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ABSTRACT

The administrative structure of technological and vocational education (TVE) in Taiwan has three levels: central, provincial/municipal, and local authorities. Provision is at three levels: senior vocational schools (which include vocational programs provided by some general senior high schools), junior colleges, and institutes/universities of technology. A project is underway to provide technical programs at the junior high school level. Programs in senior vocational schools are divided into daytime and evening divisions and cooperative education, technical, special technical, and supplementary programs. The junior college system is divided into two- and five-year programs. Institutes/universities of technology have undergraduate, master's, and doctoral programs. Undergraduate programs are two- and four-year and are open to individuals in the work force. Key features regarding future development of TVE include the following: establishing related laws to further the development of TVE; adapting the TVE system to create a second educational avenue; keeping up with national economic development by training skilled labor; promoting lifelong education; implementing an occupational certification system and encouraging the participation of disadvantaged groups to achieve equality in education. (The report offers descriptions of the junior high technical program, senior high vocational school, junior college, and institute/university of technology, including goals, programs, subfields, curriculum, faculty, and prospects for students.) (YLB)

A Brief Introduction to the Technological and Vocational Education of the Republic of China

Compiled by the Department of Technological and Vocational Education
Ministry of Education, R.O.C.

September 1997

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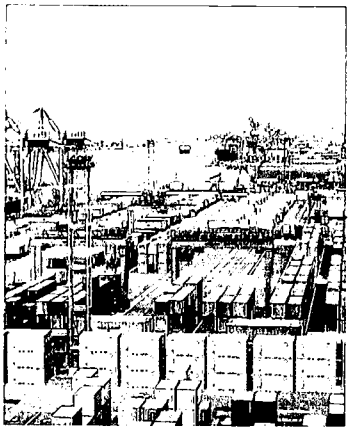
I. Foreword



Technological and vocational education (TVE) has always played an extremely important role in the economic development of the R.O.C. (i.e., Taiwan). In the 1950s, when domestic production was still labor-intensive, the teaching of entry-level compentancy at the junior high school level ensured there was sufficient manpower to meet demands. In the late 1960s, with production gradually becoming more skill-intensive, this system was abandoned as nationwide nine-year compulsory education came into effect. Senior vocational schools were developed, and junior colleges were established with the purpose of cultivating entry-level and mid-level technical/ managerial skills, respectively.

By the early 1970s, the transition to a skill-intensive production system was complete, and industry was moving into the capital-intensive phase. As a result, the labor market faced an increased demand for personnel with well-developed managerial and leadership abilities. It was at this time that the first institute of technology was founded to give senior vocational school and junior college graduates opportunities for further education. More institutes followed, offering master's and doctoral degree programs, and the TVE system was complete.

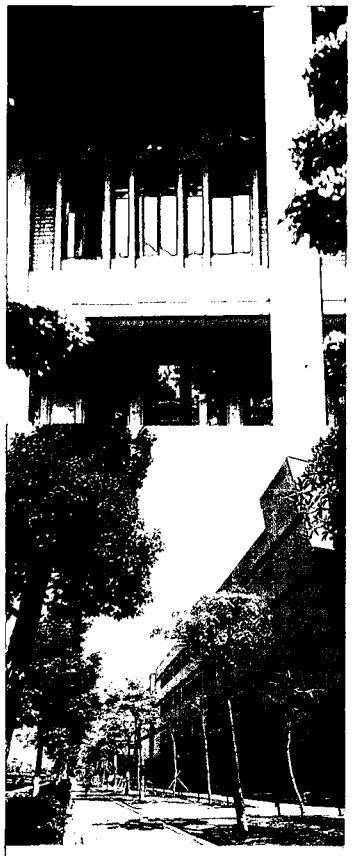
Over the past forty years, Taiwan has changed from a net importer, dealing mainly in agricultural goods, to a leading exporter of industrial products. Average annual per capita income has increased from under US$200 in the 1950s to over US$12,000 in the 1990s, and Taiwan has become the world's thirteenth

largest trading nation, gaining considerable global prestige from this economic miracle. It is generally recognized that the successful implementation of the TVE system has been a major factor in the rapid economic development of the nation.

Now Taiwan has already joined the ranks of developed nations. Looking back up the long, hard road to development, it is not difficult to see how technological and vocational education has kept pace with national economic growth, industry changes, social needs, and technological advancement, by continuously adjusting to meet the real workforce needs.

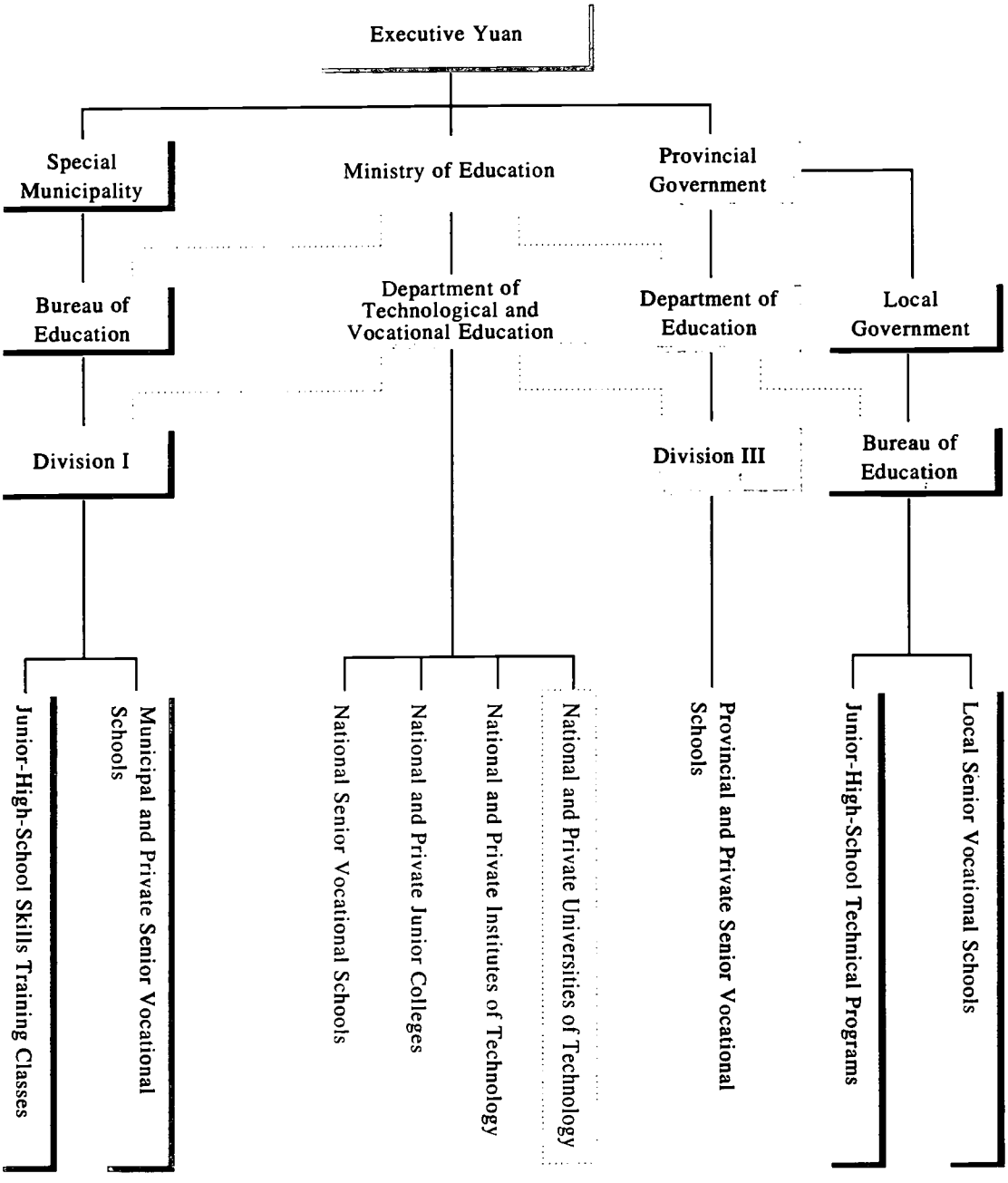
Recently, the domestic and international situation has undergone enormous changes, and TVE is facing the necessity of structural adjustment, with particular regard to government-promoted policies, which include establishing Taiwan as an operations hub for the Asia Pacific region and preparing to join the World Trade Organization (WTO). To achieve these goals, TVE is now going through a necessary and critical period of transition, gradually moving from its current planning-directed condition to a more market-oriented approach. In the future, TVE in Taiwan will continue to adapt to the needs of our developing society as well as predicted changes and worldwide trends in technological and vocational education. It will also adapt to suit the changing career requirements of students, thus providing the personnel needed for Taiwan to enter the 21st century with confidence.

