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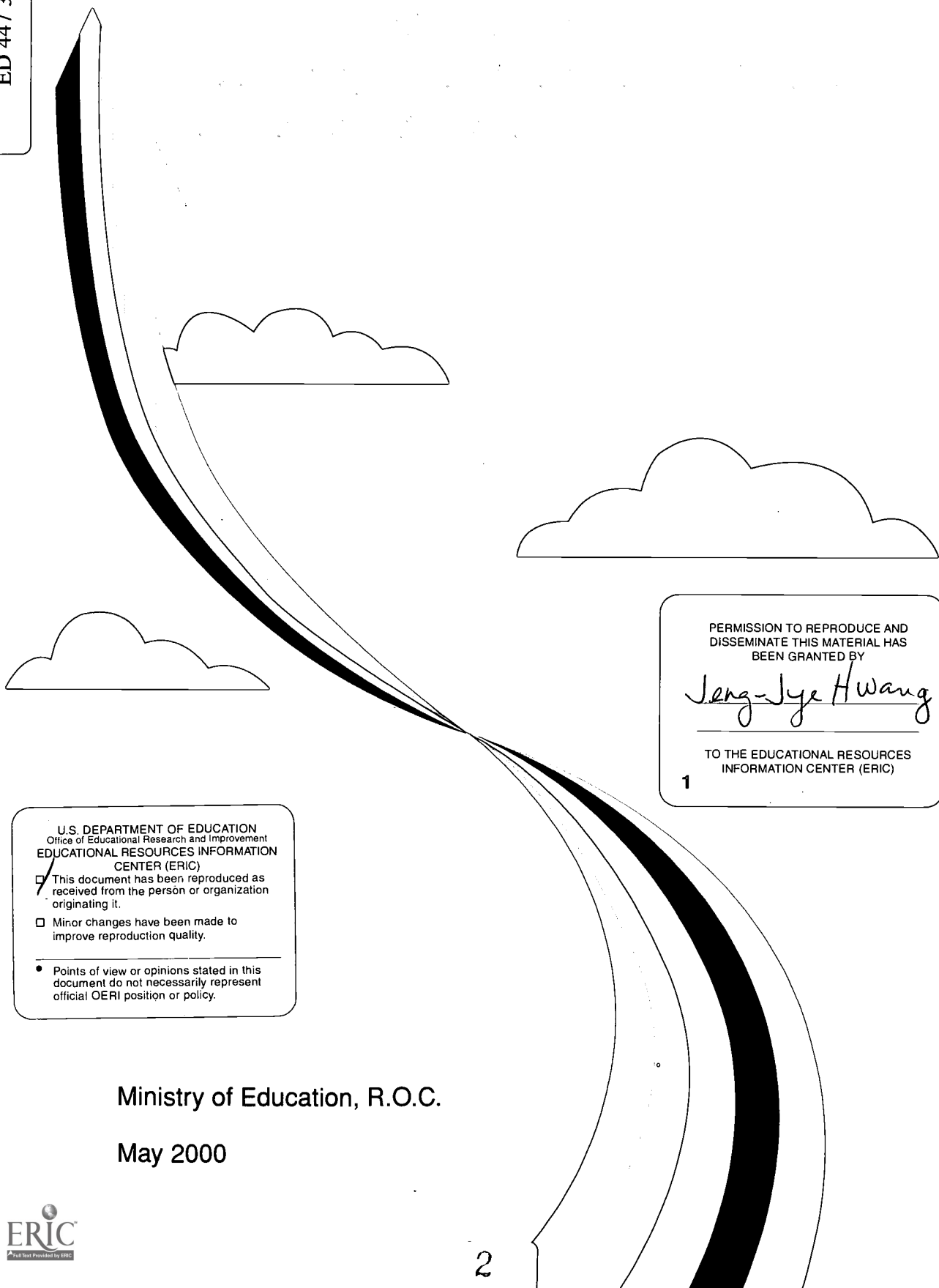
ABSTRACT

Successful implementation of the technological and vocational education (TVE) system has been a major factor in Taiwan's rapid economic development. In the 1999-2000 academic year, 1,034,289 TVE students account for 57.7 percent of students in upper-secondary and post-secondary schools. The junior high school technical arts program gives students with unclear academic aptitudes the opportunity to acquire an employable skill or continue study. It offers vocational exploration and guidance, technical arts, and special practical arts. The vocational high school provides entry-level competencies and basic technical skills. Graduates may start a business, become employed, or go on to further education. Junior colleges of technology teach applied sciences and technology and turn out personnel with mid-level technical or managerial skills. Most graduates enter the job market. Colleges/universities develop a higher level of personnel in the fields of technology, engineering, and management. Key issues regarding future development of TVE are adapting the TVE schooling system to improve graduates' access to further studies; keeping up with national economic development by cultivating technical or managerial manpower; gearing a lifelong education system while assisting students with career development; reconstructing TVE curricula and emphasizing industry needs; and offering equal opportunities for disadvantaged groups. (YLB)



Ministry of Education, R.O.C.

May 2000

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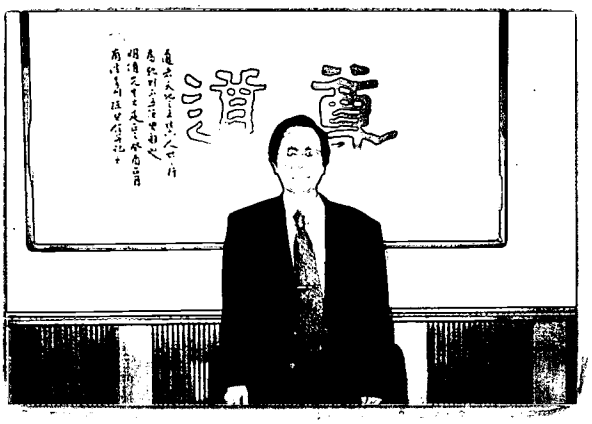
A Message from Minister Tzeng

Though without sufficient natural resources, Taiwan has created a world-famous economic miracle in the past forty years. One of the main reasons is the abundant high quality human resources continuously cultivated by the technological and vocational education (TVE) institutions. Their dedication to the country's economic development is vitally important.

At present, to cope with the radical changes and meet the countrymen's expectation for the reform of TVE, we have to gradually take measures to revise the system so that specialized talents in high-technology areas can be efficiently cultivated to enhance the country's competitive strength. At the same time, we also must establish a life-long learning system for TVE in order to satisfy the countrymen's needs for continued learning and advanced education. Following a complete reform of the current TVE system, the important work that lies ahead will be to elevate the quality of education. The main task is to plan and implement the "Reform Program for the New Century Articulated TVE Curriculum." Secondly, the system of evaluating TVE colleges/universities should be improved and the evaluation of vocational high schools should continue. Thirdly, a multiple-track admissions system and a "separation of testing and recruiting" system should be established to promote each institution's autonomy for admitting students and normalization of teaching. Fourthly, a plan to elevate the educational quality of TVE institutions needs to be implemented. Fifthly, we want to encourage partnerships between TVE institutions and domestic as well as foreign institutions, organizations, and enterprises to expand educational resources. Additionally, for disadvantaged students the current programs of technological arts and practical skills in vocational high schools, and skills training for the aboriginal population and people in remote areas will continue to be provided in order to promote harmonious societal development, putting into effect the ideal of equal educational opportunity.

Ovid J. L. Tzeng, Ph.D.
Minister of Education
May 2000

A Message from Director General Hwang



For decades, technological and vocational education (TVE) has made significant contribution to Taiwan's social stability and economic prosperity by nurturing a great deal of manpower in technology and management. However, the design and instruction of TVE curricula placed considerable emphasis on immediate employment upon graduation and failed to provide opportunities for pursuing advanced education which is -a disadvantage that limited students' career development and had TVE become terminal education. Recently, as industrial and economic development has been under transformation in response to the increasing demand in highly technical and managerial personnel, more efforts have also been devoted to adjust TVE in a rapid and broad fashion by making its outreach upward and downward on the formal educational system. This adjustment has not only created a complete and comprehensive TVE system, but also provided more opportunities for TVE students to pursue advanced education.

In the foreseeable future, the Ministry of Education (MOE), on the basis of current achievement, will expediate the pace of TVE reforms in response to the following: demands in national economic planning and development, international trends in education, the learning need of students, public expectation toward educational reforms, manpower demand in the 21st century, and the elimination of bottlenecks facing TVE today. The visions of TVE reforms include:

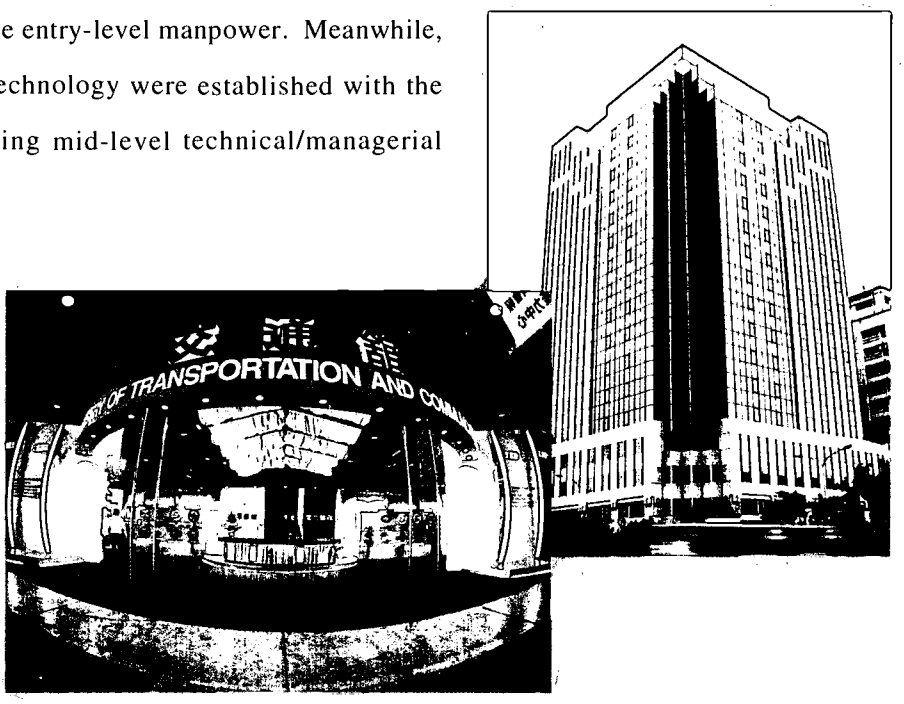
* Adjust and develop a TVE system based on social needs.
* Improve admission policies and create more learning opportunities.
* Design articulated TVE curricula for the 21st century.
* Nurture professional personnel in response to important national policies in economic planning and development.
* Improve TVE quality.
* Strengthen technological and vocational further education and create a lifelong learning environment.
* Emphasize individual need and promote students' career development.
* Enhance the partnership of TVE.

