint shop, who had studied DE in high school, thought *"the program was well organ-*

ized. The 'Sir' knew what he was teaching. He practiced what he preached."

"I wouldn't change anything about the school," observed a lineman for an electric co-op, *"but I would change myself in school. I would apply myself more on the educational part of school, instead of just trying . . . to pass."*

And a mechanic for an agricultural equipment dealer believed, *". . . it doesn't matter how good the program is; you only get out what you put in."*

"Lumps" for Some Teachers and Counselors

The most frequent criticisms were about the quality of teaching, counseling, and course content. Examples selected at random:

"Improvement of the courses comes with better teachers!" wrote a respondent who was studying mechanical engineering in a university. *"In addition, it is my feeling that the State Board of Education is run by* ***incompetents*** *who know little about the needs of high school students."*

"If only the teachers cared more about you as a person," wished a male food handler in a short-order restaurant chain. *"I don't think that the teachers really cared if you made it in life or not; only whether you were an A student."*

A welder in an industrial maintenance firm wished for *"teachers that have had practical experience in the courses they are teaching."*

A female bank teller on a night shift believed *"Teachers should be checked up on. There were about three courses I took where the teacher came in and checked the room and then left. The teacher only came back a couple of times to give a test (an open-book test)."*

"If only the teachers cared more about you as a person."

"A special attitude is required for this teacher (of vocational courses) because he represents the working, adult world which we all must become a part of," wrote a secretary in a law firm, who was aiming for high school teaching certificate. *"If, at a very influential age, a student is 'turned off' by a teacher in this position, the results can be very sad. At the same time, a student who is reaching a turning point in his life may be saved by a teacher in this same position if that teacher is able to recognize and deal with individual students' problems or needs. The teachers I came into contact with in my school were very kind, but they also were very unsuited for this job. Because of the strong background I had at home, I didn't suffer from it, but I know some who were 'knocked down again.' "*

A Mexican-American apprentice in diesel mechanics noted, *"There were so many questions when I graduated that were unanswered for lack of time. Vocations should be offered at earlier ages. Kids need teachers*

who care, and aren't in it just for that regular paycheck."

"Much improvement is needed in career counseling," thought an electrician in a steel mill. *"Checking career possibilities should be stressed. Testing the potential in an individual would help. During my vocational program, I worked as a mechanic in a local garage, but now I am an apprentice electrician in (company named). Recently I was offered a promotion to foreman of my craft. I didn't know I was capable of handling such a job, but apparently my supervisors do."*

"Though I favor as little governmental control as possible," observed a wholesale manager, *"the state should regulate (or at least oversee) career counselors. I have seen too many who were biased because of their own experiences. Why point someone towards flagpole repair when they have acrophobia?"*

"Why point someone towards flagpole repair when they have acrophobia?"

A woman office manager in a printing shop believed, *"An effort should be made to offer career counseling and then focus on the particular skills for that area, instead of the 'shotgun' approach used when I went through; i.e., giving an overview of some skills with the hope some would be usable."*

"We had a non-functioning counselor who was deaf to pleas for assistance in career planning or classroom training," reported a woman management trainee in the retail industry. *"Overall, our school system was extremely poor in preparing for career and/or additional education."*

A computer operator in the armed forces, who had taken radio-TV repair in high school, wrote:
"I can see now that time spent with counselors was extremely non-productive. Had it been better utilized, I feel that I would not have turned to the military for education."

Coaches Who "Practice" Teaching Get Some Bruises

"I wouldn't let coaches be teachers because they're coaches not teachers," declared a man who had taken voc. ag. in high school, but currently was aiming to become a landscape architect. He wished for more education in drafting, algebra, and geometry. *"Understanding that good teachers are hard to find, I can't be overly critical of staff. However, I feel they are the bridge between generations, and communication between the two."*

A nurse's aide observed, *"The number one complaint I had when in school was that coaches in (city named) were given such important courses as history or government when all they cared about was sports. They did not teach these subjects well. If you learned anything, you did it on your own."*

A man currently studying in an out-of-state technical university, who signed his form "Disgusted Graduate of '73,"

would *"get a more job-minded principal. Technical courses (in my high school) were limited to drafting. All funds that were allotted for other shops were used on a new sports installation."*

A woman working as a receptionist in a finance company, who had taken DE but wished she had taken business courses instead, offered an agenda worthy of consideration by any school board of trustees:

"1. Try to get and keep teachers who really care about students and their futures.

"2. Get coaches out of teaching positions. Not one coach I ever had was worth a dime.

"3. Introduce subjects on what makes people tick and how to deal with situations that arise at work (or at home).

"4. Teach students how to budget money so they don't get in over their heads.

"5. Start early warning children about the effects of drugs on their bodies and their lives.

"6. Have better classes for slow learners, but even more important . . . recognize and accommodate gifted children . . .

"7. Considering the fact over half of our population is overweight and in view of the great number of people who die each year of heart attacks, I think more emphasis should be put on physical fitness . . . Healthy people not only feel better and live longer, they also learn quicker."

Mandatory Career Exploration

Student needs for better/broader information about job and career opportunities surfaced in comments like these:

A woman who indicated no current employment would *"have a course during the first year of high school cover thoroughly career possibilities and insights into jobs, duties, advantages, disadvantages, financial outlooks, and having people from particular fields come and share their views about their jobs . . . For someone who knows what they want, for instance an office career, vocational training is of great help. However, I do feel before any vocational training in any one field is given, all job opportunities must be first looked at and considered. It should be a mandatory course."*

Another respondent, trained vocationally as a nurse's aide and who identified current work done as that of "housewife," suggested a different kind of mandatory course: *"High school prepared me for things like reading and writing, but not much for actual life experiences. I think a course on 'marriage' should be mandatory. These courses are offered in some schools around the country. My own marriage has been happy and fulfilling, but I wasn't prepared for things like balancing a budget or paying bills. I think advance preparation would have helped."*

A white female typist-checker working in an insurance company thought *"Business courses would have helped with having your own business or even help*

with financial understandings. There is not a great need for hairdressers any more. There are already too many beauticians. This, I think, should be explained to a person wanting to take cosmetology before they get into it. Otherwise they might get disappointed."

"Having grown up a lot since high school, I think if we could have had previous members of VOE come to the classroom and speak about their experiences (it) would have helped considerably," wrote an office manager/bookeeper in the oil industry.

Greater variety in on-the-job learning opportunities, and more employer-based learning centers, were suggested by many respondents. Examples:

"I would very much have liked to have been exposed to more of the real world while in school," commented a warehouseman for a large mail-order house. *"The jobs available were not stimulating and too much emphasis placed on just having a job . . . any job."*

An elementary school teacher suggested, *"Additional courses in which students would be able to get classroom and on-the-job experience, (in areas such as communications, photography, teaching, etc.), by being 'assistant helpers' would be interesting. It would be great if more centers were in a town for vocational classes (other than DE, VOE, and voc. ag.)."*

Get Tougher!

Looking back at their high school education, many former vocational students wished for stricter discipline and higher goals for personal achievement. A black man who had studied radio and TV repair in high school, but currently was checking cargo weight and balance for a freight airline, suggested, *"Prayers to be said in morning and severe punishment be given to the ones who are messing up the school systems, like vandalism and beating of teachers."*

A woman business reporter for a daily newspaper thought, *"High school was too easy. The challenges were minimal, and the busy work was dull. I never cared to work hard in high school. College turned that attitude around, not vocational education. College was demanding, and a lot more compelling. I did pretty well there. Thank you."*

"High school was too easy. Challenges were minimal."

"Most of the teachers I had in high school were good; it was the students and all the extracurricular activities that kept me from taking full advantage of what was there," observed a secretary for a bank officer handling real estate loans. *"I feel like if there were more discipline in the schools, there would be less trouble like with drugs, etc. It's scary for me to look at the kids today and see they are ten times worse than I was. I hope I can afford*

private school for my kids."

"I will never send my child to a (city named) public high school or any public school for that matter," vowed a former student in VOE who became a homemaker. *". . . Most eighth graders cannot even read. Also, they have no discipline. I think the public school system is very poor."*

The workbooks we have in ICT were a total waste of time." *"More modern office machines such as keypunch machines, card readers, and other data processing equipment should be available either from the school or perhaps in cooperation with some local business,"* thought a former student in VOE. *"Operation of printing and duplicating equipment should*

"All of my vocational teachers had a great influence on my life."