II. Technological and Vocational Education Administration System



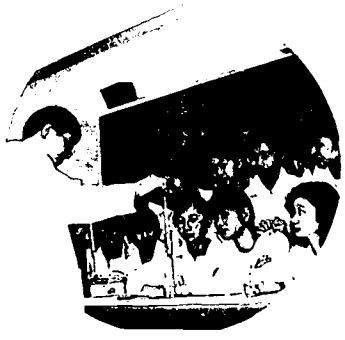
The administrative structure of TVE in Taiwan has three levels: central, provincial/municipal, and local authorities. The central authority, the Department of Technological and Vocational Education under the Ministry of Education, has established four divisions which are in charge of national technological and vocational education and have direct supervisory control of institutes/universities of technology, national and private junior colleges and national senior vocational schools. The Department also shares responsibility with Division Three of the Education Department of the Taiwan Provincial Government and Division One of the Education Bureau of the Taipei and Kaohsiung city governments, together forming an organizational network for TVE in Taiwan.

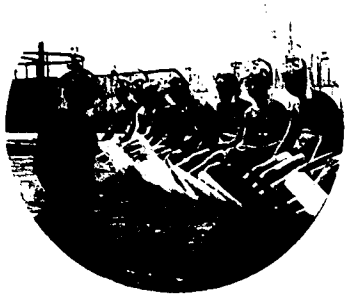
Division Three of the Education Department of the Taiwan Provincial Government is responsible for the supervision of TVE within provincial and private senior vocational schools. Likewise, the relevant divisions within the city governments of Taipei and Kaohsiung supervise TVE in municipal and private senior vocational schools, and the local governments administer local senior vocational schools and technical programs in junior high schools.