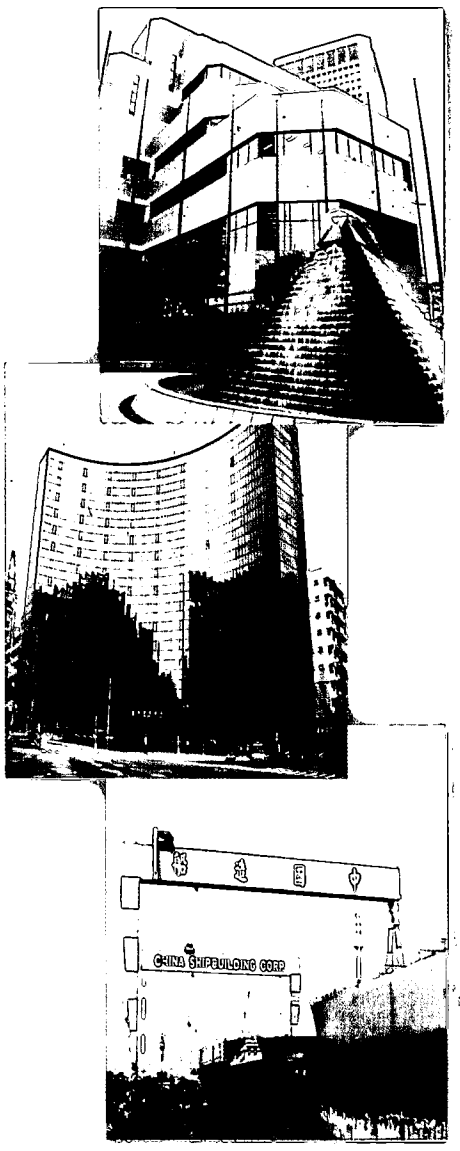
Last but not least, we hope that more public attention can be paid to the development of TVE. Let us work together and make it more dynamic, flexible, refined and excellent.

Jenq-Jye Hwang, Ph.D.
Director General
Department of TVE, Ministry of Education
May 2000

Foreword

Technological and vocational education (TVE) has always played an extremely important role in the economic development of the R.O.C. on Taiwan (henceforth, called Taiwan). In the 1950s, when domestic production was still labor-intensive, the entry-level skilled workers nurtured at the junior high school level and ensured there was sufficient manpower to meet demands of national economic development. In the late 1960s, with production gradually becoming more skill-intensive and nationwide nine-year compulsory education coming into effect, Vocational high schools were developed and was instead of the role of junior high schools to nurture the entry-level manpower. Meanwhile, junior colleges of technology were established with the purpose of cultivating mid-level technical/managerial personnel.





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 vocational high school and junior college of technology graduates opportunities for further education. More institutes followed, offering master's and doctoral degree programs, and the TVE system was complete.

Over the past 40 years, Taiwan has changed from a net importer, dealing mainly in agricultural goods, to a leading exporter of industrial products. Average annual per capital income has increased from under US$200 in the 1950s to over US$13,000 in the 1990s, and Taiwan has become the world's 13th 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.

Taiwan is going to join the ranks of developed nations. Looking back on the history of national development, it is not difficult to see how TVE has kept pace with national economic growth, industry changes, social needs, and technological advancement, by continuously adjusting to meet the real manpower needs.

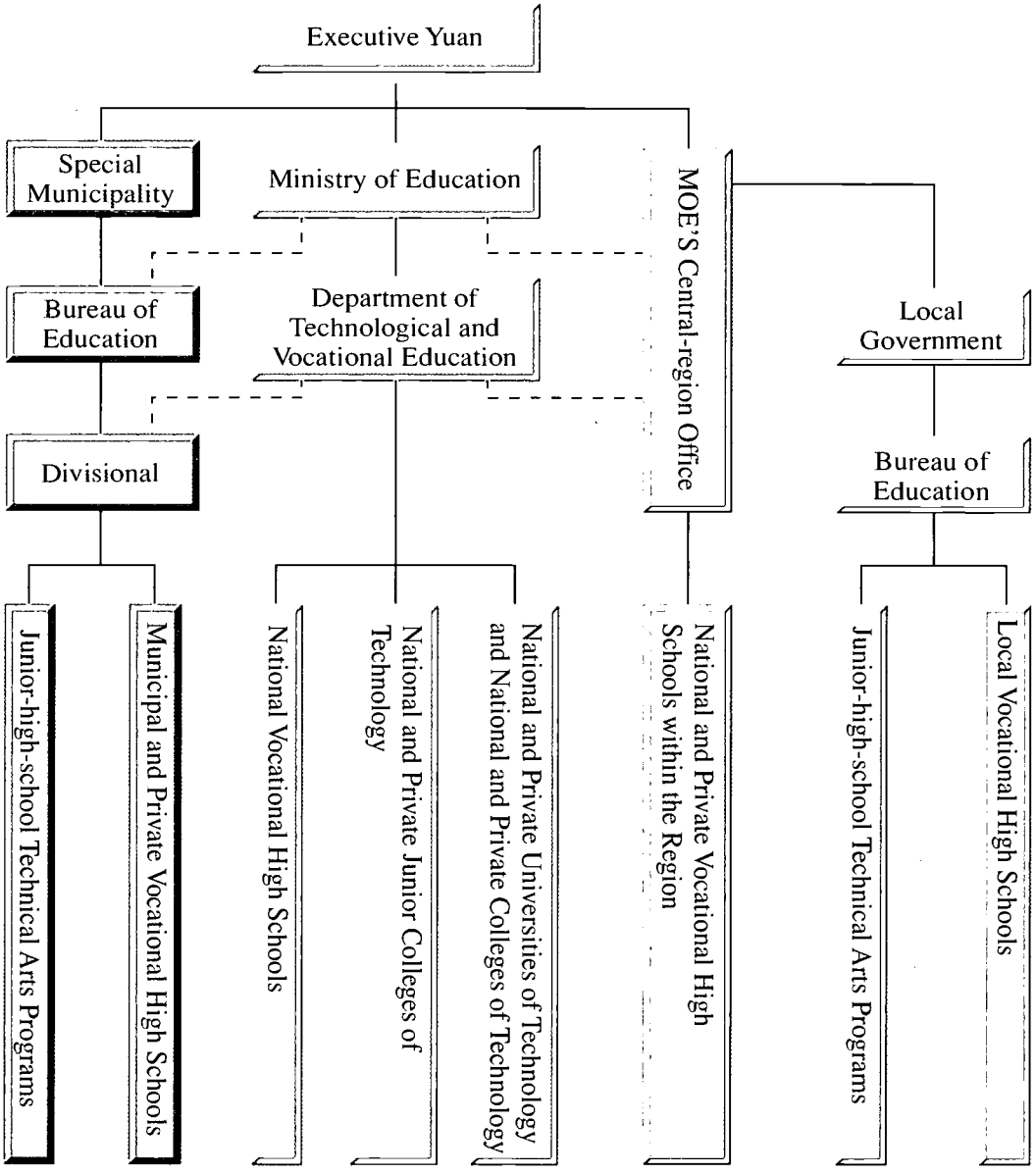
Recently, the domestic and international situation has undergone enormous changes, and TVE is facing the necessity of structural adjustment, with particularly regard to government-promoted policies, which include establishing Taiwan as an operations hub for the Asian and Pacific Region and preparing 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 TVE. 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.

Technological and Vocational Education (TVE) Administration System

The administrative structure of TVE in Taiwan has three levels which are central, municipal, and local authorities. The central authority is the Department of Technological and Vocational Education (DTVE) under the Ministry of Education(MOE). It has established four divisions which are in charge of national TVE and have direct supervisory control of colleges/universities of technology, national and private junior colleges of technology and national vocational high schools. The Department also shares responsibility with the third division of the central-region office of the MOE, the first division of the Taipei Education Bureau and the Kaohsiung Education Bureau, together forming an organizational network for TVE in Taiwan.

The third division of the central-region office is responsible for the supervision of national and private vocational high schools in the regions other than Taipei and Kaohsiung Cities. Likewise, the relevant divisions within the city governments of Taipei and Kaohsiung supervise TVE in municipal and private vocational high schools, and the local governments administer technical arts programs in junior high schools.