Better instructional equipment and materials in vocational education were yearned for by other respondents. *"My employer did enough to teach me the basics in the field I had chosen,"* wrote a Mexican-American male who had taken ICT and currently was working as a carpenter. *"But the classroom instruction was insufficient . . . books were outdated . . . we were in a class where everyone was taking a different course."*

The owner-manager of a pictureframing shop wished for *"less emphasis on rules and more on being responsible in dealing with the real world.*

be taught more fully. Also, more electric typewriters were needed at the time I was participating in the program."

And a former student in radio and TV repair would *"Provide more money for equipment . . . Create industry-school cooperation in job hunting, technical advice, and equipment donations."*

"Design courses to help prepare students to function and cope with everyday life."

Perhaps the extreme range in the variety of comments, which defied the analytical classifications prepared for the computer, can best be illustrated by these three examples:

"I have become a brown belt in karate since I finished high school," reported one male respondent, *"and I think a self-defense course should be offered in all high schools. These rape and manhandling offenses have gone far enough in my opinion."*

A surveyor for an engineering firm offered these suggestions: *"Have better lunch programs instead of junk food. Relocate all administrative staff who have consistent arguments with other staff members and students. Do away with all politics involved in the school district. Pay the custodians and the cafeteria help more."*

Finally, from a branch manager for an oil company: *"If I did it over again, I would fight for the front row seat in every class."*

TECHNICAL BACKGROUND

Chapter 6

Three specifications for the survey were initially made:

1. The universe to be sampled would be high school seniors enrolled in vocational programs five years earlier than the time of the survey. The Council wanted a longitudinal study with a minimum of five years of time lapse after high school. The probability of many inaccurate addresses was a risk willingly taken. The Council was not concerned with whether respondents were graduates or "leavers" from the senior level of the 1972-73 school year.

2. Survey method was to be a mailed questionnaire not more than one page in length. This, too, was an eyes-open decision, forced largely by budgetary constraints. Personal interviews more dependably reach the disenchanted "failures" among former vocational students, but costs of that survey method are much higher.

The bias, or tendency in surveys-by-mail to reflect responses from "successful" persons, is recognized here for the sake of objectivity. That, and other limitations inherent in the survey, are not set out by way of apology. The Advisory Council and its staff thought it better to try to measure results and to benefit from such measurements, than never to try at all. Student opinions had not been sought by an organized method by the Council since 1971.

3. The Council's survey was not to duplicate or overlap separate surveys recently made or currently underway by any other public service agencies. Discussions of this point eventuated into three definite survey purposes:

- To identify any gains from vocational education other than job-placement in an occupation related to that training, and the salaries/wages earned. Such measures have been and will continue to be useful. The Advisory Council was interested in any ancillary benefits outside those standard measures.
- To ascertain any unmet educational needs among former vocational students five years out of high school. This Advisory Council for Technical-Vocational Education serves also as the Advisory Council for Adult Education in Texas.
- To examine the match-up between former students' actual experiences with their high school hopes and aspirations. The Council was curious about possible relationships of vocational education to lifestyles and self-fulfillment.

Statewide Stratified Sample

Given those specifications, a theoretical sample of the universe was constructed so as to be proportional to size groupings of school districts and to the 20 Education Service Regions (geographical) in Texas. Two factors were influential in constructing the theoretical sample. One was the hope that a "return rate" of up to 30% of mailouts might be obtained. Subsequent experience proved that assumption to be overly optimistic; yet, some variation between expectation and actual would be permissible. The second factor was budgeted cost of the survey, on which marked variation would be much less permissible.

In the table that follows "targeted" figures, whether for school districts by Group sizes or the total for regional representation, are simple arithmetic calculations. Tentative Sample figures, however, are the aggregates of "quotas" de-

veloped for school districts to be invited to participate and numerically developed with an eye on sufficient vocational units approved for the 1972-73 school year to warrant the probability that the selected ISDs had enough senior students to meet the assigned quotas.

Comparison of Targets and Tentative Samples by School District Sizes

Size Groups Selected	Targeted	Tentative Sample
Group I (50,000 - over, ADA)	4,080	4,095
Group II (10,000 - 49,999)	5,542	5,455
Group III (5,000 - 9,999)	1,819	1,830
Group IV (1,500 - 4,999)	3,604	3,600
Group V (1,000 - 1,499)	867	870
Group VI (500 - 999)	1,081	1,045
Totals	16,993	16,895
Target total for regional representation	16,852	

(The variance between "targets" for proportional representation of Education Service Regions and for school districts by sizes, is due to two factors:

Regional targets were calculated on the basis of total ADA for 1972-73 in a TEA computer printout. Targets by school district sizes were calculated on the basis of refined ADA for only the six largest sized school district groups, as reflected in TEA's 1972-73 *Annual Statistical Report.*)

SUMMARY

Tentative Sample for Student Survey

ADA Group	I Edinburg	II Corpus Christi	III Victoria	IV Houston	V Beaumont	VI Huntsville	VII Kilgore	VIII Mt. Pleasant	IX Wichita Falls	X Richardson	XI Fort Worth	XII Waco	XIII Austin	XIV Abilene	XV San Angelo	XVI Amarillo	XVII Lubbock	XVIII Midland	XIX El Paso	XX San Antonio	Totals
I				1,375						1,000	500		350						360	510	4,095
II	500	350	120	1,155	250	75	125		110	415	375	225		150	125	225	225	270	210	550	5,455
III	210	180		410	50	75	150	50		250	50	60			75	60	60	75		75	1,830
IV	190	110	125	225	250	100	300	120	50	400	300	150	250	75	50	175	200	90	60	380	3,600
V		30	30	60	50	100	75	25		100	100	75	100	25	25	25	25	25			870
VI		30	75	20		100	130	130	100	100	50	85	100	50		25	50				1,045
Total	900	700	350	3,245	600	450	780	325	260	2,265	1,375	595	800	300	275	510	560	460	630	1,515	16,895
Target	884	697	357	3,247	600	442	782	323	255	2,261	1,377	595	782	289	272	493	561	459	663	1,513	16,852
Counties in Region	7	10	12	7	6	15	17	11	12	8	10	12	15	13	18	26	20	19	2	14	254
Counties in Sample	4	7	6	6	6	9	13	9	6	8	9	10	11	7	4	8	9	7	1	8	148

The quotas for school districts within size Groups resulted in distributing the sample by Education Service Regions.

The contrived proportions within the statewide stratified sample, however, were badly eroded by unpredictable return rates. For example, by Education Service Regions, the variance was from 25.0% in Region IV (Houston) to 1.0% in Region VIII (Mt. Pleasant). Statewide questionnaires mailed out totaled 12,489. A total of 1,931 responses were received in time for computer analysis for a return rate of 15.4%.

Survey Instruments

Development of a one-page (front and back), 11-item survey questionnaire was greatly assisted by an Advisory Committee consisting of Mr. U. D. Adams, Austin (Voc. Ag.); Mr. David Bohannon, Lampasas (Voc. Ed. Director); Mrs. Karen Cotton, Austin (Homemaking); Ms. Wanda Insall, Austin (V.O.E.); Mr. Ronald E. Morrison, Round Rock (Trades and Industries); Mrs. Willine Park, Austin (Health Occupations); Mrs. Edith Patterson, Houston (D.E.); and Mr. Charles Priddy, Austin (Vocational Counseling).

That group, however, should not be held responsible for any interpretations of survey results in this document. The Advisory Council's staff was solely responsible for that task.

The survey instrument was further refined, especially in two respects, by pretesting it in the Austin ISD under Mrs. Cotton's leadership. Early drafts of the instrument contained one element in Item 1 which read like this: *"Please show by a checkmark how much you* **now** *think your vocational education helped you to . . . understand how private enterprise works?"*

The term "private enterprise" was not understood by many students in the pretest, and the phrase was reworded to read "understand the world of work?"

The second significant change resulting from pretesting was Item 8 respecting ethnic backgrounds. The draft offered five classifications: Asian; Black; Indian (American or Alaskan); Mexican-American or Spanish; and White, other than Hispanic. Both the pre-test and experience with other surveys indicated that detailed a breakout yielded no significance in Texas' population. The item was simplified to three backgrounds: Black, Mexican-American or Spanish, and Other, including White.

The accident of alphabetical listing and the inclusion of "White" with "Other" irritated some respondents who apparently suspected reverse discrimination.

The transmittal letter to former students and the survey instrument used are exhibited on the following pages.

Names and addresses were furnished by cooperating school districts. Mailouts were made by the Advisory Council's central office staff, and responses received at that point.