EDUCATIONAL ADMINISTRATION SYSTEM

III. Technological and Vocational Education Schooling System



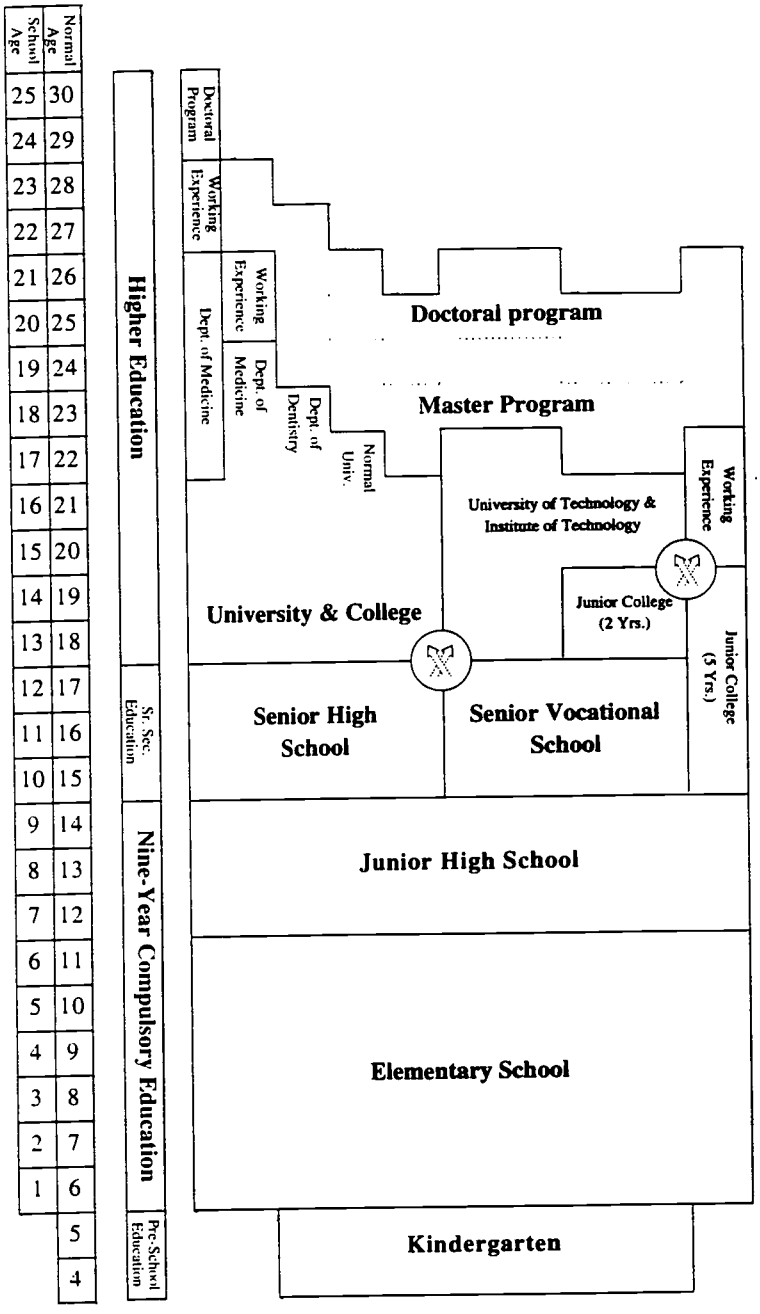


TVE in Taiwan is provided at three levels, senior vocational schools (which include vocational programs provided by some general senior high schools), junior colleges and institutes/universities of technology. In addition, a project is currently under way to provide technical programs at the junior high school level. Its purpose is to enable students to gain an earlier awareness of their interests and aptitudes and to cultivate these interests accordingly. At the upper-secondary school level, an experimental program of comprehensive education, which includes vocational programs, has been conducted.

Programs in senior vocational schools are divided into daytime and evening divisions, cooperative education programs, technical programs, special technical programs and supplementary programs.

The junior college system is divided into two types, two-year and five-year programs. The two-year programs also offer evening programs, for which the period of study is at least one year longer than for day programs.

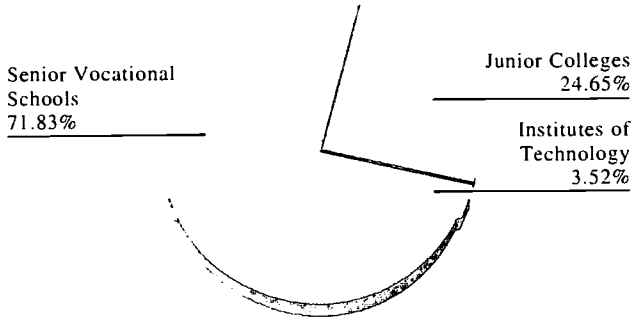
Institutes/universities of technology have undergraduate, master's and doctoral programs. Undergraduate programs are two-year and four-year, and are also open to individuals in the workforce.



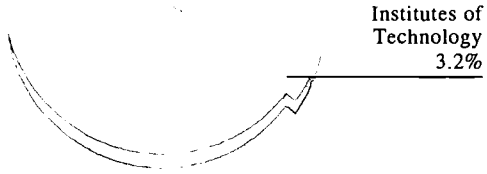
CURRENT SCHOOLING SYSTEM

IV. TVE Schools - An Overview

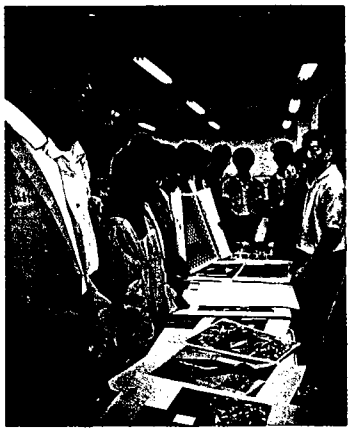
For the 1996-97 academic year, overall statistics for TVE in Taiwan were as follows: There was a total of 10 institutes of technology, with 30,806 students enrolled (including 28,672 undergraduates and 2,134 in graduate programs). Junior colleges numbered 70, with a total of 412,837 students (197,230 in 5-year colleges, 214,622 in two-year colleges and 985 in three-year colleges). There were 204 senior vocational schools with 520,153 students. In other words, TVE students, with a total of 963,796, accounted for 60.9% of the total number of students in both upper-secondary and post-secondary schools.



Percentage of Schools at Different Levels of TVE in 1996-97 Academic Year (N = 284 schools)



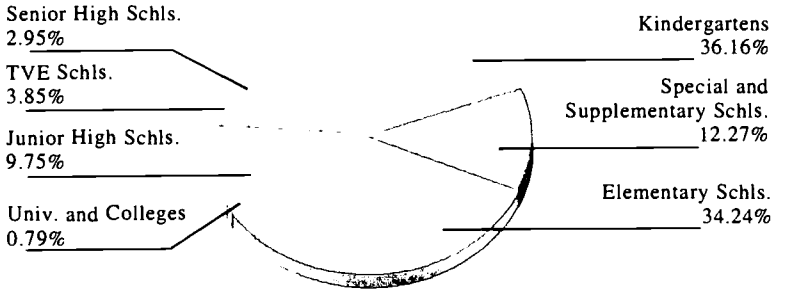
Percentage of Students at All Levels of TVE Schools in 1996-97 Academic Year (N = 963,796 students)



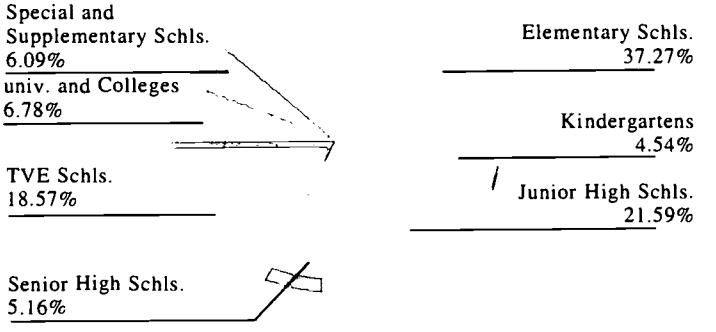
Comparision of Student Numbers between General and TVE Schools in 1996-97 Academic Year

Category		General	TVE	Total	TVE Students	
					Number	Percentage
Elementary				1,934,756		
Junior High School				1,120,716		
Senior Vocational School		268,066	520,153	905,213	637,147	66.1%
Junior college (5 Yrs.)	Lower 3		116,994			
	Upper 2		80,236	295,843	295,843	30.7%
Junior College (2 Yrs.)			214,622			
Junior College (3 Yrs.)*			985			
University & Institute of Technology		309,165	28,672	382,710	30,806	3.2%
Graduaate		42,739	2,134			
Total		619,970	963,796			
Percentage		39.1%	60.9%	1,583,766	963,796	100.0%
Ratio		1:1.56				

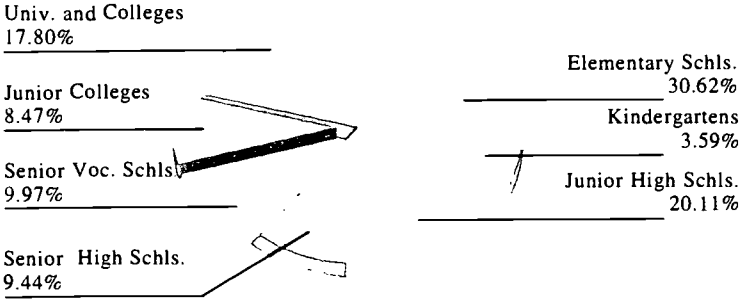
* The three-year junior college programs have been phased out.