EDUCATIONAL ADMINISTRATION SYSTEM

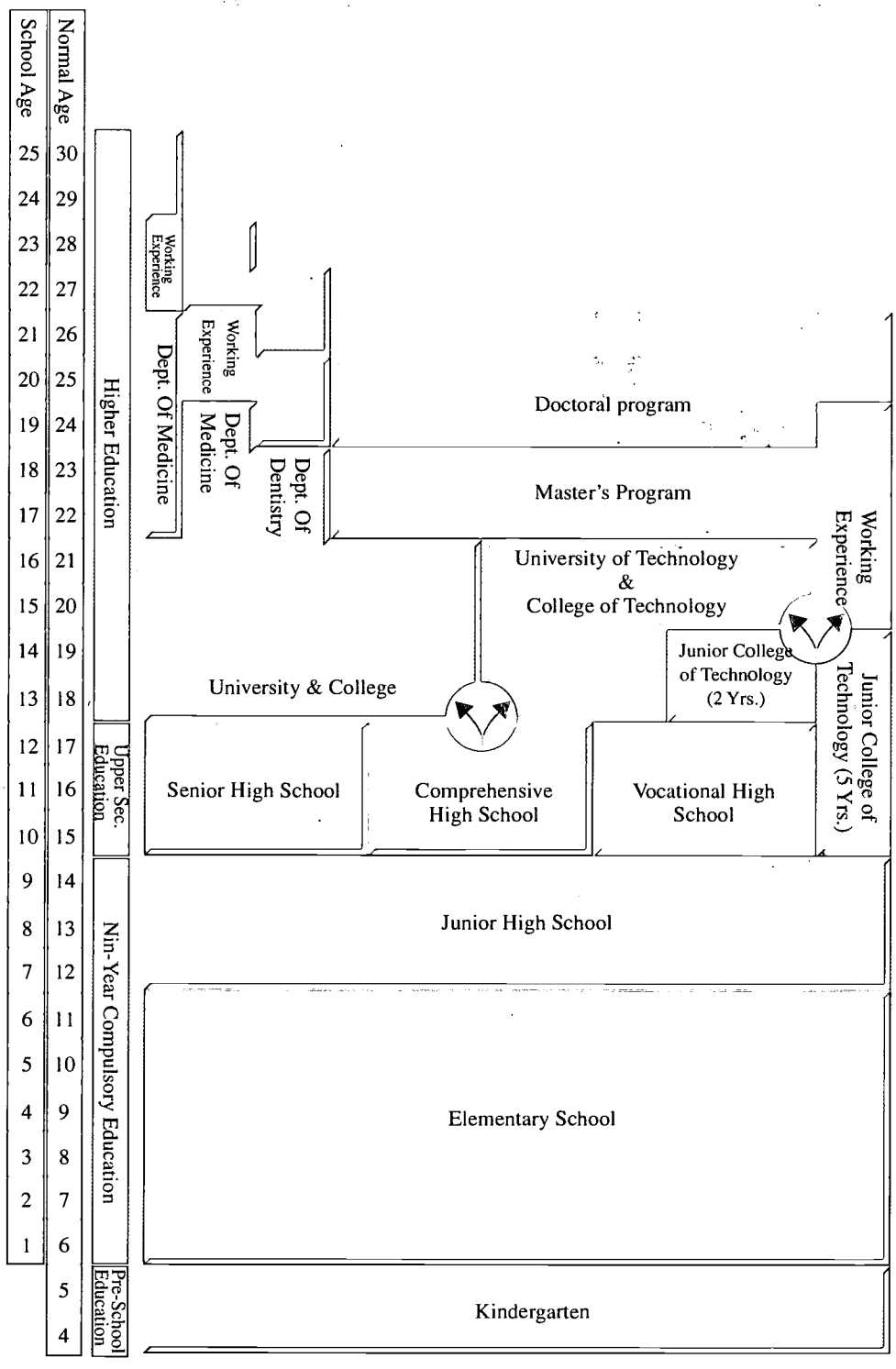
TVE Schooling System

TVE in Taiwan has three levels, vocational high schools (which include vocational programs provided by some general senior high schools), junior colleges of technology and colleges/ universities of technology. In addition technical arts programs are provided at the junior high school level. Its purpose is to enable students to gain an earlier awareness of their career interests and aptitudes and to cultivate accordingly. At the upper-secondary school level, comprehensive high schools also provide some vocational programs.

Programs in vocational high schools have daytime courses, evening courses, cooperative education programs, practical skills programs, special needs programs and in-service futher-study programs.

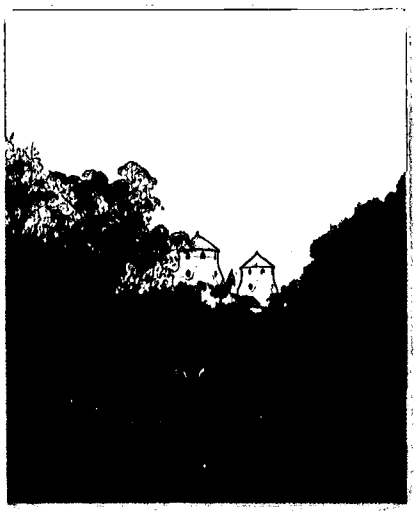
The junior college of technology level is divided into two types, two-year and five-year systems. The two-year system also offers evening courses, for which the period of study is at least one year longer than for daytime courses of the program.

Colleges/universities of technology have undergraduate, master's and doctoral programs. The program of the undergraduate level has three types of two-year, four-year and in-service classes.

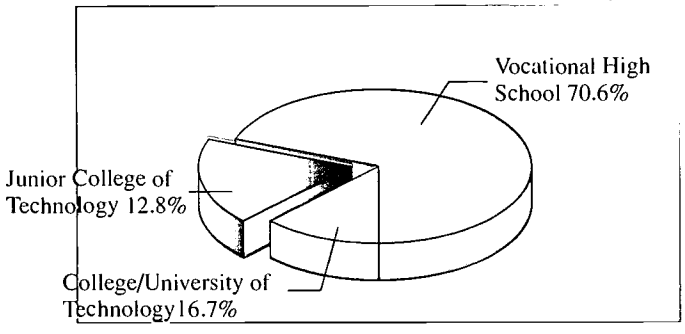


Current Schooling System

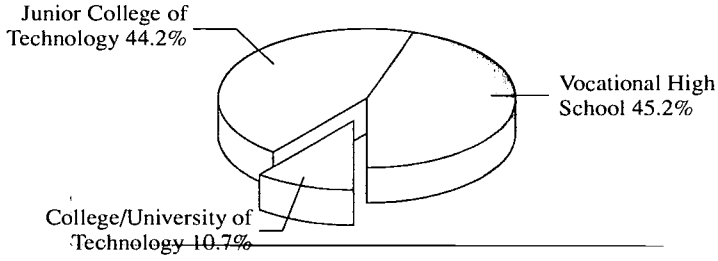
TVE Schools–An Overview



For the 1999-2000 academic year (from August 1, 1999 to July 31, 2000), overall statistics for TVE in Taiwan were as follows: There was a total of 47 colleges/ universities of technology, with 110,062 students enrolled (including 105,633 undergraduates and 4,429 in graduate programs). Junior colleges of technology numbered 36, with a total of 457,020 students (195,101 in 5-year colleges, 261,891 in 2-year colleges and 28 in 3-year colleges). There were 199 vocational high schools with 467,207 students. In other words, TVE students, with a total of 1,034,289, accounted for 57.7% of the total number of students in both upper-secondary and post-secondary schools.



Percentage of Schools at Differen levels of TVE in 1999-2000 Academic Year (N = 282 Schools)

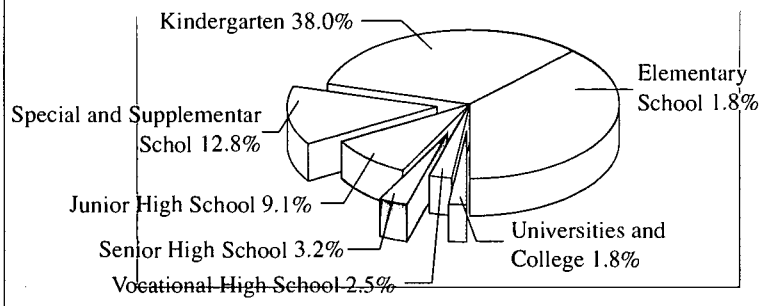


Percentage of Students at All Levels of TVE Schools in 1999-2000 Academic Year
(N = 1,034,289 Students)

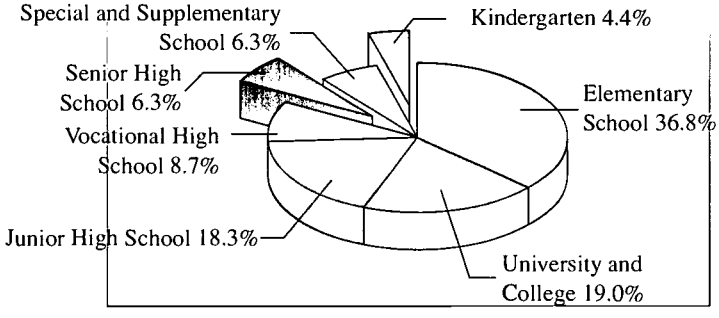
Comparision of Student Numbers between General and TVE Schools in 1999-2000 Academic Year

Category		General	TVE	Total	TVE Students	
					Number	Percentage
Elementary				1,927,793		
Junior High				957,210		
Upper Secondary		331,545*	467,207	910,328	578,783	56.0%
Junior College of Technology	Lower 3		111,576			
	Lower 2		83,525	345,444	345,444	33.3%
2-Year			261,891			
3-Year			28			
University & College/ University of Technology		364,507	105,633	537,373	110,062	10.7%
Graduate		62,804	4,429			
Total		758,856	1,034,289	1,793,145	1,034,289	100.0%
Percentage		42.3%	57.7%			
Ratio		1 : 1.36				

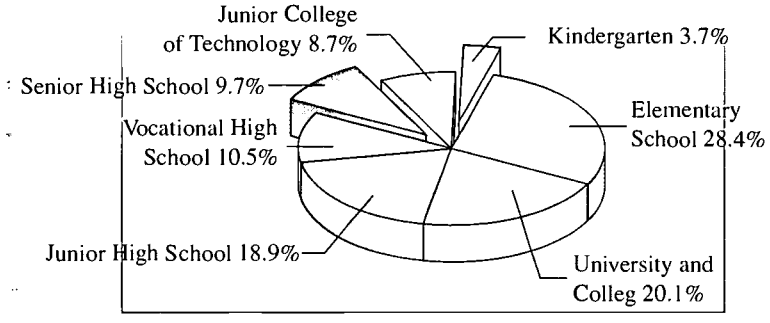
* This number includes 45,264 students in comprehensive high schools.