As expected, the addresses proved to be the severest limitation in the survey. Americans are mobile, and the younger generation is especially so. Out of 100 envelopes returned by post offices as undeliverable which were selected at random, 76 were stamped "Moved—Not Forwardable;" 14 were stamped "No Such Street Number;" three were marked "Unclaimed;" three were marked "Wrong Address;" two as "Insufficient Address;" and one each as "No Mail Receptacle" and "Vacant."

Unexpectedly, 38 independent school districts out of 239 in the stratified sample failed to cooperate by furnishing names and addresses of former students.

EXECUTIVE DIRECTOR
Alton D. Ice
Austin

THE ADVISORY COUNCIL FOR TECHNICAL–VOCATIONAL EDUCATION IN TEXAS
(Advisory Council to the State Board of Education)
P.O. Box 1886
Austin, Texas 78767
512/475-2046

April 19, 1978

Dear Former Vocational Student:

How are you doing? And what do you now think of the education you got back in high school?

Those questions are the basic reasons for the enclosed survey sheet. We very much want and need to know what you think.

Your high school has provided your name and address to help fulfill the Advisory Council's legal responsibility for evaluating vocational education in Texas. We need to know how well the vocational education courses you took met your needs, in order to improve for students who are following you.

Your replies on the enclosed survey form will be kept confidential. You need not even sign your name to it, but we greatly need your personal replies in order to improve the effectiveness of vocational education to others.

Please fill out the form now. Mail it back in the enclosed envelope which requires no additional postage.

Thank you very much. With every good wish.

Sincerely,

Alton D. Ice

Alton D. Ice
Executive Director

ADI:ck
Enclosures (2)

PURPOSE: "To establish a climate conducive to the development of technical, vocational, and manpower training in educational institutions in the State of Texas to meet the needs of industrial and economic development of the state."

TECHNICAL/VOCATIONAL STUDENT SURVEY

1. Think back over the vocational education program you took in high school. For each of the questions in the first column, please show by circling a number in one of the opposite columns how much you now think your vocational education helped you to:

	Range of Ratings				
	Very Helpful	Some Help	Don't Know	Very Little Help	No Help at All
a. Prepare for your first job after leaving school?	1	2	3	4	5
b. Learn by doing and understanding what you did?	1	2	3	4	5
c. Develop good attitudes toward work?	1	2	3	4	5
d. Explore possible career opportunities available to you?	1	2	3	4	5
e. Learn how to get along with other persons, on and off the job?	1	2	3	4	5
f. Understand your own interests, abilities, values, and potential?	1	2	3	4	5
g. Develop decision-making skills, or how to get and organize information, examine alternatives and their consequences, decide, and evaluate your decision?	1	2	3	4	5
h. Become an effective and responsible citizen in your community?	1	2	3	4	5
i. Understand the world of work?	1	2	3	4	5
j. Become aware of your role as a consumer in our economy?	1	2	3	4	5

2. Can you think of vocational subjects you now wish you had taken, but which you did not choose or which were not even offered when you were in high school?

a. _____ (No) b. _____ (Yes).

c. If "yes," please describe briefly the needed vocational subject: _____

_____

_____.

3. Is what you're now doing related to what you want to do in your chosen career?

a. _____ (Yes) b. _____ (Uncertain) c. _____ (No).

4. Do you think advancing in your career during your lifetime will require more formal education or training, beyond what you've already had or already enrolled for?

a. _____ (No) b. _____ (Uncertain) c. _____ (Yes).

d. If "yes," please indicate what kind of additional education you think you will need: _____

_____

_____.

e. In what kind of school? _____.

(over)

5. Please state your present occupation or work by filling in the following blanks:

a. _____ (Kind of job or work done)

b. _____ (Kind of business or institution you work in)

6. If you were back in high school, in which one of the following areas would you like most to have more training? (Please check only one.)

a. Reading _____.

b. Writing _____.

c. Mathematics _____.

d. Preparing for a job _____.

e. Exploring career possibilities and choosing your own career _____.

f. Knowing how our economy works _____.

g. Understanding government and politics _____.

h. Dealing with things like buying a car or a home, airline schedules, job applications, and income tax returns _____.

i. Some other area you think of (describe briefly) _____

_____

_____.

7. How well have your experiences since you left high school matched your original hopes and desires up to now? (Please check one of the following statements which most nearly reflects your evaluation.)

a. _____ Experiences have surpassed my hopes.

b. _____ Most hopes have been fulfilled so far.

c. _____ Some hopes fulfilled, but not others.

d. _____ Few hopes have been fulfilled so far.

e. _____ Experience has been totally different from my hopes.

Please let us know your ethnic background and sex, by checking appropriate blanks below:

8. Ethnic Background:

a. Black _____

b. Mexican-American or Spanish _____

c. Other, including White _____

9. Sex:

d. Female _____

e. Male _____

For office use only:

VE _____

Region _____

District _____ - _____ - _____

10. Please name the vocational program you took during your senior year in high school: _____.
(Voc. Ag., DE, Voc. Ind., etc.)

11. We would welcome any comments about how to improve the courses you took in high school and/or the services provided there. In other words, how would you change high school if you could? Use the back of the transmittal letter if you need additional space.

_____

_____

_____

_____

Thanks very much for your responses. Just put the completed questionnaire in the enclosed envelope which requires no postage. It will be summarized in Austin along with other replies, and the summary furnished your high school.

Data Processing

In April of 1978, specifications for transferring coded data to cards or tapes and for the analyses desired were mailed to eight computer centers in Texas. In the light of availabilities of time and staff, the transfer of data to magnetic tapes was assigned to the Records Conversion Facility of the Texas Department of Corrections; and the electronic processing of the data to the Computer Services Center of the Region IV (Houston) Education Service Center.

To save programming time, one of the specifications had been for the selective use of the software Statistical Package for the Social Sciences developed by Northwestern University.

SUMMARY OF PROCEDURES USED TO OBTAIN THE STATISTICAL ANALYSES OF THE TECHNICAL/VOCATIONAL STUDENT SURVEY

The staff of ACTVE was responsible for the distribution and collection of the questionnaires; they were also responsible for the coding of the responses of certain items on the questionnaire.

The forms were sent to the Reocrds Conversion Facility of the Texas Department of Corrections in Huntsville, for "keypunching." Mr. Bill Lynch of TDC and Alice Dickerson of Region IV established an appropriate format for the keying of the data (which was actually a key-to-tape process). Upon completion of this aspect of the data collection, the tapes containing the survey responses were delivered to GTMRPC for processing. The following steps took place:

1. The data from the tapes were placed into a permanent file on the GTMRPC's Control Data Corporation Cyber-172 computer.

2. The data was checked for valid responses; any value other than those identified as valud by ACTVE specifications was recoded to zero (or missing).

3. The data file was then processed through two standard procedures of "SPSS" (Statistical Package for the Social Sciences). This is a standard, commercial package of statistical analyses available from Region IV Education Service Center. The software (computer programs) are documented and described in the manual, SPSS by Norman Nix, C. H. Hull, J. G. Jenkins, Karin Steinbrinner, and D. H. Bent, published by McGraw-Hill.

4. The staff of ACTVE and the Region IV consultants worked jointly to choose appropriate statistical procedures and to create labels for the computer output that would assist the user in interpreting the computer printed results.

5. The statistical routines utilized were "FREQUENCIES" and "CROSSTABS," which result in basic descriptive statistics, such as frequency distributions, means, modes, and chi square values.

6. The data were analyzed according to the specifications originally set forth by the ACTVE staff, those being:

   Statewide Summaries
   Statewide Summaries by Vocational Program
   Regional Summaries by Vocational Program
   Regional Summaries by Ethnic Background
   Regional Summaries by Sex

   District Summaries by Vocational Program - for those districts with more than 50 returned questionnaires.

   Summaries by Vocational Program according to school district size (as furnished by ACTVE staff).

APPENDICES

TABLES

We have included tables of statewide tabulations in three areas:

Statewide Summary of Responses by Survey Instrument Items

Statewide Summary of Responses by Vocational Education Program of Respondents.

Statewide Summary of Responses by Education Service Center Regions

Other types of computer analyses are available. If interested in any other breakdowns, contact ACTVE office.

TABLE I

Table I is a tabulation of responses by descriptors of the questions asked the former students about vocational education. It shows the number of responses per descriptor (absolute frequency) and the percentage (relative frequency).

Table I-A -- This includes the data pertaining to the responses to question 1, which read: "Think back over the vocational education program you took in high school. For each of the questions in the first column, please show by circling a number in one of the opposite columns how much you now think your vocational education helped you to:" Then, there was a listing of 10 items. The responses to these items are included on this table.

