

Guidelines for Technical and Vocational Education Policies

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I. Introduction to Technical and Vocational Education

According to Paragraph 1, Article 4 of the Technical and Vocational Education Act (hereinafter referred to as “the Act”) enacted on January 14, 2015, the Guidelines for Technical and Vocational Education Policies (hereinafter referred to as “the Guidelines”) were first established and announced on March 2, 2017. According to Paragraph 2, Article 4 of the Act, the Guidelines should be comprehensively reviewed and announced at least once every two years, thus the Guidelines have been revised and then announced on February 21, 2019 and again on February 24, 2021.

Under the Guidelines, authorities of various levels are to actively promote the relevant policies, endeavor to demonstrate the value of technical and vocational education (TVE), strengthen the articulation between education and practice, and spark innovation in teaching. Through Vocational Senior Secondary Schools Excellence Assistance Programs, Deep Cultivation Plans for Technological and Vocational Colleges, and related initiatives, establishing various interdisciplinary integration talent cultivation mechanisms, developing advanced TVE courses, and strengthening the cooperation and alliance between TVE and industries, the Ministry of Education has progressively established an outstanding TVE system to achieve the vision and objectives stated in the Guidelines.

A. Positioning and Values

TVE has long been a major contributor to cultivating high-quality human resources and promoting economic development. With the advancement of social equity and sustainable environmental consciousness, and social innovation driven by digital and green technologies, TVE must continue adjusting its talent cultivation approach and assign school teachers with practical experience, as well as industry professionals, to provide practical education and guide students in hands-on practice to enable them to engage in adaptive learning based on their interests, aptitudes, and talents. Through such engagement, students can quickly adapt to the workforce upon graduation and become diverse and innovative professionals in practical applications that meet the needs of various industries. TVE has the mission of cultivating high-quality professional and technical personnel needed by various industries at all levels. In addition to disseminating professional knowledge, such education emphasizes learning-by-doing, doing-by-learning, and practical application, with practical education and cultivation of practical, innovative, employable and life-long learning competencies serving as the core values. The cultivation of talented professional and technical personnel with practical and innovative abilities through TVE enables the learners to achieve self-actualization, to become important promoters and to participate in organization, to facilitate industrial and

community development, to enhance industrial competitiveness, to innovate research and development (R&D), as well as maintain sustainable development, and promote social cohesion.

B. Challenges and Problems

In recent years, relevant authorities have initiated various phases of the Technical and Vocational Education Reshaping Project, The Forward-looking Infrastructure Development Program, and the Project Establishment of Regional Industry Talent and Technology Cultivation Bases, and allocated funds to implement these Projects. TVE then developed its own distinct features. Development of TVE will entail creating quasi-learning-environments that facilitate academia-industry collaboration, implement recruiting staff members based on their practical experience, enhancing practical courses, emphasizing student internships and hands-on practice, developing teachers' practical experience, and inviting professionals and experts from the industrial fields to provide practical education. The progress of TVE institutions has been gradually recognized and valued.

However, TVE still has its challenges and problems:

a. Challenges:

In the social aspect, our society is going through a difficult ordeal with a growing senior society and declining birthrate; in the technology aspect, emerging technology and mobile devices have changed our lifestyle; in the economic aspect, acceleration of the cross-domain innovations and industrial transformation are still having driven by digital technology; in the environment aspect, the shortage of energy and resources has speeded up the issue of effective recycling, Net Zero Emissions and guiding industries towards green transformation ; in the global situation, in addition to the rise of citizenship and the changes in international circumstances which have reorganized global economic and trade territory and supply chain, the world is currently facing the impact and influence of the pandemic.

b. Problems:

While TVE, in trying to respond to these challenges has effectively engaged in cultivating professional technical talents for all levels, enhancing the global vision, and recruiting international professional talents, there remain issues which need to be properly dealt with:

- 1) TVE talents cultivation system should maintain flexibility with the transformation of industry, support the continuing career

education for all levels and diversify career development channels.