Percentage of Schools at Different Levels in 1996-97 Academic Year (N = 7,224 Schools)



Percentage of Students at All Levels in 1996-97 Academic Year (N = 5,191,219 students)



Percentage of Expenditure for Different Levels of TVE Schools in 1996-97 Academic Year (N = 403.74 billion NT dollars)

Number of TVE Schools	
Category	Number
Senior Voc. Schl.	204
Sr. H. Sch. - Voc.	87
Junior College	70
Institute of Tech.	10
Univ. - IT	16

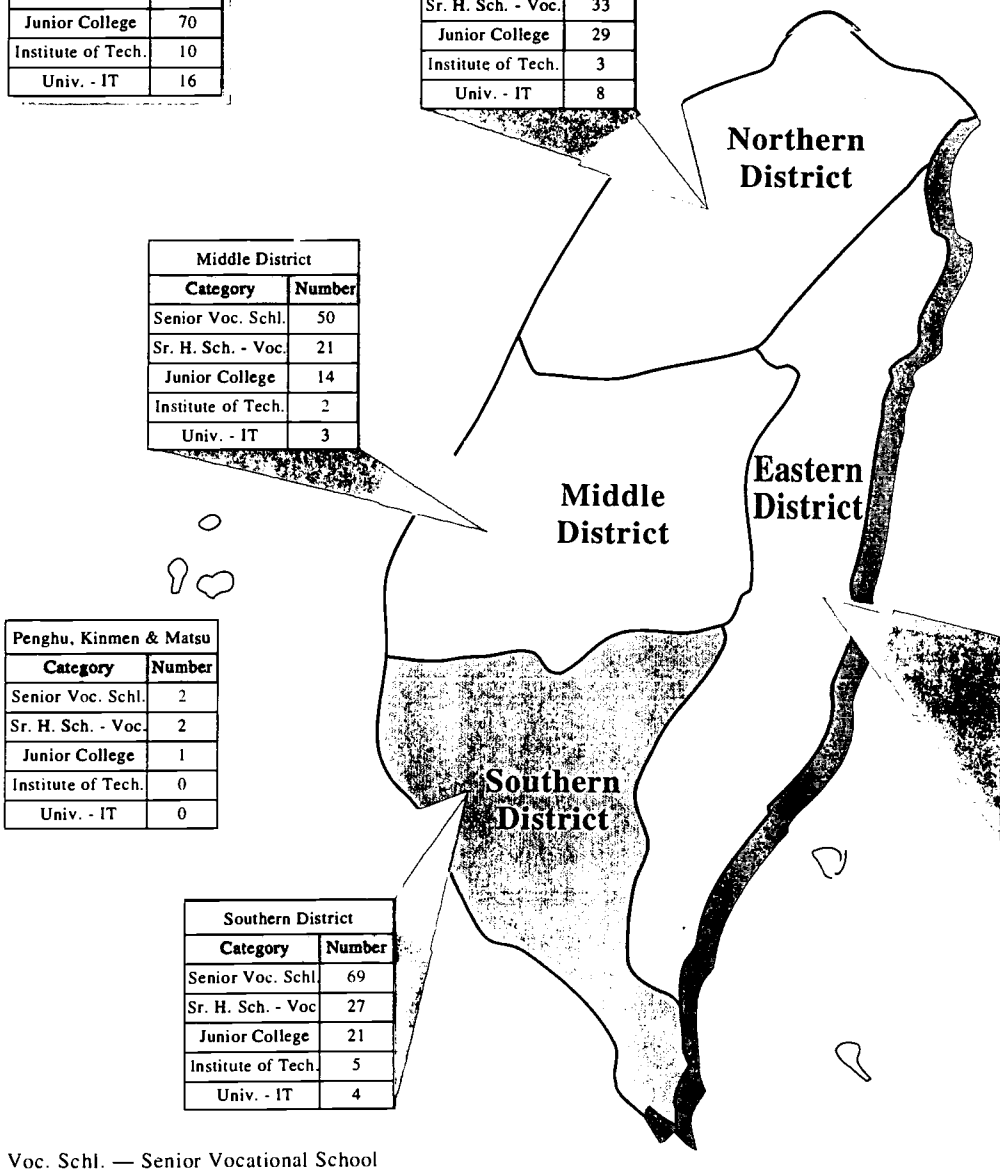
Northern District	
Category	Number
Senior Voc. Schl.	66
Sr. H. Sch. - Voc.	33
Junior College	29
Institute of Tech.	3
Univ. - IT	8

Middle District	
Category	Number
Senior Voc. Schl.	50
Sr. H. Sch. - Voc.	21
Junior College	14
Institute of Tech.	2
Univ. - IT	3

Penghu, Kinmen & Matsu	
Category	Number
Senior Voc. Schl.	2
Sr. H. Sch. - Voc.	2
Junior College	1
Institute of Tech.	0
Univ. - IT	0

Eastern District	
Category	Number
Senior Voc. Schl.	17
Sr. H. Sch. - Voc.	4
Junior College	5
Institute of Tech.	0
Univ. - IT	1

Southern District	
Category	Number
Senior Voc. Schl.	69
Sr. H. Sch. - Voc	27
Junior College	21
Institute of Tech.	5
Univ. - IT	4



Note: Senior Voc. Schl. — Senior Vocational School
Sr. H. Sch. - Voc. — Senior High School offering Vocational Programs
Institute of Tech. — Institute of Technology (IT)
Univ. - IT — University offering Programs of Technology

DISTRIBUTION OF TVE SCHOOLS

V. Junior-high Technical Program

Goals

The junior-high technical program is geared towards junior high school students whose academic aptitudes are not clearly identified, who are unwilling to continue formal education or who are more practically-oriented. It is designed to give them the opportunity before leaving school to acquire an employable skill, go on to senior technical programs, or resume their education at senior vocational schools or five-year junior colleges.

Programs

In accordance with "The Plan for Development and Improvement of Junior-high School Technical Programs — Moving Towards 10-year Compulsory Education," the following programs are offered:

1. Vocational exploration and guidance: held during the second semester of the eighth grade, these programs help students gain an understanding of their own interests and aptitudes as well as give them an introduction to the world of work and to the programs available in senior vocational schools.
2. Technical courses: aimed at nineth graders intending to enter employment, these courses are held six to fourteen hours a week for one year, and students are guided towards further study in the senior-high technical programs at senior vocational schools.
3. Special technical courses: aimed at eighth and nineth graders who have minor learning difficulties, these technical courses improve students' employment prospects and guide them towards further study in special technical programs at senior vocational schools.