Table I-B -- This contains a chart on the responses regarding needed vocational programs. Question 2-c read: "Can you think of vocational subjects you now wish you had taken, but which you did not choose or which were not even offered when you were in high school? If 'yes,' please describe the needed vocational subject:"

The second chart on Table I-B includes the responses to the question about the kind of additional education needed (question 4-d). It read: "Do you think advancing in your career during your lifetime will require more formal education or training, beyond what you've already had or already enrolled for? If 'yes,' please indicate what kind of additional education you think you will need:"

Table I-C -- The first chart on Table I-C includes responses concerning more training most desired. Question 6 read: "If you were back in high school, in which one of the following areas would you like most to have more training? (Please check only one)" Then nine items were listed.

The second chart on this table includes responses as to how to improve high school courses and services. Question 11 read: "We would welcome any comments about how to improve the courses you took in high school and/or the services provided there. In other words, how would you change high school if you could?"

TABLE II

Table II gives the breakdown of the responses to the question about the helpfulness of vocational education according to the vocational program of the respondents. Programs include agriculture, distributive education, health occupations, useful homemaking, gainful homemaking, office education, trades and industrial.

Table II-A -- This includes the first four items -- "Prepare for First Job?;" "Learn by Doing and Understanding?;" "Develop Good Work Attitudes?;" "Explore Career Opportunities?"

Table II-B -- This portion includes the next four items -- "Learn to Get Along with People?;" "Understand Your Own Potential?;" "Develop Decision-Making Skills?;" "Become Responsible Citizen?"

Table II-C -- The last two items are included here -- "Understand Work World?;" "Become Aware of Consumer Role?"

TABLE III

This table includes a breakdown of the responses to question 1 by Education Service Region. Texas is divided up into 20 regions serviced by Education Service Centers.

Table III-A -- This contains the first two items of question one -- "Prepare for First Job?" and "Learn by Doing and Understanding?"

Table III-B -- The next two items -- "Develop Good Work Attitudes?" and "Explore Career Opportunities?" -- are included.

Table III-C -- This contains the items -- "Learn to get Along with People?" and "Understand Your Own Potential?"

Table III-D -- The items -- "Develop Decision-Making Skills?" and "Become Responsible Citizen?" are set forth.

Table III-E -- The last two items broken out are "Understand Work World?" and "Become Aware of Consumer Role?"

NOTE: The readers' skepticism is invited to the danger of making conclusions where the number of responses are very low.

TABLE I

TABLE I-A

STATEWIDE SUMMARY OF RESPONSES BY SURVEY INSTRUMENT ITEMS

Category Label	PREPARE FOR 1ST JOB		LEARN BY DOING AND UNDERSTANDING		DEVELOP GOOD WORK ATTITUDES		EXPLORE CAREER OPPORTUNITIES		LEARN TO GET ALONG WITH PEOPLE	
	Absolute Freq.	Relative Freq. (PCT)	Absolute Freq.	Relative Freq. (PCT)	Absolute Freq.	Relative Freq. (PCT)	Absolute Freq.	Relative Freq. (PCT)	Absolute Freq.	Relative Freq. (PCT)
Not Answered	14	.7	25	1.3	15	.8	24	1.2	27	1.4
Very Helpful	1007	52.1	1042	54.0	1061	54.9	758	39.3	939	48.6
Some Help	610	31.6	633	32.8	589	30.5	639	33.1	668	34.6
Don't Know	35	1.8	81	4.2	99	5.1	134	6.9	91	4.7
Very Little Help	148	7.7	109	5.6	116	6.0	237	12.3	137	7.1
No Help At All	117	6.1	41	2.1	51	2.6	139	7.2	69	3.6
TOTAL	1931	100.0	1931	100.0	1931	100.0	1931	100.0	1931	100.0

Category Label	UNDERSTAND YOUR OWN POTENTIAL		DEVELOP DECISION-MAKING SKILLS		BECOME RESPONSIBLE CITIZEN		UNDERSTAND WORK WORLD		BECOME AWARE OF CONSUMER ROLE	
	Absolute Freq.	Relative Freq. (PCT)	Absolute Freq.	Relative Freq. (PCT)	Absolute Freq.	Relative Freq. (PCT)	Absolute Freq.	Relative Freq. (PCT)	Absolute Freq.	Relative Freq. (PCT)
Not Answered	25	1.3	15	.8	24	1.2	21	1.1	16	.8
Very Helpful	948	49.1	765	39.6	565	29.3	861	44.6	598	31.0
Some Help	616	31.9	669	34.6	747	38.7	717	37.1	698	36.1
Don't Know	103	5.3	158	8.2	248	12.8	76	3.9	176	9.1
Very Little Help	158	8.2	222	11.5	223	11.5	183	9.5	280	14.5
No Help At All	81	4.2	102	5.3	124	6.4	73	3.8	163	8.4
TOTAL	1931	100.0	1931	100.0	1931	100.0	1931	100.0	1931	100.0

TABLE I-B

Category Label	NEEDED VOCATIONAL SUBJECT	
	Absolute Freq.	Relative Freq. (PCT)
No Comment	1093	56.6
Agriculture	22	1.1
Distributive	16	.8
Health	36	1.9
HM Useful	6	.3
HM Employable	11	.6
Office	319	16.5
Technical	34	1.3
Trades	202	10.5
Management	84	4.4
Energy	3	.2
Environmental	6	.3
Humanities	27	1.4
Police-Law	18	.9
Public Relations	33	1.7
Science-Math	21	1.1
TOTAL	1931	100.0

Category Label	KIND OF ADDITIONAL EDUCATION NEEDED	
	Absolute Freq.	Relative Freq. (PCT)
No Comment	926	48.0
Agriculture	18	.9
Business	409	21.2
Education	87	4.5
Engineering	193	10.0
Health Prof	127	6.6
Home Economics	17	.9
Math-Science	39	2.0
Public Ad	19	1.0
Soc. Sciences	46	2.4
Other Personal Service	50	2.6
TOTAL	1931	100.0

TABLE I-C

Category Label	MORE TRAINING MOST DESIRED	
	Absolute Freq.	Relative Freq. (PCT)
No Comment	134	6.9
Reading	125	6.5
Writing	81	4.2
Mathematics	334	17.3
Job Preparation	109	5.6
Career Exploring	449	23.3
Economy	127	6.6
Politics	68	3.5
Life Situations	504	26.1
TOTAL	1931	100.0

Category Label	IMPROVE HS COURSES AND SERVICES	
	Absolute Freq.	Relative Freq. (PCT)
No Comment	673	34.8
Overall Satisfaction	258	13.4
Better Content	312	16.2
More Discipline	102	5.3
More Career Info	185	9.5
More Job Taining	162	8.4
Better Equipment	43	2.2
Personal Comments	196	10.2
TOTAL	1931	100.0

TABLE II

TABLE II-A

STATEWIDE SUMMARY OF RESPONSES BY VOCATIONAL EDUCATION PROGRAM OF RESPONDENTS

PREPARE FOR 1ST JOB?

	AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	0 0	2 1.4	2 .5	1 1.2	0 0	2 1.6	4 .6	3 .6	14 .7
Very Helpful	8 36.4	61 41.5	168 41.9	47 58.0	6 24.0	46 35.7	429 68.2	238 48.6	1007 52.1
Some Help	8 36.4	60 40.8	163 40.6	23 28.4	11 44.0	47 36.4	155 24.6	142 29.0	610 31.6
Don't Know	1 4.5	3 2.0	7 1.7	2 2.5	2 8.0	0 0	6 1.0	14 2.9	35 1.8
Very Little Help	4 18.2	12 8.2	38 9.5	6 7.4	3 12.0	17 13.2	18 2.9	49 10.0	148 7.7
No Help At All	1 4.5	9 6.1	23 5.7	2 2.5	3 12.0	17 13.2	17 2.7	44 9.0	117 6.1
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

LEARN BY DOING AND UNDERSTANDING?

	AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	1 4.5	2 1.4	5 1.2	1 1.2	0 0	2 1.6	5 .8	9 1.8	25 1.3
Very Helpful	5 22.7	78 53.1	161 40.1	52 64.2	12 48.0	56 43.4	391 62.2	283 57.8	1042 54.0
Some Help	10 45.5	53 36.1	166 41.4	18 22.2	9 36.0	52 40.3	193 30.7	131 26.7	633 32.8
Don't Know	4 18.2	4 2.7	22 5.5	3 3.7	1 4.0	7 5.4	14 2.2	25 5.1	81 4.2
Very Little Help	2 9.1	5 3.4	32 8.0	7 8.6	3 12.0	8 6.2	19 3.0	32 6.5	109 5.6
No Help At All	0 0	5 3.4	15 3.7	0 0	0 0	4 3.1	7 1.1	10 2.0	41 2.1
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

DEVELOP GOOD WORK ATTITUDES?

	AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	0 0	1 .7	2 .5	1 1.2	0 0	1 .8	5 .8	5 1.0	15 .8
Very Helpful	10 45.5	82 55.8	215 53.6	48 59.3	13 52.0	77 59.7	349 55.5	262 53.5	1061 54.9
Some Help	8 36.4	41 27.9	111 27.7	26 32.1	11 44.0	37 28.7	205 32.6	150 30.6	589 30.5
Don't Know	1 4.5	13 8.8	22 5.5	1 1.2	1 4.0	4 3.1	20 3.2	36 7.3	99 5.1
Very Little Help	1 4.5	7 4.8	35 8.7	5 6.2	0 0	6 4.7	35 5.6	26 5.3	116 6.0
No Help At All	2 9.1	3 2.0	16 4.0	0 0	0 0	4 3.1	15 2.4	11 2.2	51 2.6
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

EXPLORE CAREER OPPORTUNITIES?

	AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	0 0	4 2.7	2 .5	0 0	0 0	1 .8	9 1.4	8 1.6	24 1.2
Very Helpful	9 40.9	55 37.4	131 32.7	39 48.1	12 48.0	49 38.0	248 39.4	211 43.1	758 39.3
Some Help	6 27.3	46 31.3	138 34.4	31 38.3	7 28.0	38 29.5	219 34.8	154 31.4	639 33.1
Don't Know	1 4.5	15 10.2	33 8.2	1 1.2	0 0	10 7.8	34 5.4	38 7.8	134 6.9
Very Little Help	5 22.7	17 11.6	54 13.5	7 8.6	3 12.0	17 13.2	87 13.8	46 9.4	237 12.3
No Help At All	1 4.5	10 6.8	43 10.7	3 3.7	3 12.0	14 10.9	32 5.1	33 6.7	139 7.2
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

TABLE II-B

LEARN TO GET ALONG WITH PEOPLE?

	AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	0 0	4 2.7	2 .5	1 1.2	0 0	1 .8	10 1.6	8 1.6	27 1.4
Very Helpful	8 36.4	76 51.7	191 47.6	45 55.6	17 68.0	76 58.9	293 46.6	228 46.5	939 48.6
Some Help	6 27.3	44 29.9	151 37.7	25 30.9	6 24.0	41 31.8	228 36.2	167 34.1	668 34.6
Don't Know	1 4.5	12 8.2	13 3.2	3 3.7	0 0	2 1.6	31 4.9	28 5.7	91 4.7
Very Little Help	4 18.2	7 4.8	24 6.0	4 4.9	2 8.0	6 4.7	52 8.3	38 7.8	137 7.1
No Help At All	3 13.6	4 2.7	20 5.0	3 3.7	0 0	3 2.3	15 2.4	21 4.3	69 3.6
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

UNDERSTAND YOUR OWN POTENTIAL?

	AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	0 0	2 1.4	3 .7	1 1.2	0 0	1 .8	9 1.4	9 1.8	25 1.3
Very Helpful	8 36.4	75 51.0	152 37.9	45 55.6	17 68.0	52 40.3	319 50.7	277 56.5	948 49.1
Some Help	7 31.8	48 32.7	150 37.4	21 25.9	5 20.0	39 30.2	209 33.2	135 27.6	616 31.9
Don't Know	1 4.5	5 3.4	29 7.2	5 6.2	1 4.0	13 10.1	22 3.5	26 5.3	103 5.3
Very Little Help	5 22.7	12 8.2	36 9.0	6 7.4	2 8.0	16 12.4	54 8.6	27 5.5	158 8.2
No Help At All	1 4.5	5 3.4	31 7.7	3 3.7	0 0	8 6.2	16 2.5	16 3.3	81 4.2
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

DEVELOP DECISION-MAKING SKILLS?

	AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	0 0	1 .7	2 .5	1 1.2	0 0	1 .8	3 .5	7 1.4	15 .8
Very Helpful	6 27.3	62 42.2	139 34.7	29 35.8	11 44.0	43 33.3	267 42.4	206 42.0	765 39.6
Some Help	7 31.8	53 36.1	152 37.9	30 37.0	9 36.0	46 35.7	224 35.6	144 29.4	669 34.6
Don't Know	3 13.6	16 10.9	27 6.7	6 7.4	3 12.0	13 10.1	43 6.8	47 9.6	158 8.2
Very Little Help	2 9.1	12 8.2	50 12.5	12 14.8	2 8.0	16 12.4	69 11.0	58 11.8	222 11.5
No Help At All	4 18.2	3 2.0	31 7.7	3 3.7	0 0	10 7.8	23 3.7	28 5.7	102 5.3
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

BECOME RESPONSIBLE CITIZEN?

	AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	1 4.5	2 1.4	2 .5	1 1.2	0 0	1 .8	8 1.3	9 1.8	24 1.2
Very Helpful	5 22.7	63 42.9	96 23.9	18 22.2	10 40.0	36 27.9	180 28.6	156 31.8	565 29.3
Some Help	10 45.5	52 35.4	169 42.1	39 48.1	9 36.0	53 41.1	243 38.6	169 34.5	747 38.7
Don't Know	2 9.1	14 9.5	50 12.5	10 12.3	3 12.0	10 7.8	89 14.1	67 13.7	248 12.8
Very Little Help	0 0	11 7.5	55 13.7	8 9.9	2 8.0	18 14.0	75 11.9	54 11.0	223 11.5
No Help At All	4 18.2	5 3.4	29 7.2	5 6.2	1 4.0	11 8.5	34 5.4	35 7.1	124 6.4
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

TABLE II-C

	UNDERSTAND WORK WORLD?									BECOME AWARE OF CONSUMER ROLE?								
		AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS		AG	DE	HO	UH	EH	OE	T&I	ROW TOTALS
Not Answered	0 0	2 1.4	2 .5	0 0	0 0	2 1.6	6 1.0	9 1.8	21 1.1	0 0	1 .7	1 .2	0 0	0 0	1 .8	4 .6	9 1.8	16 .8
Very Helpful	6 27.3	59 40.1	179 44.6	40 49.4	10 40.0	57 44.2	297 47.2	208 42.4	861 44.6	4 18.2	52 35.4	150 37.4	19 23.5	9 36.0	45 34.9	174 27.7	143 29.2	598 31.0
Some Help	9 40.9	51 34.7	157 39.2	31 38.3	10 40.0	45 34.9	237 37.7	176 35.9	717 37.1	7 31.8	55 37.4	148 36.9	32 39.5	8 32.0	52 40.3	222 35.3	171 34.9	698 36.1
Don't Know	1 4.5	12 8.2	10 2.5	1 1.2	2 8.0	3 2.3	17 2.7	30 6.1	76 3.9	2 9.1	11 7.5	27 6.7	9 11.1	1 4.0	8 6.2	68 10.8	50 10.2	176 9.1
Very Little Help	3 13.6	17 11.6	41 10.2	6 7.4	3 12.0	14 10.9	57 9.1	41 8.4	183 9.5	4 18.2	19 12.9	48 12.0	16 19.8	6 24.0	15 11.6	106 16.9	65 13.3	280 14.5
No Help At All	3 13.6	6 4.1	12 3.0	3 3.7	0 0	8 6.2	15 2.4	26 5.3	73 3.8	5 22.7	9 6.1	27 6.7	5 6.2	1 4.0	8 6.2	55 8.7	52 10.6	163 8.4
COLUMN TOTAL	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0	22 1.1	147 7.6	401 20.8	81 4.2	25 1.3	129 6.7	629 32.6	490 25.4	1931 100.0