- 2) Seek methods to enhance career exploration education and improve the understanding and participation of TVE value from the parents, high school as well as elementary school teachers and society.
- 3) Look for ways to establish the rolling correction for subject grouping of secondary TVE; the adjustment of some of the subjects should be accelerated, learning motivation and confidence of students needs to be gradually improved, career and employment counseling still needs to be fulfilled, and the employment willingness of students and the employment rates both need to be promoted.
- 4) The course design and adjustment for some programs, at undergraduate level as well as graduate level, in postsecondary TVE should be accelerated to meet the needs of national industry and globalization, improve the quality of advanced talents, and enhance professional technical proficiency and foreign language communication skills to meet the needs of industry development.
- 5) The quality of TVE teachers and courses should be

strengthened, and the training and practical abilities of vocational education faculty be enhanced continuously. How to keep on attracting industry professionals to teach in TVE should be kept in mind.–The correspondence of the above to industry development should also be improved.

- 6) Vocational schools and colleges equipment should be upgraded according to the innovation or transformation of industry, and in response to the need for diverse educational models during and after the pandemic. Equipment and facilities should be supplemented as necessary and updated to facilitate courses and teaching innovation.
- 7) Despite the facts that internship programs and other opportunities for employee's on-duty further education offered by companies have already formed the technical talents training retention system, industry still needs to provide more retention opportunities and participate in the development of targeted occupational competency standards, courses design, and certification.
- 8) In response to the impacts and effects of the pandemic during the pandemic period and thereafter, the design and teaching of professional and internship courses should be adjusted with a

more innovative, diverse, flexible, and comprehensive perspective, to meet the needs of diverse educational models. The utilization and innovation of blended learning programs, teaching methods, and assessments should be accelerated to cultivate the talents required for future workplaces.

In order to respond to the dynamics of external and natural environment, cultivation of TVE talents, in the level of either postsecondary education or college education, should keep improving. Therefore, TVE must cultivate talented individuals with the advanced quality and industrial vision, with the ability to acquire digital technology and green technology skills, who can respond to the industry's green needs and sustainable development, and utilize cross-domain teamwork to solve problems, make innovative decisions and judgments.

C. Future Development Orientations

The Guidelines set forth the vision for, objectives of, and means of promoting TVE continuously, as well as sustainable developments. A TVE system should be established to attract students, who can flexibly respond to rapid changes in industries, and focus on cultivating qualified talents for

industry needs. For student learning, an emphasis on coordinating industry and school for courses development, enhancing professional and practical abilities, developing interdisciplinary, emerging technology applications, teamwork and foreign language communication skills, as well as the development of innovative and entrepreneurial craftsmanship, should be the core focus. Regarding the social dimension, an effective and valuable certification system should be established to integrate the resources of schools and workplaces and facilitate collaboration amongst the government, industry, guild/association, nonprofit organizations, and schools, thereby reshaping society's view of TVE. Overall, the Guidelines define clear goals for career exploration education, targeted career preparation, creating an internship system and courses that align with practice, establishing an effective and valuable certification system, offering flexible continuing education, and refining talent cultivation through collaboration with the industry, government, academia, and training institutes. Accordingly, TVE can develop new-era talented individuals who are high-quality professionals, with technology, management and service talents, which can meet the needs of present and future industries, develop practical and innovative thinking, adapt to the changes in industry and technology, and are possessed of positive work attitude and professional dedication, as well as practical, qualified, adaptable abilities, competitive advantages, and international perspectives.

II. Description of Guidelines

A. Vision

To cultivate professional and technical talented individuals who possess practical and innovative abilities to be employable

Faced with changes in the global society, economy, population, environment, and technological trends with the challenges resulting therefrom, as well as a need of the key abilities and human resources required for future industrial development, talented individuals developed through TVE should possess not only technical and practical abilities required by the industry but also the ability to engage in innovative thinking and interdisciplinary integration. Accordingly, such individuals can expedite industrial upgrades and the development of emergent industries as well as create new industries and business opportunities. Educators in TVE should also possess the aforementioned abilities. In the current era of intellectual, globalization, greenification and informatization, students should possess the ability to acquire, analyze and apply information, improve language proficiency for communicating and interaction with countries around the world, and possess life-long learning competencies. This can enable them to adapt to the emergence, downfall, and upgrade of different industries and

secure better employment of intellectual and global markets. Therefore, the vision of the Guidelines is still to cultivate professional and technical talented individuals who possess practical and innovative abilities for them to be employable. The talented individuals receiving TVE are expected to present the value of TVE and play crucial roles in driving economic development, promoting social cohesion, passing down essential knowledge, and facilitating industrial innovation.