The technical programs and special technical programs, including courses currently being planned and courses already in place, are as follows:

1. Cooperation programs: these programs are jointly offered by junior high schools, five-year colleges and vocational training centers, or through cooperation between different junior high schools
2. School-based programs: these programs are run by junior high schools themselves.
3. Delegated programs: senior vocational schools, five-year junior colleges and vocational training centers are commissioned to administer these programs. In addition, technical education centers run by junior high and senior vocational schools offer a wide variety of technical courses to students residing in specific districts.

Curriculum

The nature of the curricula for technical programs is dependent on factors such as course contents, teaching methods and class times. However, each curriculum has the following characteristics: (1) Schools design the programs themselves. (2) Practical training is emphasized. (3) Students may receive technical training outside school in the latter half of the ninth grade. (4) Students are not required to study (or are allowed to take fewer hours of) English, mathematics, physics and chemistry.

Faculty

Teaching staff for junior-high technical programs includes the following:

1. teachers currently employed in the school system,
2. teachers currently employed by vocational training centers, and
3. masters and specialists from industries.

Prospects for Graduates

Graduates either directly enter the job market, take entrance examinations for senior high school, senior vocational school or five-year junior college, or join senior-high technical programs at senior vocational schools.

VI. Senior Vocational School Education

Goals

To provide students with entry-level knowledge and to develop a workforce which possesses both good work ethics and a sound foundation of basic technical skills.

Programs

Most senior vocational programs are provided by senior vocational schools, although some senior high schools also offer vocational programs. To suit the varying requirements of students, six different kinds of programs are offered at this level.

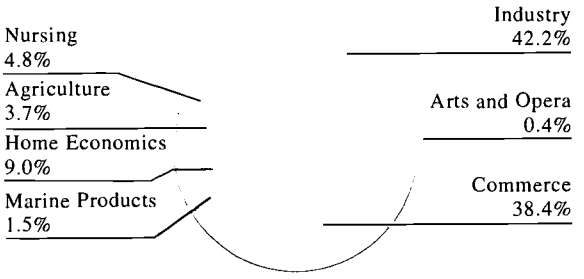
1. Daytime programs: these are for junior high school graduates and last for three years. On completion of one of these programs, qualified students receive a diploma.
2. Evening programs: also for junior high school graduates and lasting for four years. A diploma is given to qualified students on completion of one of these programs.
3. Cooperative education programs: these are administerd by schools in cooperation with companies. To gain admission, junior high school graduates need to pass both an entrance examination and an interview given by a company. Programs usually last three years, with the school responsible for providing theoretical courses while the company provides practical experience.

4. Technical programs: these programs are designed to provide junior high school graduates who do not intend to continue their formal education with an opportunity to learn marketable skills. Students register and attend one-year, two-year, or three-year programs, respectively. Certificates are issued to qualified students at the end of each program, but students receive a certicate verifying completion of the course at the end of a three-year program. Those who complete a three-year program and pass a qualification exam receive a certificate equivalent to a senior vocational school diploma.
5. Special technical programs: begun during the 1994-95 academic year, these programs offer regular three-year courses and one-year junior-high technical programs. Junior high school graduates with minor learning difficulties are given an opportunity to acquire skills. Candidates are selected for admission.
6. Supplementary education programs : These programs are designed to meet the needs of junior high school graduates who are currently employed or plan to begin a career, so there is no age restriction for admission. Most classes are held in the evening, and students who complete a three-year program and pass an examination are issued a certificate equivalent to a senior vocational school diploma.

Furthermore, in order to help students develop fully and to satisfy the demand for qualified technical personnel, beginning with the 1996-97 academic year, an experimental comprehensive high school system was established at the upper-secondary level, with academic and vocational programs being offered at the same school. In the first year, there is a core curriculum, followed by a year of exploration. Finally, in the 12th grade, students specialize in various disciplines. In this way, students receive guidance in choosing courses that suit their interests and aptitudes.

Subfields

In Taiwan, senior vocational schools offer a wide range of subfields, including agriculture, industry, commerce, home economics, marine production, nursing, art and operatic arts. As of the 1996-97 academic year, there were 204 senior vocational schools, 48.0% of which were public. There were 87 senior high schools offering vocational programs, with 21.8% of these being public. Full-time students (those on daytime programs and cooperative education programs) numbered 520,153, with 36.0% in public schools. The largest number were studying industry, with 42.2%, followed by business, with 38.4%.



Percentage of Students by Categoory Enrdled in Senior Vocational Schools in 1996-97 Academic Year (N = 520,153 students)

Curriculum

Every senior vocational school provides approximately 35 contact hours per week, and each semester lasts 18 weeks. The curriculum is structured as follows :

1. General subjects: these include Chinese, English, mathematics, general social sciences and others, taking up about 30% of total class time.
2. Technical subjects: these include technical theory and practical experience and account for around 60% of the class hours.
3. Electives: these occupy between 5 and 10% of class time.
4. Physical education: this takes up some 5% of the total class hours.

Faculty

Senior vocational school teachers graduate from local and foreign universities, or receive training at one of three teachers colleges in Taiwan. In addition, some specialist teachers and technical teachers come from industries.

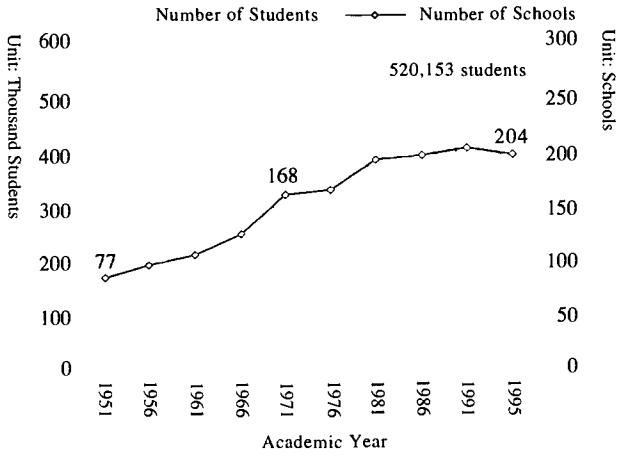
In accordance with the Teacher Preparation Law, more higher-education institutes participate in training school teachers. Before receiving certification and taking up employment as teachers, qualified individuals must complete the required number of course credits, and pass an initial qualification exam, a one-year internship, and a final qualification exam.