TABLE III

TABLE III-A

STATEWIDE SUMMARY OF RESPONSES BY EDUCATION SERVICE CENTER REGIONS

PREPARE FOR 1ST JOB?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	1 1.4	0 0	0 0	4 .8	1 3.0	0 0	1 1.6	0 0	0 0	1 .5	1 .5	2 2.6	2 1.1	0 0	1 3.7	0 0	0 0	0 0	0 0	0 0
Very Helpful	39 56.5	36 46.2	18 52.9	251 52.0	16 48.5	32 66.7	29 47.5	9 47.4	5 20.0	119 55.3	109 52.7	37 47.4	89 48.6	26 59.1	16 59.3	31 47.0	30 47.6	26 65.0	44 58.7	45 54.2
Some Help	18 26.1	26 33.3	12 35.3	149 30.8	13 39.4	7 14.6	28 45.9	7 36.8	15 60.0	55 25.6	61 29.5	27 34.6	71 38.8	11 25.0	8 29.6	25 37.9	26 41.3	11 27.5	16 21.3	24 28.9
Don't Know	3 4.3	2 2.6	0 0	7 1.4	0 0	2 4.2	0 0	1 5.3	0 0	3 1.4	3 1.4	1 1.3	8 4.4	0 0	0 0	3 4.5	0 0	1 2.5	0 0	1 1.2
Very Little Help	4 5.8	8 10.3	3 8.8	35 7.2	1 3.0	3 6.3	1 1.6	1 5.3	4 16.0	19 8.8	25 12.1	6 7.7	8 4.4	2 4.5	0 0	6 9.1	4 6.3	1 2.5	7 9.3	10 12.0
No Help At All	4 5.8	6 7.7	1 2.9	37 7.7	2 6.1	4 8.3	2 3.3	1 5.3	1 4.0	18 8.4	8 3.9	5 6.4	5 2.7	5 11.4	2 7.4	1 1.5	3 4.8	1 2.5	8 10.7	3 3.6
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

LEARN BY DOING AND UNDERSTANDING?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	1 1.4	3 3.8	0 0	11 2.3	1 3.0	0 0	0 0	0 0	0 0	2 .9	0 0	2 2.6	1 .5	1 2.3	0 0	0 0	0 0	1 2.5	2 2.7	0 0
Very Helpful	38 55.1	36 46.2	20 58.8	268 55.5	13 39.4	36 75.0	32 52.5	7 36.8	11 44.0	115 53.5	113 54.6	41 52.6	85 46.4	27 61.4	16 59.3	37 56.1	35 55.6	26 65.0	43 57.3	43 51.8
Some Help	21 30.4	24 30.8	11 32.4	152 31.5	13 39.4	8 16.7	23 37.7	9 47.4	12 48.0	62 28.8	77 37.2	23 29.5	73 39.9	12 27.3	9 33.3	23 34.8	19 30.2	10 25.0	22 29.3	30 36.1
Don't Know	2 2.9	6 7.7	1 2.9	11 2.3	1 3.0	2 4.2	1 1.6	1 5.3	1 4.0	13 6.0	5 2.4	7 9.0	17 9.3	2 4.5	0 0	1 1.5	3 4.8	1 2.5	2 2.7	4 4.8
Very Little Help	5 7.2	5 6.4	1 2.9	29 6.0	4 12.1	1 2.1	5 8.2	1 5.3	1 4.0	17 7.9	9 4.3	5 6.4	6 3.3	2 4.5	1 3.7	4 6.1	4 6.3	1 2.5	2 2.7	6 7.2
No Help At All	2 2.9	4 5.1	1 2.9	12 2.5	1 3.0	1 2.1	0 0	1 5.3	0 0	6 2.8	3 1.4	0 0	1 .5	0 0	1 3.7	1 1.5	2 3.2	1 2.5	4 5.3	0 0
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

TABLE III-B

DEVELOP GOOD WORK ATTITUDES?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	1 1.4	0 0	1 2.9	6 1.2	1 3.0	0 0	0 0	0 0	0 0	0 0	0 0	2 2.6	1 .5	0 0	0 0	0 0	1 1.6	0 0	2 2.7	0 0
Very Helpful	46 66.7	45 57.7	20 58.8	258 53.4	20 60.6	28 58.3	35 57.4	11 57.9	11 44.0	119 55.3	115 55.6	43 55.1	75 41.0	28 63.6	18 66.7	36 54.5	36 57.1	30 75.0	36 48.0	51 61.4
Some Help	13 18.8	18 23.1	11 32.4	152 31.5	7 21.2	15 31.3	21 34.4	5 26.3	9 36.0	64 29.8	71 34.3	26 33.3	70 38.3	10 22.7	7 25.9	21 31.8	17 27.0	7 17.5	26 34.7	19 22.9
Don't Know	2 2.9	7 9.0	1 2.9	22 4.6	0 0	3 6.3	2 3.3	2 10.5	3 12.0	5 2.3	7 3.4	3 3.8	23 12.6	3 6.8	1 3.7	2 3.0	2 3.2	1 2.5	3 4.0	7 8.4
Very Little Help	5 7.2	6 7.7	0 0	28 5.8	3 9.1	1 2.1	3 4.9	1 5.3	2 8.0	20 9.3	9 4.3	3 3.8	10 5.5	2 4.5	0 0	7 10.6	5 7.9	2 5.0	4 5.3	5 6.0
No Help At All	2 2.9	2 2.6	1 2.9	17 3.5	2 6.1	1 2.1	0 0	0 0	0 0	7 3.3	5 2.4	1 1.3	4 2.2	1 2.3	1 3.7	0 0	2 3.2	0 0	4 5.3	1 1.2
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

EXPLORE CAREER OPPORTUNITIES?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	4 5.8	0 0	0 0	8 1.7	1 3.0	1 2.1	0 0	0 0	0 0	0 0	1 .5	1 1.3	3 1.6	1 2.3	0 0	0 0	1 1.6	1 2.5	2 2.7	0 0
Very Helpful	32 46.4	29 37.2	19 55.9	191 39.5	12 36.4	27 56.3	20 32.8	6 31.6	6 24.0	95 44.2	82 39.6	33 42.3	53 29.0	13 29.5	8 29.6	25 37.9	24 38.1	19 47.5	39 52.0	25 30.1
Some Help	19 27.5	28 35.9	4 11.8	143 29.6	11 33.3	9 18.8	20 32.8	8 42.1	11 44.0	71 33.0	63 30.4	25 32.1	76 41.5	21 47.7	13 48.1	29 43.9	22 34.9	14 35.0	17 22.7	35 42.2
Don't Know	5 7.2	4 5.1	2 5.9	34 7.0	1 3.0	4 8.3	7 11.5	0 0	2 8.0	11 5.1	14 6.8	3 3.8	26 14.2	2 4.5	3 11.1	3 4.5	6 9.5	0 0	2 2.7	5 6.0
Very Little Help	5 7.2	11 14.1	7 20.6	65 13.5	5 15.2	4 8.3	9 14.8	3 15.8	6 24.0	18 8.4	32 15.5	9 11.5	18 9.8	4 9.1	1 3.7	7 10.6	6 9.5	3 7.5	10 13.3	14 16.9
No Help At All	4 5.8	6 7.7	2 5.9	42 8.7	3 9.1	3 6.3	5 8.2	2 10.5	0 0	20 9.3	15 7.2	7 9.0	7 3.8	3 6.8	2 7.4	2 3.0	4 6.3	3 7.5	5 6.7	4 4.8
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

TABLE III-C

LEARN TO GET ALONG WITH PEOPLE?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	1 1.4	0 0	1 2.9	13 2.7	3 9.1	1 2.1	0 0	0 0	0 0	1 .5	1 .5	2 2.6	1 .5	0 0	0 0	1 1.5	0 0	1 2.5	1 1.3	0 0
Very Helpful	42 60.9	44 56.4	19 55.9	236 48.9	18 54.5	28 58.3	32 52.5	7 36.8	9 36.0	101 47.0	104 50.2	46 59.0	73 39.9	21 47.7	10 37.0	28 42.4	30 47.6	21 52.5	28 37.3	42 50.6
Some Help	20 29.0	20 25.6	9 26.5	162 33.5	7 21.2	13 37.1	22 36.1	9 47.4	11 44.0	71 33.0	77 37.2	23 29.5	78 42.6	17 38.6	14 51.9	21 31.8	26 41.3	14 35.0	29 38.7	25 30.1
Don't Know	1 1.4	2 2.6	0 0	19 3.9	1 3.0	2 4.2	1 1.6	2 10.5	2 8.0	12 5.6	11 5.3	2 2.6	13 7.1	2 4.5	1 3.7	5 7.6	4 6.3	2 5.0	5 6.7	4 4.8
Very Little Help	1 1.4	9 11.5	3 8.8	26 5.4	3 9.1	2 4.2	4 6.6	1 5.3	1 4.0	23 10.7	9 4.3	3 3.8	15 8.2	2 4.5	2 7.4	8 12.1	2 3.2	2 5.0	10 13.3	11 13.3
No Help At All	4 5.8	3 3.8	2 5.9	27 5.6	1 3.0	2 4.2	2 3.3	0 0	2 8.0	7 3.3	5 2.4	2 2.6	3 1.6	2 4.5	0 0	3 4.5	1 1.6	0 0	2 2.7	1 1.2
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