Percentage of Schools at Different Levels
in 1999-2000 Academic Year
(N = 7,916 Schools)



Percentage of Student at Different Levels
in 1999-2000 Academic Year
(N = 5,239,919 Students)



Percentage of Expenditure for Different
Levels of TVE Schools in 1999-2000 Fiscal Years
(N = 4,390 Billion NT Dollars)

Number of TVE Schools

Category	Number
VHs	199
SHS-Voc.	86
JCT	36
CT	40
Univ.-CT	19
UT	7

Northern Area

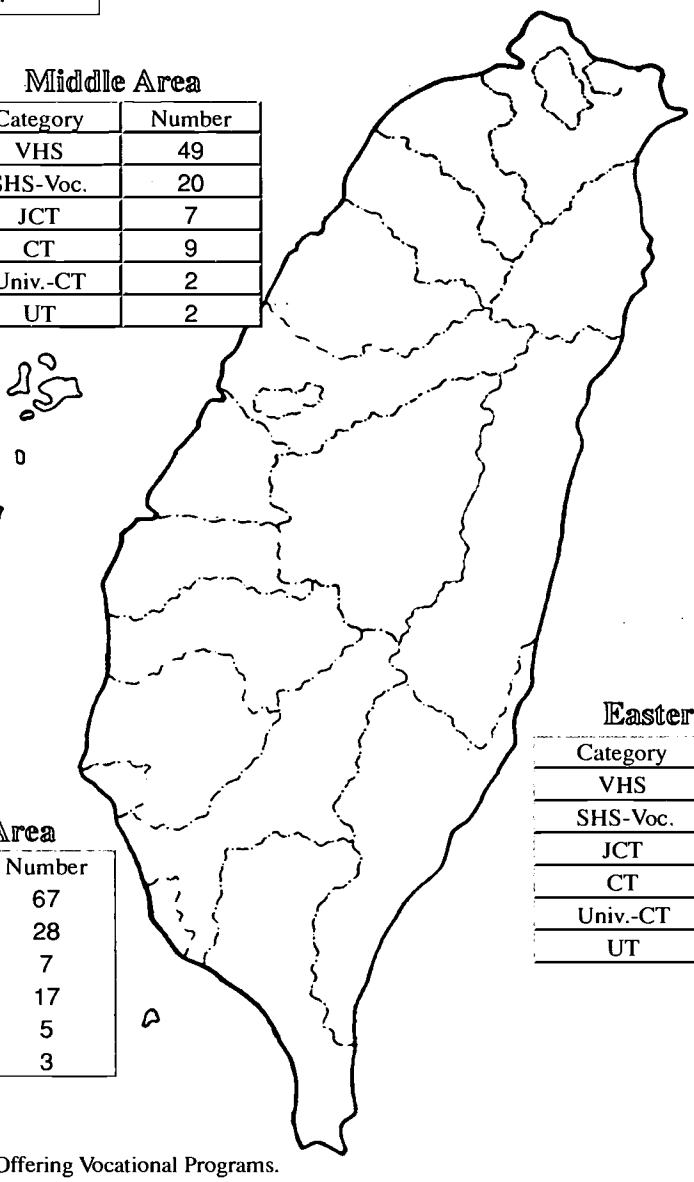
Category	Number
VHS	64
SHS-Voc.	32
JCT	19
CT	11
Univ.-CT	12
UT	2

Middle Area

Category	Number
VHS	49
SHS-Voc.	20
JCT	7
CT	9
Univ.-CT	2
UT	2

Penghu, Kinmen & Matsu

Category	Number
VHS	2
SHS-Voc.	2
JCT	1
CT	0
Univ.-CT	0
UT	0



Eastern Area

Category	Number
VHS	17
SHS-Voc.	4
JCT	2
CT	3
Univ.-CT	0
UT	0

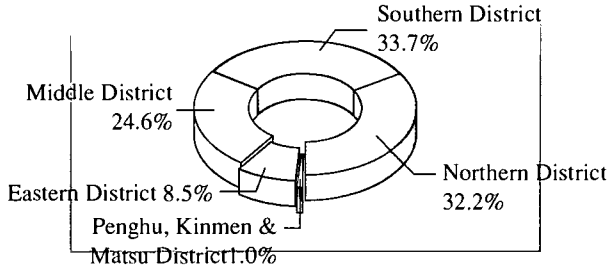
Southern Area

Category	Number
VHS	67
SHS-Voc.	28
JCT	7
CT	17
Univ.-CT	5
UT	3

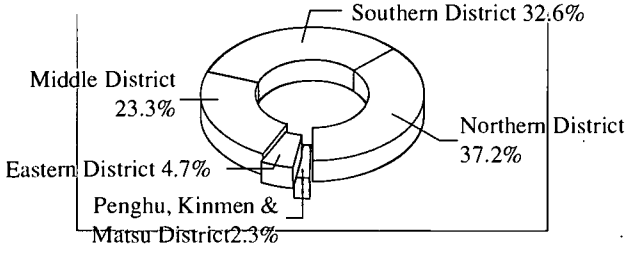
Note:

1. VHS:Vocational High School.
2. SHS-Voc. : Senior High School Offering Vocational Programs.
3. JCT: Junior College of Technology.
4. CT: College of Technology.
5. Univ.-CT: University Offering programs of Technology.
6. UT: University of Technology.

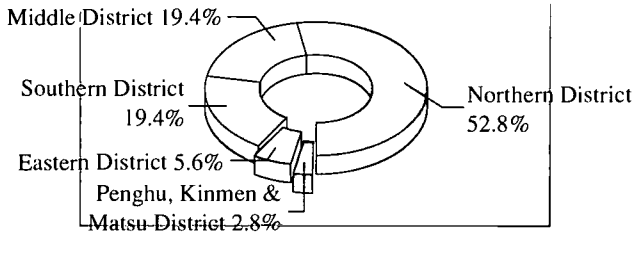
Distribution of TVE Schools in 1999-2000 Academic Year



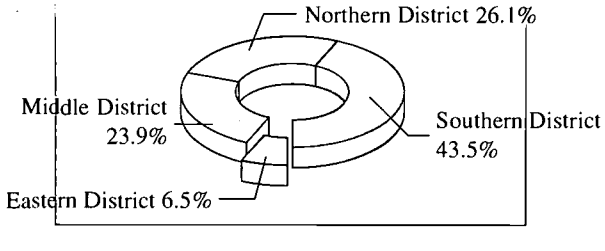
Percentage of Vocational High Schools in Different Districts in 1999-2000 Academic Year (N = 199 Schools)



Percentage of Senior High Schools offering Vocational Programs in Different Districts in 1999-2000 Academic Year (N = 86 Schools)

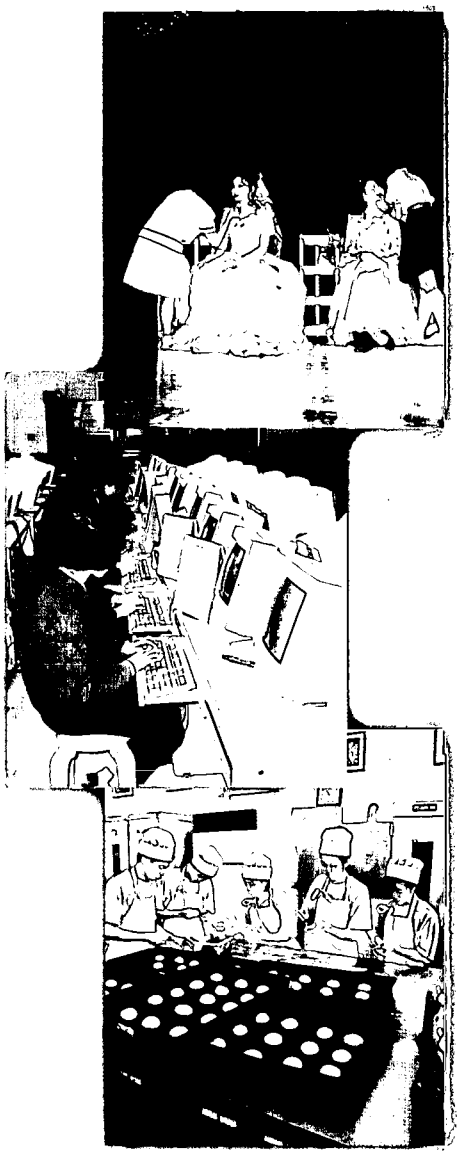


Percentage of Junior College of Technology in Different Districts in 1999-2000 Academic Year (N = 36 Schools)



Percentage of Colleges/Universities of Technology in Different Districts in 1999-2000 Academic Year (N = 47 Schools)

Junior-high-school Technical Arts Program



Goals

The junior-high technical arts 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 practical skills programs, or resume their education at vocational high schools or five-year junior colleges of technology.

Programs

In accordance with "The Plan for Development and Improvement of Junior-high School Technical Arts 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 vocational high schools.
2. Technical arts programs: aimed at ninth graders intending to enter the TVE system or workplace, these courses are held 6-14 hours a week for one year , and students are guided towards further study in the practical skills programs at vocational high schools.
3. Special practical arts programs: aimed at eighth and ninth graders who have some degree of learning difficulties, these programs improve students' employment prospects and guide them towards further study in special practical arts programs at vocational high schools.

The technical arts programs and special technical arts 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, vocational high schools, five-year colleges of technology 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: vocational high schools, five-year junior colleges of technology and vocational training centers are commissioned to administer these programs. In addition, technical arts education centers run by junior high schools and vocational high schools offer a wide variety of technical arts courses to students residing in specific districts.

Curriculum

The nature of the curricula for technical arts 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 practical 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 arts 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, vocational high school or five-year junior college of technology, or join practical skills programs at vocational high schools.