Prospects for graduates

At the end of the 1995-96 academic year, 157,930 students graduated from senior vocational schools, 37.8% from public schools. Senior vocational school graduates are able to choose between starting a business, taking up employment or going on to further studies. The channels for further education are two-year junior colleges and four-year programs at institutes/ universities of technology.

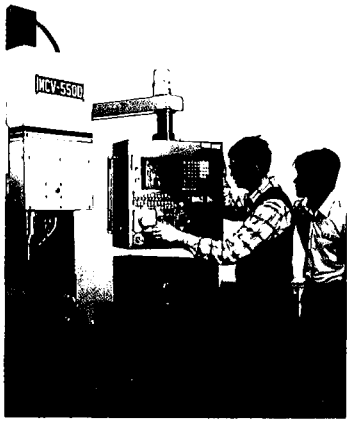
Every year approximately six out of every ten senior vocational school graduates enter the job market, and each graduate has an estimated choice of four to five job opportunities. About thirty percent of graduates continue their education. Educational standards are constantly improving in Taiwan, and economic

development continues. Therefore, to cope with the resultant demand for manpower, the TVE system will be improved and expanded, and more routes to higher education will be opened to graduates of senior vocational schools.



Growth in Number of Students and Schools for Senior Vocational Schools

VII. Junior College



Goals

To teach applied sciences and technology, and to turn out a workforce with mid-level technical or managerial skills.

Programs

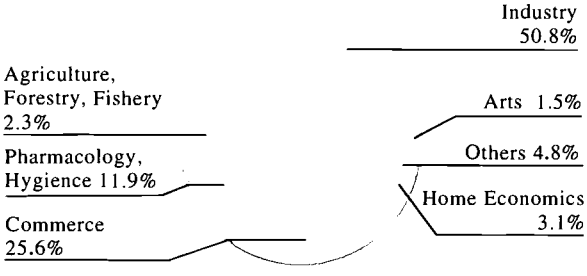
Programs at junior colleges are divided into five-year and two-year systems, including daytime and evening divisions and special supplementary programs.

1. Five-year programs: these programs have only daytime courses and are designed for junior high school graduates. Courses last for five years, except in the case of certain subjects, which may be extended to six years.
2. Two-year programs: these programs offer daytime, evening and supplementary courses, and are designed for students who have graduated from senior vocational schools or who have reached an equivalent academic level. The study period is normally two years. The evening division is divided into regular classes and classes for those in employment. The former normally lasts two years and the latter is available to individuals who possess at least one year of working experience. There is a limit of three years for completion of study.
3. Since the 1996-97 academic year, some prestigious junior colleges have been allowed to change to institutes of technology. These institutes are required to continue their junior college programs to prepare mid-level practical workers.

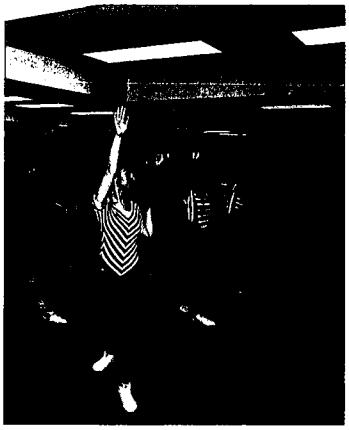
Subfields

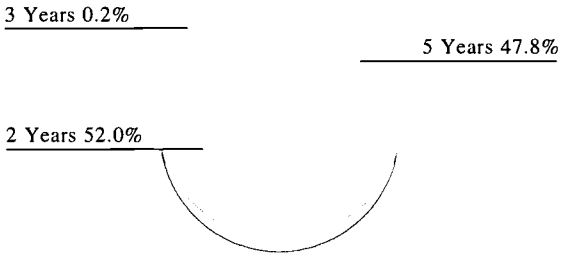
Subfields offered by junior colleges in Taiwan include the following categories: industry, agriculture, commerce, home economics, marine studies, pharmacology, nursing, medical technology, physical education, arts, music, opera, languages, food service and others. As of the 1996-97 academic year, there were 70 junior colleges, of which 20.0% were public and 80.0% private.

In the 1996-97 academic year the total number of students enrolled in daytime and evening programs at junior colleges was 412,837, with 69.1% in daytime programs. Of these students, 84.6% were enrolled in private schools. The category of industry accounted for the greatest number of students, with 50.8%, followed by commerce with 25.6%



Percentage of Students by Category Enrolled in Junior Colleges in 1996-97 Academic Year (N = 412,837 students)





Percentage of Students Enrolled in Junior Colleges in 1996 Academic Year (N = 412,837 students)

Curriculum

The junior college curriculum follows the academic year and credit system and is divided into general subjects (25%), vocational foundation subjects (10%), and vocational core subjects (25%). The remaining 40% of the curriculum is designed according to the individual requirements of schools. In order for students to graduate, 220 credits are the requirement in the five-year system, and 80 credits are required in the two-year system.

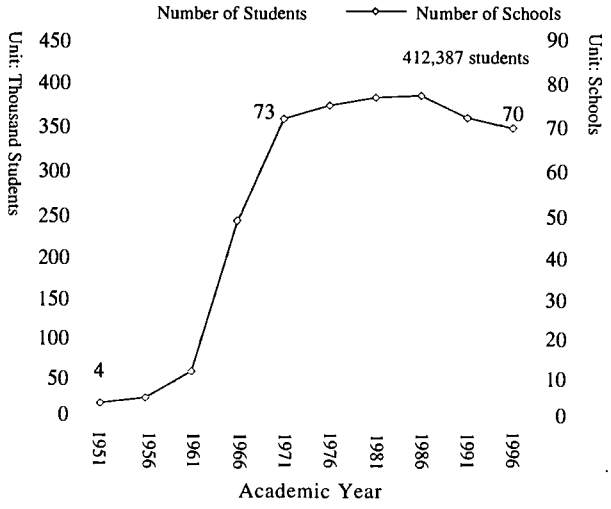
Faculty

The teaching staffs at junior colleges are divided into four levels: lecturer, assistant professor, associate professor and professor. In the 1996-97 academic year, fulltime teachers numbered 12,717. Most of them were

graduates of domestic or foreign graduate schools, and the majority (69.4%) held master's degrees. 19.1% held the position of associate professor or higher, and many teachers had practical experience in the field.