UNDERSTAND YOUR OWN POTENTIAL?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	2 2.9	0 0	1 2.9	11 2.3	1 3.0	1 2.1	0 0	0 0	0 0	2 .9	0 0	1 1.3	1 .5	0 0	1 3.7	1 1.5	1 1.6	0 0	2 2.7	0 0
Very Helpful	40 58.0	40 51.3	20 58.8	229 47.4	17 51.5	30 62.5	28 45.9	10 52.6	9 36.0	105 48.8	97 46.9	43 55.1	70 38.3	24 54.5	13 48.1	31 47.0	34 54.0	25 62.5	43 57.3	40 48.2
Some Help	22 31.9	20 25.6	10 29.4	142 29.4	9 27.3	13 27.1	25 41.0	3 15.8	12 48.0	65 30.2	76 36.7	20 25.6	69 37.7	16 36.4	10 37.0	23 34.8	19 30.2	11 27.5	18 24.0	33 39.8
Don't Know	0 0	5 6.4	0 0	30 6.2	1 3.0	3 6.3	3 4.9	1 5.3	0 0	11 5.1	9 4.3	5 6.4	21 11.5	1 2.3	2 7.4	5 7.6	2 3.2	1 2.5	1 1.3	2 2.4
Very Little Help	2 2.9	9 11.5	3 8.8	43 8.9	4 12.1	1 2.1	4 6.6	3 15.8	3 12.0	17 7.9	17 8.2	6 7.7	18 9.8	1 2.3	1 3.7	4 6.1	5 7.9	2 5.0	8 10.7	7 8.4
No Help At All	3 4.3	4 5.1	0 0	28 5.8	1 3.0	0 0	1 1.6	2 10.5	1 4.0	15 7.0	8 3.9	3 3.8	4 2.2	2 4.5	0 0	2 3.0	2 3.2	1 2.5	3 4.0	1 1.2
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

TABLE III-D

DEVELOP DECISION-MAKING SKILLS?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	0 0	0 0	0 0	8 1.7	1 3.0	0 0	2 3.3	0 0	0 0	0 0	0 0	2 2.6	1 .5	0 0	0 0	0 0	0 0	0 0	1 1.3	0 0
Very Helpful	34 49.3	29 37.2	13 38.2	201 41.6	11 33.3	26 54.2	24 39.3	9 47.4	7 28.0	76 35.3	84 40.6	36 46.2	63 34.4	17 38.6	10 37.0	20 30.3	24 38.1	20 50.0	29 38.7	32 38.6
Some Help	24 34.8	30 38.5	10 29.4	154 31.9	10 30.3	11 22.9	21 34.4	5 26.3	13 52.0	78 36.3	77 37.2	23 29.5	70 38.3	17 38.6	9 33.3	26 39.4	25 39.7	15 37.5	21 28.0	30 36.1
Don't Know	5 7.2	3 3.8	4 11.8	34 7.0	3 9.1	5 10.4	6 9.8	2 10.5	0 0	23 10.7	13 6.3	5 6.4	23 12.6	3 6.8	4 14.8	8 12.1	5 7.9	2 5.0	4 5.3	6 7.2
Very Little Help	1 1.4	12 15.4	5 14.7	56 11.6	8 24.2	4 8.3	4 6.6	2 10.5	3 12.0	24 11.2	24 11.6	9 11.5	20 10.9	5 11.4	4 14.8	9 13.6	4 6.3	1 2.5	14 18.7	13 15.7
No Help At All	5 7.2	4 5.1	2 5.9	30 6.2	0 0	2 4.2	4 6.6	1 5.3	2 8.0	14 6.5	9 4.3	3 3.8	6 3.3	2 4.5	0 0	3 4.5	5 7.9	2 5.0	6 8.0	2 2.4
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

BECOME RESPONSIBLE CITIZEN?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	2 2.9	0 0	0 0	11 2.3	1 3.0	0 0	0 0	0 0	0 0	2 .9	1 .5	2 2.6	3 1.6	0 0	0 0	0 0	0 0	0 0	2 2.7	0 0
Very Helpful	30 43.5	23 29.5	10 29.4	121 25.1	8 24.2	21 43.8	19 31.1	6 31.6	8 32.0	57 26.5	72 34.8	26 33.3	48 26.2	12 27.3	7 25.9	20 30.3	18 28.6	15 37.5	20 26.7	24 28.9
Some Help	22 31.9	31 39.7	13 38.2	179 37.1	14 42.4	19 39.6	27 44.3	7 36.8	11 44.0	82 38.1	71 34.3	32 41.0	73 39.9	20 45.5	11 40.7	24 36.4	29 46.0	19 47.5	26 34.7	37 44.6
Don't Know	7 10.1	10 12.8	2 5.9	78 16.1	5 15.2	4 8.3	8 13.1	3 15.8	1 4.0	22 10.2	25 12.1	10 12.8	27 14.8	2 4.5	4 14.8	10 15.2	8 12.7	3 7.5	7 9.3	12 14.5
Very Little Help	4 5.8	11 14.1	6 17.6	49 10.1	4 12.1	2 4.2	3 4.9	1 5.3	4 16.0	31 14.4	29 14.0	8 10.3	24 13.1	7 15.9	5 18.5	8 12.1	6 9.5	2 5.0	12 16.0	7 8.4
No Help At All	4 5.8	3 3.8	3 8.8	45 9.3	1 3.0	2 4.2	4 6.6	2 10.5	1 4.0	21 9.8	9 4.3	0 0	8 4.4	3 6.8	0 0	4 6.1	2 3.2	1 2.5	8 10.7	3 3.6
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

TABLE III-E

UNDERSTAND WORK WORLD?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	0 0	1 1.3	0 0	8 1.7	1 3.0	0 0	0 0	0 0	0 0	2 .9	0 0	1 1.3	3 1.6	1 2.3	0 0	0 0	0 0	2 5.0	2 2.7	0 0
Very Helpful	42 60.9	36 46.2	14 41.2	197 40.8	13 39.4	27 56.3	31 50.8	4 21.1	7 28.0	102 47.4	100 48.3	42 53.8	61 33.3	16 36.4	13 48.1	34 51.5	32 50.8	22 55.0	26 34.7	42 50.6
Some Help	18 26.1	27 34.6	12 35.3	186 38.5	14 42.4	12 25.0	21 34.4	10 52.6	13 52.0	72 33.5	75 36.2	23 29.5	82 44.8	19 43.2	9 33.3	26 39.4	19 30.2	14 35.0	32 42.7	33 39.8
Don't Know	1 1.4	3 3.8	2 5.9	18 3.7	2 6.1	3 6.3	2 3.3	1 5.3	1 4.0	6 2.8	6 2.9	1 1.3	17 9.3	1 2.3	3 11.1	2 3.0	4 6.3	1 2.5	1 1.3	1 1.2
Very Little Help	5 7.2	8 10.3	3 8.8	47 9.7	3 9.1	3 6.3	6 9.8	4 21.1	4 16.0	25 11.6	20 9.7	9 11.5	16 8.7	5 11.4	2 7.4	3 4.5	5 7.9	1 2.5	8 10.7	6 7.2
No Help At All	3 4.3	3 3.8	3 8.8	27 5.6	0 0	3 6.3	1 1.6	0 0	0 0	8 3.7	6 2.9	2 2.6	4 2.2	2 4.5	0 0	1 1.5	3 4.8	0 0	6 8.0	1 1.2
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

BECOME AWARE OF CONSUMER ROLE?