Vocational High School

Goals

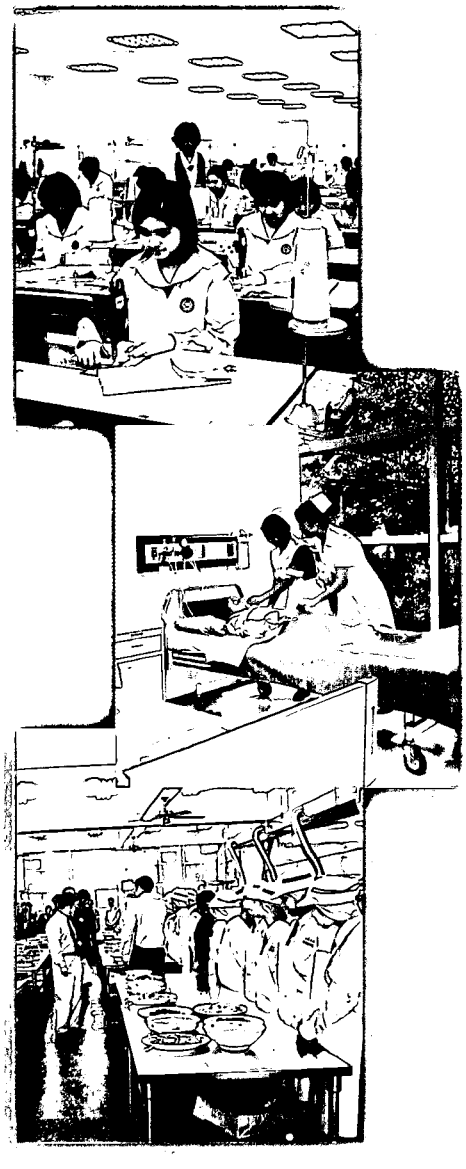
To provide students with entry-level competencies and to develop a workforce which possesses both good work ethics and a sound foundation of basic technical skills.

Programs

Most upper-secondary vocational programs are provided by vocational high schools, although some senior high schools also offer vocational programs. To suit the varying requirements of students, there are six different kinds of programs for junior high school graduates:

1. Daytime division: the courses last for 3 years. On completion of one of these programs, qualified students receive a diploma.
2. Evening division: the courses last for 4 years. A diploma is given to qualified students on completion of one of these programs.
3. Cooperation education programs: these are administered by schools in cooperation with companies. Programs usually last three years, with the school responsive for providing theoretical courses while the cooperating firm provides practical experience in the field.

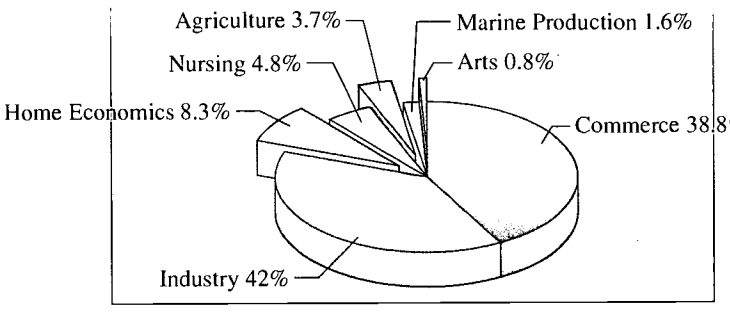
4. Practical skills programs: these programs are designed for junior high school graduates who do not intend to continue their formal education to learn a marketable skill in accordance with their particular interests. Students register and attend one-year, or three-year programs, respectively. Certificates are issued to qualified students at the end of each program. Students who complete a three-year program and pass a qualification exam receive a certificate equivalent to a vocational high school diploma.
5. Special practical arts programs: these programs began during the 1994-95 academic year, these programs offer both regular three-year courses and one-year practical skills programs for junior high school graduates with some degree of learning difficulties to acquire skills. Candidates are selected for admission.
6. In-service further-study 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 equal to a vocational high school diploma.



Furthermore, in order to help students develop fully and to satisfy the demand for hi-tech personnel, beginning with the 1996-97 academic year, a comprehensive high school system was established at the upper-secondary level, with academic and vocational programs being offered at the same school. There is a core curriculum designed to promote students' basic skills and career orientation and exploration. In the 11th grade, students start to specialize in various disciplines. In this way, students receive guidance in choosing courses that suit their interests and aptitudes. This program became a formal education system at the upper-secondary level in 1999.

Subfields

In Taiwan, vocational high schools offer a wide range of subfields, including agriculture, industry, commerce, home economics, marine production, nursing, arts and opera. As of the 1999-2000 academic year, there were 199 vocational high schools, 48.7% of which were public. There were 86 senior high schools offering vocational programs, with 22.1% of these being public. Full-time students (those on daytime programs and cooperative education programs) numbered 467,207, with 38.4% in public schools. The largest number were studying industry, with 42%, followed by commerce, with 38.8%.

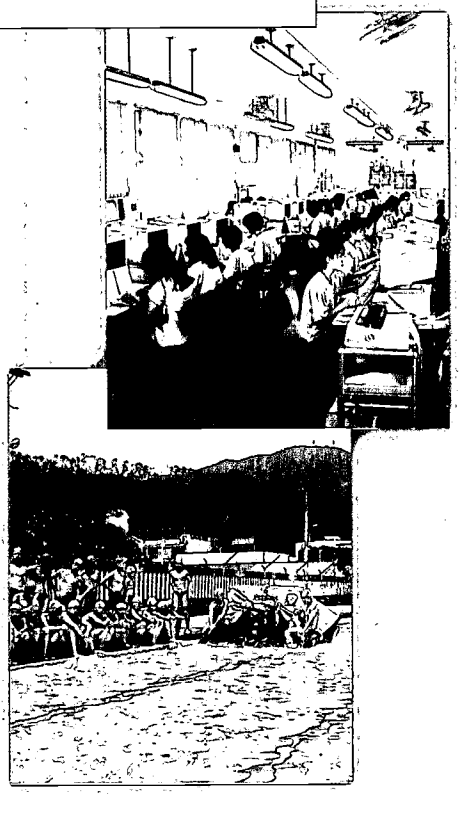


Percentage of Students by Category Enrolled in Vocational High Schools in 1999-2000 Academic Year (N = 467,207 Students)

Curriculum

Every vocational high 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, social sciences and others, taking up about 30% of total class time.
2. Technical subjects: these include technical theory as well as practical experience and account for around 60% of the class hours.
3. Electives: these occupy between 5 and 10% of class time.
4. Group activities: these take up some 5% of the total class hours. Moreover, This curriculum will be replaced by the new national curriculum in the 2000-01 academic year.



Faculty

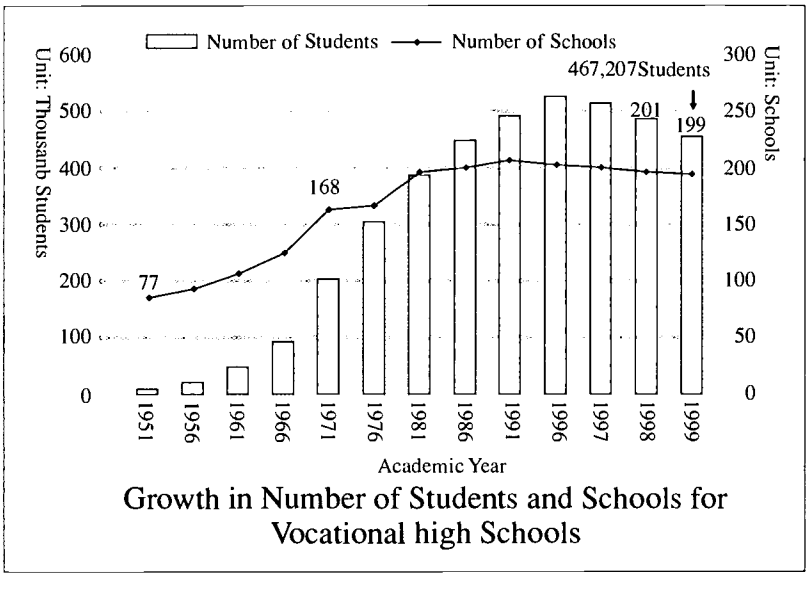
Vocational high school teachers graduate from local and foreign universities, and mainly from three normal universities in Taiwan. In addition, some specialist teachers and technical teachers come from industries.

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

Prospects for graduates

At the end of the 1998-99 academic year, 158,553 students graduated from vocational high school, 35.9% from public schools. Vocational high 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 of technology and four-year programs at colleges/ universities of technology.

Every year approximately six out of every ten vocational high school graduates enter the job market, and each graduate has an estimated choice of four to five job opportunities. About 30% of graduates continue their further education. The level of educational quality is constantly promoting 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 vocational high schools.



Growth in Number of Students and Schools for Vocational high Schools

Junior College of Technology

Goals

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

Programs

Programs at junior colleges of technology are divided into five-year and two-year systems, offering daytime courses, evening courses and the courses of special in-service further-study programs.

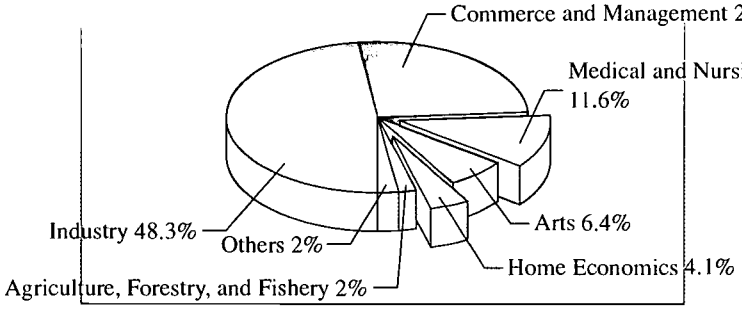
1. Five-year system: only offer daytime courses and are designed for junior high school graduates. Courses last for five years, except in the case of certain subjects, which may be extended to six years.
2. Two-year programs: these programs offer daytime, evening and supplementary courses, and are designed for students who have graduated from vocational high schools or who have reached an equivalent academic qualification. The study period is normally two years. The evening course is divided into regular classes and in-service 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.