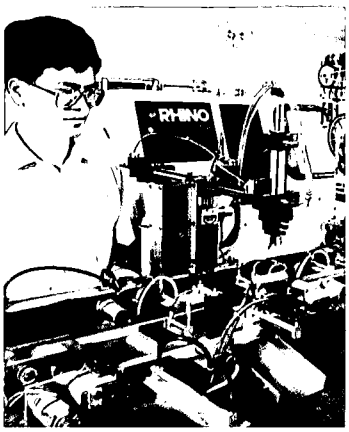
Prospects for Graduates

There were 105,113 students who graduated from junior colleges in the 1995-96 academic year, more than four-fifths (81.4%) of them from private schools. Most graduates entered the job market, becoming mid-level technicians, and some continued their studies at either two-year institutes/universities of technology or four-year universities.



Growth in Number of Students and Schools for Junior Colleges

VIII. Institutes/Universities of Technology



Goals

To develop a higher level workforce for the fields of technology, engineering, and management.

Programs

Institutes/universsities of technology provide the highest levels of TVE in Taiwan. Undergraduate programs, master's programs and doctorates are offered.

1.Undergraduate programs

(1) Four-year programs: courses are divided into daytime and supplementary programs. Daytime programs are aimed at senior vocational school graduates or students who have reached an equivalent level and last for four years. Supplementary programs are designed for people who have been employed for more than one year, and the period of study is five years. A bachelor's degree is conferred on completion of the program.

(2) Two-year programs: courses are divided into daytime and supplementary programs. Daytime programs are aimed at graduates of junior colleges and last for two years. Supplementary programs are designed for people who have been employed for more than one year, and the period of study is five years. A bachelor's degree is conferred on completion of the course.

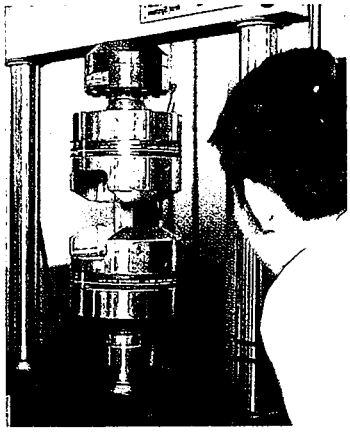
2.Master's programs

These programs are aimed at individuals who hold bachelor's degrees from universities or institutes of technology or who have reached an equivalent academic level. Courses last for one to four years. A master's degree is conferred on students who have completed courses, submitted a master's thesis and passed an examination.

3. Doctoral programs

Individuals who have completed a master's program at a university or institute/university of technology may be admitted to a doctoral program, which lasts from two to seven years. A doctorate is conferred on a student who has completed courses, undergone a screening process for doctoral candidates, submitted a dissertation and passed an examination.

Additionally, in order to increase junior college graduates' opportunities for further study, some universities or colleges, such as National Taiwan Ocean University, also offer two-year or four-year programs of technology.

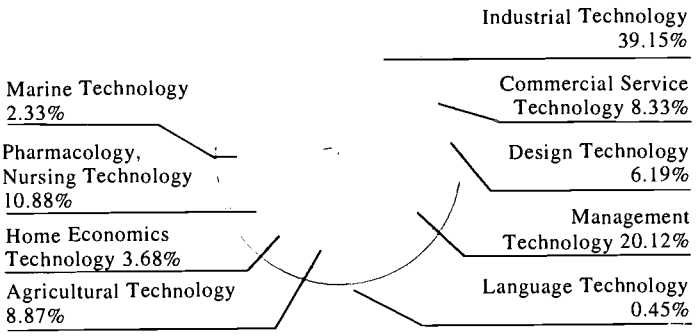


Subfields

As of the 1996-97 academic year, there are 10 institutes of technology in Taiwan, 6 public and 4 private. Subfields are classified into eight categories: engineering; design; agriculture; management; marine technology; home economics; medical, nursing and healthcare technology; and commercial services. In 1996-97, the total number of students was 30,806, with 28,672 (93.1%) in undergraduate programs and 2,134 (6.9%) in graduate programs. Students in the engineering category made up 39.15% of the total, and the management category made up 20.12% of the total.

Curriculum

Each institute/university designs its own programs according to its particular characteristics. Following the academic year and credit system, each semester lasts a minimum of 18 weeks. One course credit per hour per week is given for completed courses. In practical courses, one course credit per two to three hours per week is given for completed courses. To



Percentage of Students by Category Enrolled in Institutes of Technology in 1996-97 Academic Year (N = 30,806 students)

graduate, students must complete a minimum of 136 credits in four-year programs and a minimum of 72 credits in two-year programs. In master's programs, at least 24 credits and submission of a thesis are the graduation requirement, and the requirement for a doctorate is 18 credits plus submission of a disseration.

Faculty

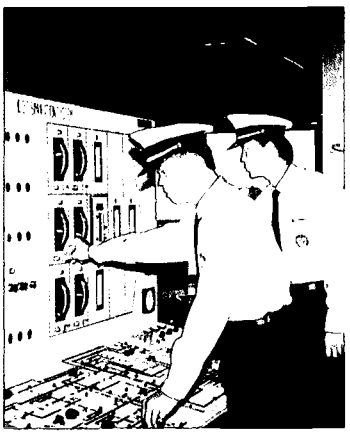
Teachers at institutes/universities of technology consist of lecturers, assistant professors, associate professors and professors. Teachers are graduates from local or overseas graduate schools, with the majority holding master's degrees or doctorates.

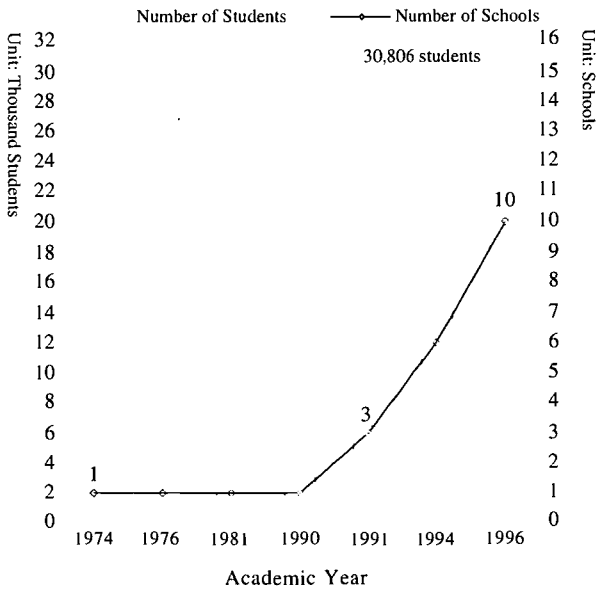
Prospects for Graduates

In the 1996-97 academic year, the number of students graduating from institutes of technology was 5,322, including 45 who received doctorates, 685 who received master's degrees and 4,865 who received bachelor's degrees. Individuals who graduate from institutes of technology have the option of either taking

up further study or entering the job market based on their high level of technical expertise.