REGION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Not Answered	1 1.4	0 0	0 0	6 1.2	1 3.0	0 0	0 0	0 0	0 0	1 .5	0 0	1 1.3	3 1.6	0 0	0 0	0 0	0 0	0 0	3 4.0	0 0
Very Helpful	27 39.1	29 37.2	12 35.3	144 29.8	11 33.3	22 45.8	18 29.5	4 21.1	6 24.0	69 32.1	55 26.6	26 33.3	52 28.4	9 20.5	9 33.3	20 30.3	20 31.7	18 45.0	19 25.3	28 33.7
Some Help	24 34.8	29 37.2	14 41.2	161 33.3	12 36.4	14 29.2	26 42.6	9 47.4	12 48.0	70 32.6	78 37.7	32 41.0	72 39.3	17 38.6	7 25.9	28 42.4	27 42.9	14 35.0	21 28.0	31 37.3
Don't Know	4 5.8	5 6.4	1 2.9	49 10.1	1 3.0	5 10.4	9 14.8	1 5.3	0 0	18 8.4	23 11.1	2 2.6	26 14.2	6 13.6	6 22.2	5 7.6	5 7.9	2 5.0	5 6.7	3 3.6
Very Little Help	7 10.1	11 14.1	3 8.8	67 13.9	7 21.2	3 6.3	6 9.8	3 15.8	5 20.0	34 15.8	36 17.4	10 12.8	25 13.7	8 18.2	2 7.4	8 12.1	7 11.1	5 12.5	18 24.0	15 18.1
No Help At All	6 8.7	4 5.1	4 11.8	56 11.6	1 3.0	4 8.3	2 3.3	2 10.5	2 8.0	23 10.7	15 7.2	7 9.0	5 2.7	4 9.1	3 11.1	5 7.6	4 6.3	1 2.5	9 12.0	6 7.2
COLUMN TOTAL	69 3.6	78 4.0	34 1.8	483 25.0	33 1.7	48 2.5	61 3.2	19 1.0	25 1.3	215 11.1	207 10.7	78 4.0	183 9.5	44 2.3	27 1.4	66 3.4	63 3.3	40 2.1	75 3.9	83 4.3

FOLLOW-UP INFORMATION AND SYSTEMS FOR SECONDARY AND POST-SECONDARY STUDENTS 1976-77

We felt it would be helpful to include some of the basic facts about how the vocational education completers did in secondary and post-secondary programs for the year 1976-77 and how the data is compiled.

SECONDARY

In 1976-77, 58,928 students completed their studies in vocational education on the secondary level. Of this number, 62.3 percent obtained full-time employment in the field in which they were trained or a related field.

Of the completers, only 16,644 were not available for employment. A large percentage of these (86.4) are continuing their education at a college, university or technical institute. The others are not available for employment due to reasons such as marriage, death, military enlistments, etc.

Of the 38,275 completers available for employment, 6.4 percent were known to be unemployed. Of the total, 10.47 percent were listed as "status unknown," which means they were unable to be contacted.

Secondary Follow-Up System

The follow-up system for high school completers is in three stages: (1) enrollment report, (2) completion report, (3) follow-up report.

Texas Education Agency sends the teachers an enrollment report in the fall of each year. This report lists the students who are expected to complete the program that year. The teachers mail this back to TEA.

Then in March or April, the teachers fill out a completion report, identifying those who will complete the program. This information is sent to TEA and put on computer.

The final step is the follow-up report. The teachers receive the forms in January of the succeeding year and they report on the status of their former completers. They mail the information in to TEA by March. The information is processed and is usually available for use by April 1 of each year.

This procedure is followed statewide.

POST-SECONDARY

The follow-up program for post-secondary students is called Tex-SIS (Texas Student Information System). It will be explained in detail a little further in this section.

According to Tex-SIS, 84% of certificate and two-year program occupational technical graduates are employed in the field for which trained or a closely related field.

Of the remaining graduates, 10% are continuing their education at a college or university.

The employed occupational-technical students who have graduated, state that their institution helped them to obtain a new job or helped them improve in their jobs. Over one-half of the students are coming to college to prepare for a job and about 15% are coming to improve job skills.

Because many students in community junior colleges and Texas State Technical Institute are not intending to be "graduates," Tex-SIS includes follow-up of those students who leave college before graduating.

Post-Secondary Follow-Up--Tex-SIS

On May 15, 1978, Tarrant County Junior College in Fort Worth, began an exciting new operation -- Project FOLLOW-UP. It was developed to fill a big need -- that of a system for follow-up of students who attended Texas post-secondary institutions.

Tarrant County Junior College's job was to develop, test, and validate a management information system for the follow-up of students who entered Texas community junior colleges and technical institutes. During the period from May 1974 through August 1976, questionnaires and computer programs were designed and procedures developed for local campuses to conduct follow-up surveys on various populations of students.

The overwhelming support by Texas colleges and institutes led to the statewide implementation of Tex-SIS (Texas Student Information System) in the fall of 1976. Since that time, approximately 101,000 questionnaires have been processed within the 239 total studies.

Tex-SIS includes seven subsystems and 14 different student follow-up questionnaires, which provide a means for collecting data to assist colleges and technical institutes to learn more about the quality of their instructional programs and college services. The seven subsystems include:

Subsystem I - Student's Educational Intent

Subsystem II - Withdrawal Follow-Up

Subsystem III - Nonreturning Student Follow-Up

Subsystem IV - Graduate Follow-Up

Subsystem V - Employer Follow-Up

Subsystem VI - Adult and Continuing Education Follow-Up

Subsystem VII - State Follow-Up Reporting

As a result of the implementation of Tex-SIS, Texas community colleges and technical institutes now have opportunities to collect reliable and current

data on students' educational goals; students' future enrollment plans; reasons students withdraw from courses; reasons students withdraw from college; students' rating of quality of instruction; instructor interest; content of courses; counseling; instructional media; student activities; library services; transfer problems; employment status; salary information; suggestions for improving courses; etc.

Information can also be obtained from employers of vocational/technical graduates about their rating of the education received by the employee in such areas as mathematical skills, technical knowledge, organizational ability, communication skills, personal appearance, punctuality, etc.

Throughout the state, institutions are finding more and more uses for Tex-SIS data as they become more familiar with the results of the studies and potential data analysis opportunities.

In addition, information is specifically available on the employment status of students in the following areas: (1) graduates and students who do not return from one semester, (2) students' job titles once employed, and (3) availability of jobs by program completers. All of these areas are currently being linked with the supply/demand analysis work of the Texas 1202 Commission -- which matches Tex-SIS student follow-up responses (as one source of supply data) with occupational demand information.

Throughout the state, follow-up information is continuously being collected from certificate and two-year program students. Such information is being used to more effectively develop occupational programs; to better evaluate student and instructional services and to increase cost effective management.

SUPPLY-DEMAND INFORMATION FOR POST-SECONDARY EDUCATION

In May of 1977, the Coordinating Board, Texas College and University System, completed a preliminary report based on a sampling of statewide employment opportunities for graduates of Texas Post-Secondary Educational Programs. A second report, titled "Post-Secondary Educational Supply and Occupational Demand in Texas for the Period of 1977-83," was published in March of 1978 to provide additional employment information to individuals making career decisions.

For more information, contact your counselor or write: Post-Secondary Educational Planning, Coordinating Board, Texas College and University System, P. O. Box 12788, Capitol Station, Austin, Texas, 78711, for a copy of the full report.

In a brochure that capsulizes the full report, there are three categories: (1) short-term employment opportunities that are expected to be competitive to keenly competitive (the supply will be greater than the demand); (2) short-term employment opportunities that are expected to be generally good (there is a rough balance between supply and demand); (3) short term employment opportunities that are expected to be very good to excellent (the demand will be greater than the supply).

Under the third category for less-than-four-year programs, these are the "best bets" for the years 1978-80.

Accounting Technologies (accounting, technicians, bookkeeping)
Auto Body Repair (auto body repairers)
Auto and Diesel Mechanics (auto mechanics, heavy equipment, diesel mechanics)
Construction and Maintenance Trades (carpenters, construction workers, electricians, welders)
Hotel and Restaurant Technologies (managers, clerks)
Inhalation Therapy Technology (inhalation therapists)
Machine Shop (machinists, machine operators)
Nursing (registered nurses, licensed vocational nurses)
Optical Technologies (opticians, lens grinders, polishers)
Printing and Lithography (printing press operators, lithographers)
Radiologic Technology (technologists, technicians)
Specialized and General Secretarial (general secretaries, legal secretaries, medical secretaries)

FOUR-OR-MORE-YEAR PROGRAMS

Accounting (accountants; bank, financial managers; insurance brokers)
Computer Science (computer specialists)
Doctor and Dental Surgery (dentists)
Doctor of Medicine (physicians)
Engineering (electrical, chemical, industrial)
Health Care Administration (health administrators, managers)
Industrial Education (teachers, technicians)
Medical Technology (clinical lab technologists, technicians, medical lab workers)
Nursing (registered nurses, medical assistants)
Occupational Therapy (therapists)
Physical Therapy (therapists)
Secondary Education (Industrial Arts, Mathematics and Science teachers)
Veterinary Medicine (veterinarians)