Since the 1996-1997 academic year, some prestigious junior colleges of technology have been promoted to colleges of technology. However, these colleges are required to continually provide their junior college of technology programs to prepare mid-level practical workers.

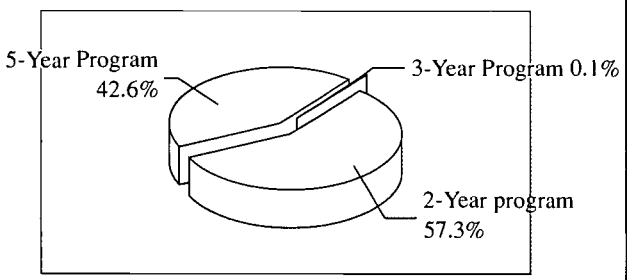
Subfields

Subfields offered by junior colleges of technology in Taiwan include the following categories: industry, agriculture, commerce, home economics, marine production, pharmacology, nursing, medical technology, physical education, arts, music, opera, languages, food service and others. As of the 1999-2000 academic year, there were 36 junior colleges of technology, of which 11. 1% were public .

In the 1999-2000 academic year the total number of students enrolled in daytime and evening programs at junior colleges of technology was 457,020, with 13.4% in public colleges. Of these students, 86.6% were enrolled in private colleges. The category of industry accounted for the greatest number of students, with 48.3%, followed by commerce with 25.6%.



Percentage of Students by Category Enrolled in Junior College of Technology in 1999-2000 Academic Year (N = 457,020 Students)



Percentage of Students Enrolled in Junior College of Technology in 1999-2000 Academic Year (N = 457,020 Students)

Curriculum

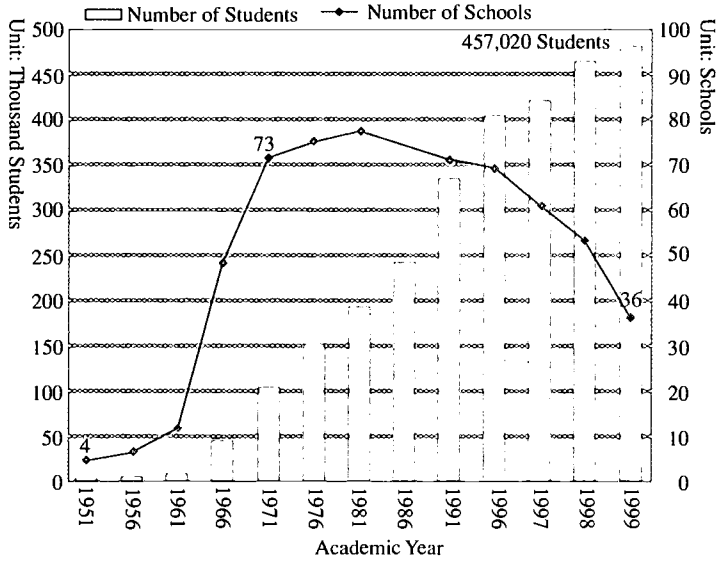
The junior college of technology curriculum follows academic year and credit system(i.e., earning minimum credits within maximum academic years) and is divided into general subjects (25%), basic technical subjects (10%), and core technical subjects (25%). The remaining 40% of the curriculum is designed according to the individual requirements of schools. In order for students to graduate, a five-year program requires students completed 220 credits , and a two-year program requires students completed 80 credits.

Faculty

The teacher at junior colleges of technology are divided into four levels: lecturer, assistant professor, associate professor and professor. In the 1999-2000 academic year, full-time teachers numbered 7,205. Most of them were graduates of domestic or foreign graduate schools, and the majority (82.3%) held master's degrees. There were 17.3% of teachers who held the position of assistant professor or higher, and many teachers had practical experience in the field.

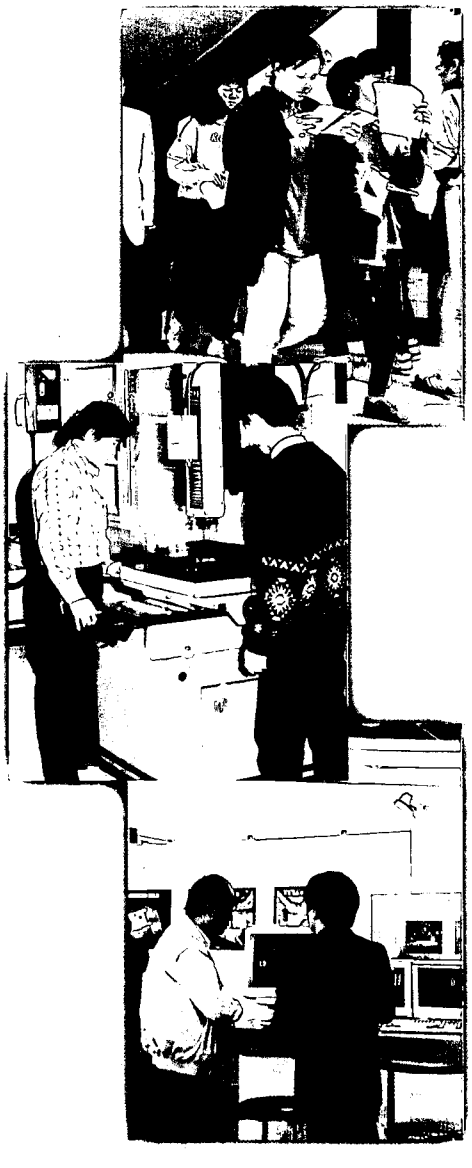
Prospects for Graduates

There were 120,886 students who graduated from junior colleges of technology in the 1998-99 academic year, more than four-fifths (84.1%) of them from private schools. Most graduates entered the job market, becoming mid-level technicians, and some continued their studies at either two-year colleges/universities of technology or four-year colleges/universities.



Growth in Number of Students and Schools for Junior Colleges of Technology

College/University of Technology



Goals

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

Programs

Colleges/universities of technology provide the highest levels of TVE in Taiwan. Undergraduate programs, master's and doctoral programs are offered.

1. Undergraduate programs

(1) Four-year system: offers daytime courses and supplementary programs. Daytime programs are aimed at vocational high 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 system: courses are divided into daytime and supplementary programs. Daytime programs are aimed at graduates of junior colleges of technology 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 three 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 colleges 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.

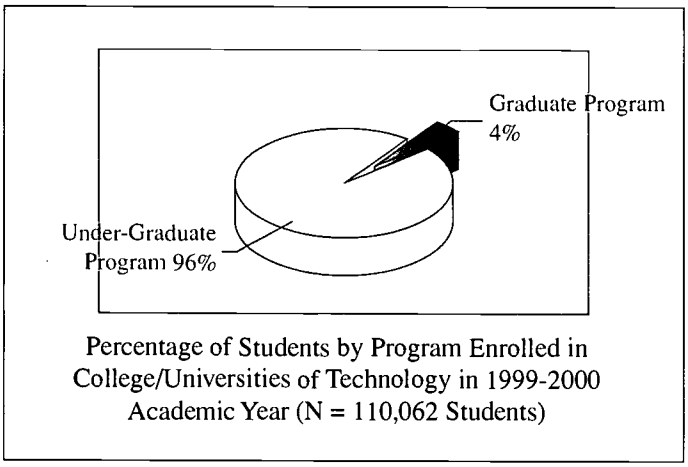
3. Doctoral programs

Individuals who have completed a master's program at an academic university or college/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 of technology graduates' opportunities for further study, some universities or colleges offer two-year or four-year programs of technology.

Subfields

As of the 1998-99 academic year, there are 47 institutes of technology in Taiwan, 15 public and 32 private. Subfields are classified into eight categories: engineering, design, agriculture, management, marine technology, home economics, medical, medical and nursing, and commercial services. In 1999-2000, the total number of students was 110,062, with 105,633 (96%) in undergraduate programs and 4,429(4%) in graduate programs.



Percentage of Students by Program Enrolled in College/Universities of Technology in 1999-2000 Academic Year (N = 110,062 Students)

Curriculum

Each college / 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 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 thesis are the graduation requirement, and the requirement for a doctorate is 18 credits plus submission of a dissertation.

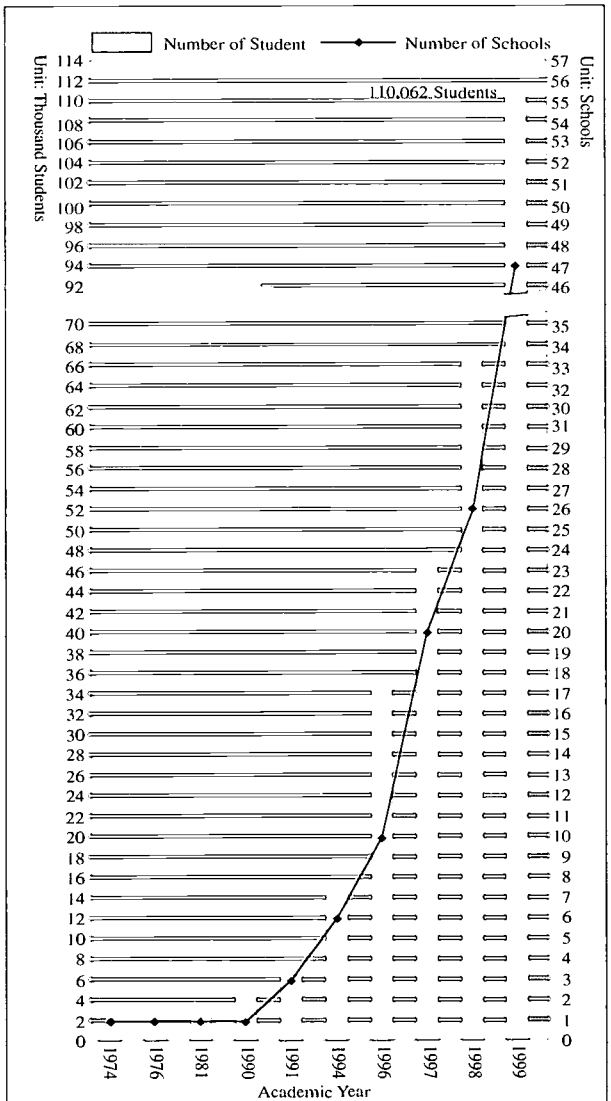
Faculty

Teachers at college / university of technology consist of lecturers, assistant professors, associate professors and professors. Teachers are graduates from domestic or foreign graduate schools, with the majority holding master's degrees or doctorates.