1. The career option: setting up new enterprises or taking up high-level positions as technical specialists in public and private enterprises, or government organizations. It is also possible, by passing the civil service or other relevant examinations, for graduates to begin careers in the economic, cultural and educational sectors of the nation.
2. The study option: pursuing further study at a local or overseas university, developing an aptitude for independent research, and eventually becoming leaders in business and industrial fields.





Growth in Number of Students and Schools for Institutes of Technology

IX. Special Features of TVE

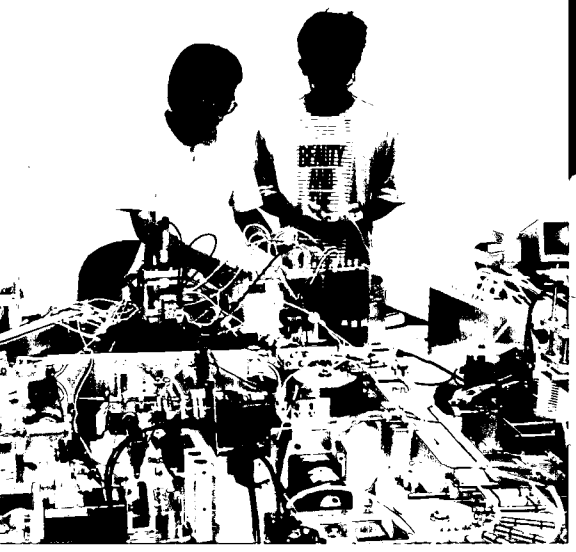
1. Emphasizing pragmatic learning while creating a unique schooling system.↑

2. Focusing on the study of applied technology while laying the foundation for career development.↓

3. Applying project work; integrating learning outcomes.↑

4. Administering skills tests; implementing certification system.↓

. Updating the TVE curriculum to meet the needs of society.↓



6. Recruiting teachers from industries, strengthening teachers' practical skills.↑

Using cooperative education by combining theory with practical experience.↓

8. Offering continuing education, thus contributing to community development.↑

X. Looking to the Future

In order to remain in tune with national development, social changes and changing values, and in accordance with technological advancement and the increasingly international nature of vocational-technical education, the key issues regarding future development of TVE in Taiwan are as follows:

1. Establishing related laws to further the development of TVE

Reflecting the demands of technical advancement and social change, and in accordance with opinions regarding educational reform expressed at the Seventh National Education Symposium and in various other circles, a revision of the Technological and Vocational Education Law has been instigated. The existing laws related to technological and vocational schools will be replaced by legislation on the establishment of a consistent TVE system, covering universities of technology, institutes of technology, junior colleges and senior vocational schools. The new regulations will result in a more flexible TVE system, thus opening more educational channels, offering greater variety within the curriculum, and developing TVE's unique features. The realization of lifelong learning opportunities and the implementation of an occupational certification system can also be listed among the benefits of these changes in legislation.

2. Adapting the TVE schooling system to create the second "educational avenue"

Recently, calls for educational reform have come from various academic groups. As a result, adjustments in the ratio of senior high, senior vocational school and junior college students are being considered, and a decision has been made to convert some senior high schools and senior vocational schools to

experimental comprehensive schools, accompanied by a simultaneous overhaul of the senior vocational school system. Moreover, in order to improve access to further TEV, the second "educational avenue" (senior vocatiomal school–junior college–institute/university of technology), parallel with the avenue of senior high school to university, has been created. Thus, construction of more national institutes of technology and junior colleges is planned, and private endowments are being encouraged. Junior colleges are to be upgraded to institutes of technology while retaining their junior college programs, and maximum use will be made of university resources. The two-year system at institutes of technology is to be encouraged in order to expand study opportunities for people currently employed, and changes will be made to regulations for the establishment of university branches, so that institutes of technology will become universities of technology offering comprehensive university education with an emphasis on practicality. Consequently, an all-through TVE schooling system (senior vocational school–junior college–institute/university of technology) will be fully established.

3. **Keeping up with national economic development by training skilled manpower**

In line with stated government policies of national economic development, the establishment of Taiwan as an Asia-Pacific regional operations hub, and preparation for joining the World Trade Organization, TVE will need to keep up with the rapid advancement in and automation of production and the demands of increasing internationalization. Improvements will be made in the training of personnel skilled in foreign languages, finance, information, communications, food service, etc. Furthermore, to cope with changes in the structure of domestic production, there will be increased training of service personnel with high-level technical competencies.

4. Promoting a lifelong education system while assisting students with career development

To meet the requirements of the combined with local resources in our learning-oriented society and to expand the availability of supplementary and further education, teaching staffs and facilities at TVE schools will be utilized as community education centers. More channels to higher technical education will be opened and certain restrictions, for example on study modes and length of programs, will be lifted. There will be further inter-school cooperation and more daytime and evening divisions. There will also be an expansion in the number of courses, beginning in both the fall and spring semesters, thus creating a more flexible system of entry and graduation for TVE students and giving them the opportunity to take courses which suit their needs.

5. Strengthening the practical side of TVE, and implementing an occupational certification system

With the introduction of a more flexible cooperative education system, the implementation of pre-service occupational certification tests, and more variety in course times and teaching methods, students will be able to enjoy increased opportunities for practical training and gaining hands-on experience, thus ultimately improving their employment prospects. At the same time, when hiring teachers for specialist practical courses, schools will be urged to give priority to teachers who themselves have considerable practical experience and appropriate certification. Teachers will also be encouraged to increase contacts with industries by participation in workshops and field studies. Specialist teachers will be able to achieve a higher rank

by means of original work. In addition, practical instruction quality will be improved by ensuring that only holders of the required certification will be permitted to teach vocational courses, by adopting a workplace-oriented approach to course contents, by emphasizing student involvement in capstone project work, and by working with other related institutes to fully implement an occupational certification system through legitimacy. In this system, learned competencies and occupational certificates are highly valued.

6. Encouraging the participation of disadvantaged groups to achieve equality in education

In accordance with the national policy for the promotion of social welfare, the availability of TVE to students from minority and disadvantaged groups will be expanded. The junior high school technical program will be extended as part of the drive to realize the goal of a ten-year compulsory education system. More opportunities for TVE will be offered to the aboriginal peoples of Taiwan, and current senior vocational school teachers and facilities will be used to provide students who have minor learning difficulties with the opportunity to learn marketable skills and improve their livelihood. In order to achieve the goal of educational equity and to eliminate resource discrepancies between public and private schools, the overall quality of education will be improved, more scholarships and loans will be made available, certain restrictions on application will be lifted and the financial burden on children from economically disadvantaged families will be eased.

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