Prospects for Graduates

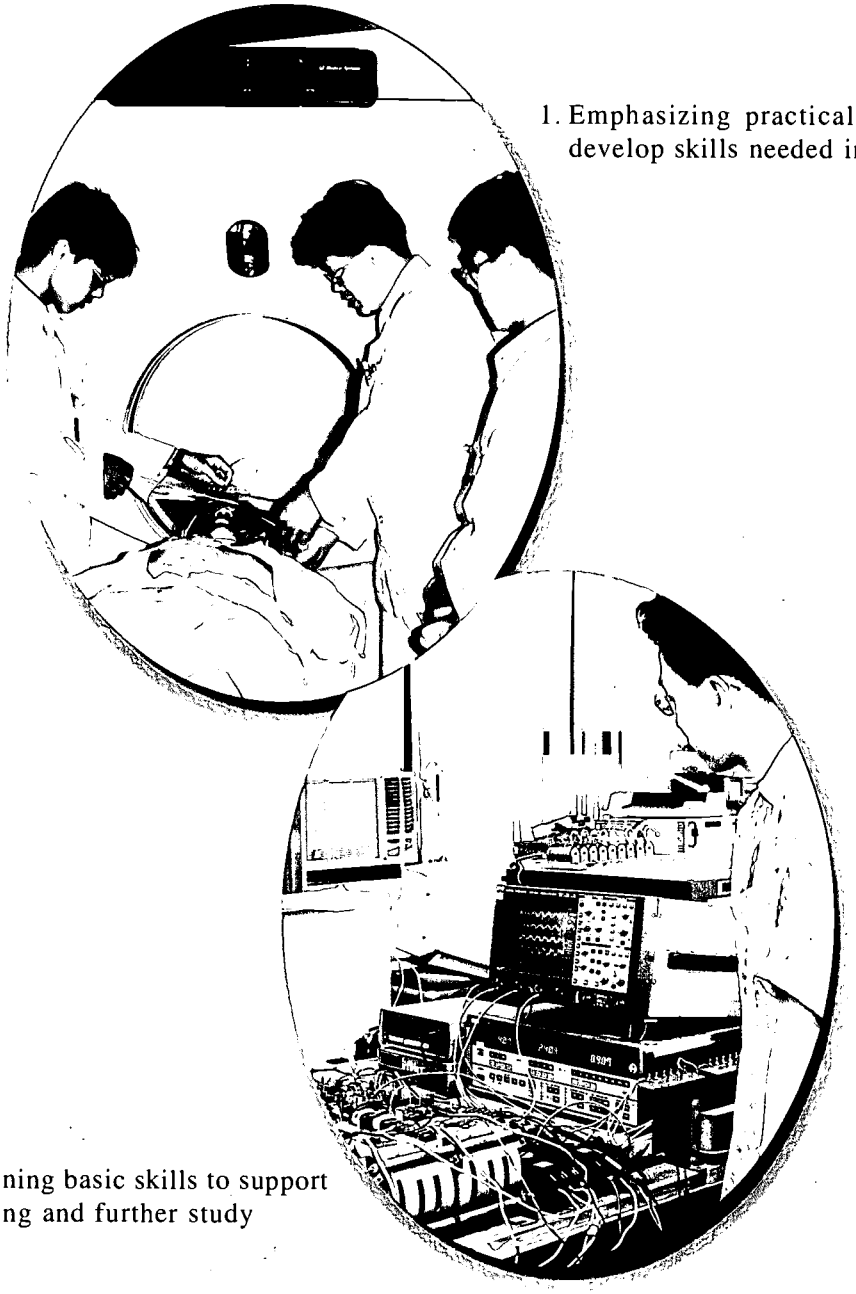
In the 1998-1999 academic year, the number of students graduating from colleges/universities of technology was 13, 608, including 42 who received doctorates, 921 who received master's degrees and 12, 645 who received bachelor's degrees. Individuals who graduate from colleges/ universities of technology 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/managerial 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 Colleges/Universities of Technology

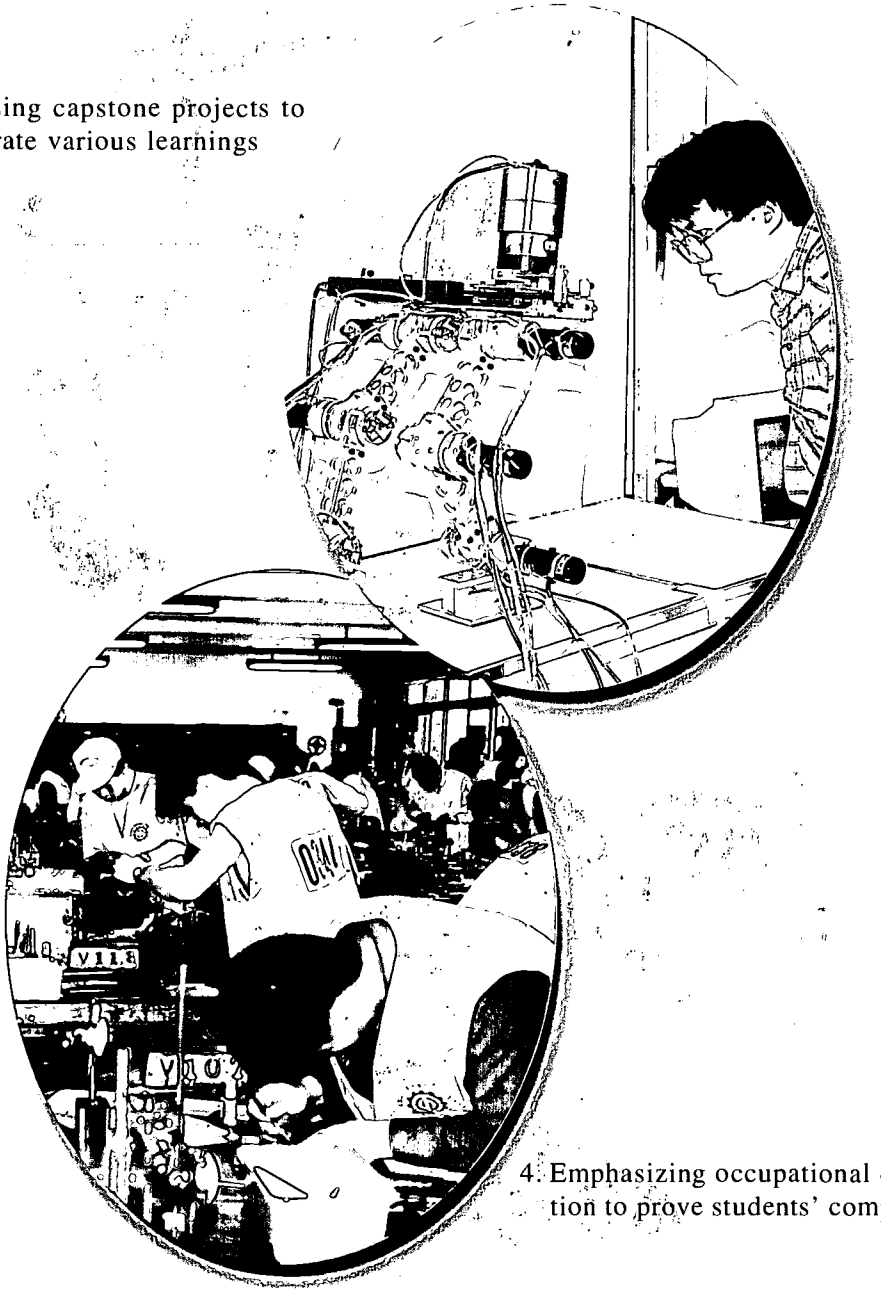
Special Features of TVE



1. Emphasizing practical learning to develop skills needed in workplace

2. Strengthening basic skills to support job-training and further study

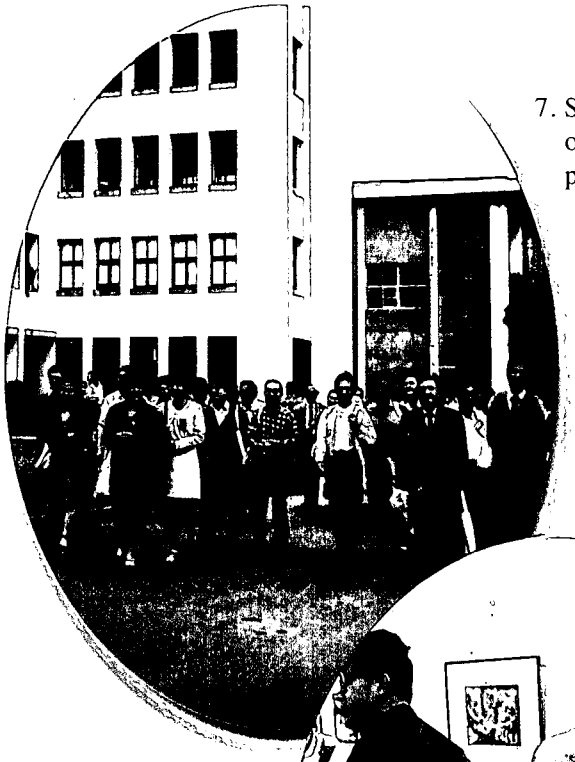
3. Focusing capstone projects to integrate various learnings



4. Emphasizing occupational certification to prove students' competencies

5. Updating the TVE curricula to meet the needs of changing society

6. Recruiting teachers from industries to strengthen students' practical skills



7. Strengthening school-industry co-operation to gain benefits from partnership

8. Offering continuing education to promote lifelong learning

Looking to the Future

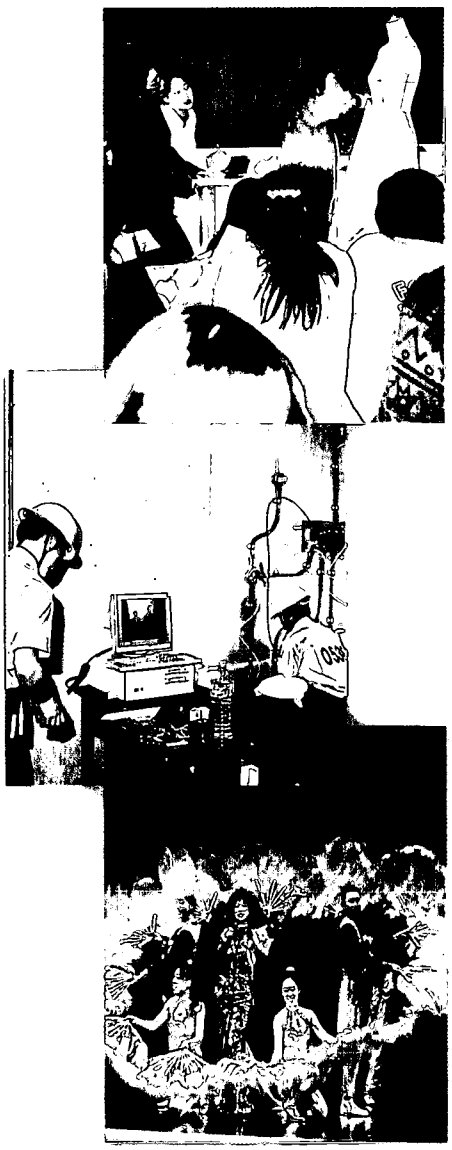
In order to remain in tune with national development, social changes and changing values, and in accordance with technological advancement and the international trends in vocational-technical education, the key issues regarding future development of TVE in Taiwan are as follows:

1. Establishing related laws to further the development of TVE

Reflecting the demands of technological advancement and social change, a revision of the Technological and Vocational Education Law has been undertaken. 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, colleges of technology, community colleges, junior colleges of technology, and vocational high 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 improve TVE graduates' accesses to further studies

Recently, calls for educational reform have come from various academic groups. As a result, adjustments in the ratio of senior high, vocational high school and junior college of technology students are being considered and decision has been made to convert some senior high schools and vocational high schools to comprehensive high schools, accompanied by a simultaneous overhaul of the vocational high school system. Moreover, in order to improve TVE graduates' accesses to further studies, construction of more national colleges of technology and junior colleges of technology is planned, private schooling, and a planning of community colleges are being encouraged. Junior colleges of technology are to be upgraded to colleges of technology while retaining their junior college of technology programs, and maximumized use will be made of university resources. The two-year program at colleges 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 colleges of technology will become universities of technology offering comprehensive university education with an emphasis on practicality. Consequently, complete TVE schooling system (vocational high school–junior college of technology–college/university of technology) will be fully established.



3. Keeping up with national economic development by cultivating technical/ managerial manpower

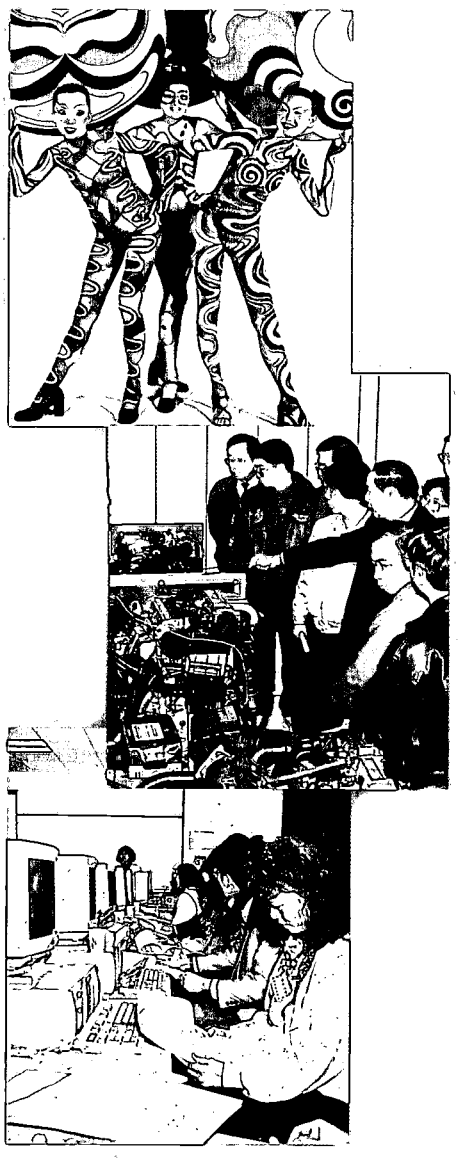
In line with stated government policies of national economic development, the establishment of Taiwan as jreen silicon island, and preparation for joining the World Trade Organization, TVE will need to keep up with the rapid advancement in and automation of production and the demands of increasing internationalization. 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 hi-tech competencies.

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

To meet the requirements of the combined with local resources in our learning society and to expand the availability of continuing further and recurrent education, teaching staffs and facilities at TVE schools will be utilized as community education centers. More channels to higher TVE education will be opened and certain restrictions, for example on study modes and length of programs, will be lifted. There will be further inter-program and school cooperation and more daytime and evening courses. 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.

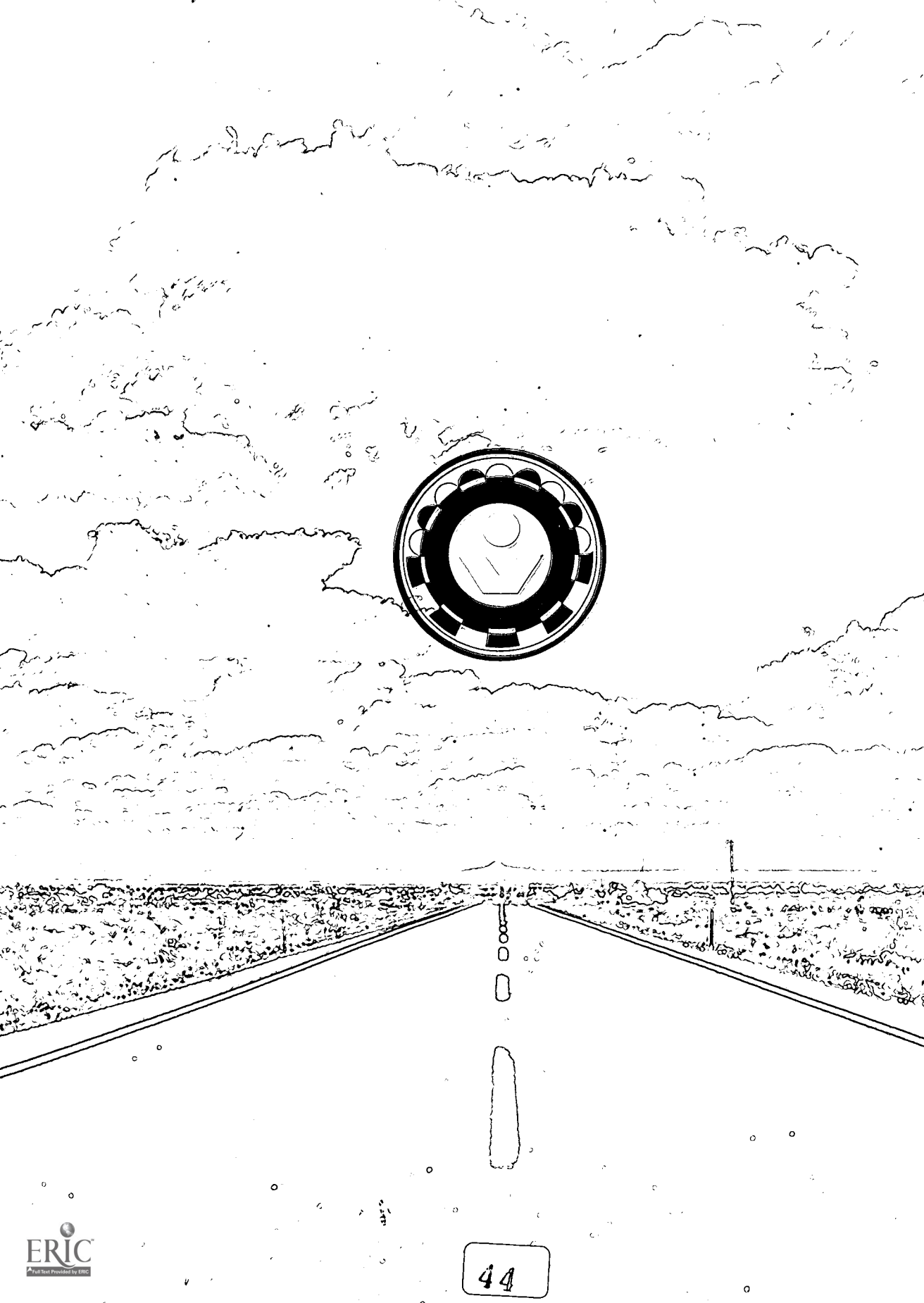
5. Reconstructing curricula of TVE, and emphasizing the needs in industries

In order to have TVE meet the needs in industries and the desire of students, a TVE curriculum reform project is implemented to adapt TVE programs and curricula. 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 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 technical courses, by adopting a workplace-oriented approach to courses 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, both learned competencies and education background are highly valued.



6. Encouraging the participation of disadvantaged groups achieving 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 technical arts programs will be extended as part of the drive to realize the goal of a twelve-year compulsory education system. More opportunities for TVE will be offered to the indigenous peoples of Taiwan, and current vocational high school teachers and facilities will be used to provide students who have some degree of learning difficulties 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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