B. Objectives

Objective 1: To establish a flexible education system adapting to environmental and industrial trends and demonstrating the practical value of TVE

TVE primarily differs from regular education in that TVE utilizes practical education to help students acquire professional and hands-on abilities, demonstrate professional ethics and morals in humanities literacy. Accordingly, they can become talented professional and technical talented individuals needed by all industries. Through the promotion of TVE policy, the gap between learning and practice among TVE students has been improved. Yet the content and method of TVE will need to be kept updated according to the environment and industry needs, so the TVE teachers,

courses, and subject grouping can be adjusted accordingly.

On its way to continuously establish the infrastructure for digital competence cultivation, and adapt to the development of diverse education models in various countries, TVE should also strengthen students' self-directed learning, application of digital technology and professional skills through digitization and diverse teaching resources, in order to facilitate the transition in teaching during and after the pandemic period.

Faced with innovation-oriented industry transformation, escalated needs of professional talents for large enterprise, Small and Medium Enterprise (SMEs) and micro-enterprises, changes and uncertainty with respect to industrial upgrades and future industrial development, TVE should continuously focus on professional and technical education, strengthen its education functions, and establish flexible learning systems, upgrade innovative teaching methods, provide convenient channels for continuing education, and utilize the flexible and diverse teaching model of corporation of academics and training organizations/industry, academic and training organizations. TVE can be combined with vocational training and in-service training provided by professional institutions. By way of collaboration with industries, guilds, and nonprofit organizations, TVE can be arranged to engage in the above training to meet various students' requirements in career exploration, employment, cross-industry learning, industry switching, and in-

service training. TVE, through its implementation, shall allow the public to acquire and refine professional skills, exhibit the professional spirit of dedication and teamwork, and thereby securely maintain their livelihood in the society so as to demonstrate the value and function of TVE.

Objective 2: To strengthen TVE curricula-and-faculty structure, develop hands-on abilities, spark innovative thinking and entrepreneurial spirit of teachers and students, and promote the passing down of skills and industrial innovativeness

In light of rapid changes in industrial development, talented individuals cultivated through TVE must immediately respond to large enterprise, SMEs, micro-enterprise and industrial upgrades and future industrial needs. TVE curriculum development, together with faculty structure and training, must be continuously improved. Furthermore, it is a “MUST” to enhance the flexibility and practicality of curriculum design and teaching evaluation, by way of strengthening pre-service education courses for teaching faculty, industry practical work experience, and industry-specific or technical training. Innovative teaching methods and courses on innovation and entrepreneurship must be adopted to develop talented individuals needed by industry.

Talent cultivation through TVE involves more than the passing down and refinement of practical skills in various fields. In response to the trend of innovation economies and sustainable industrial development, students should be capable of keeping improve adaptive explore and learning, having the courage to innovate professional skills, existent practical techniques to fulfill the needs and deal creatively with the future world. Specifically, they should possess innovative thinking skills and the initiative to engage in concrete actions, in addition to developing the “unafraid of failure” spirit of entrepreneurs. Students should endeavor to invent new techniques and occupations, promote the passing down and innovation of skills, create more job opportunities, and drive industrial innovation and development.

Objective 3: To promote collaboration as between government, industry, academy, and training organizations to cultivate high level talented individuals, thereby raising society’s awareness of the importance of professional, and increasing the international influence of TVE

TVE should align with the overall national development while shouldering the responsibility for promoting industrial upgrades, revitalizing industrial competitiveness, and cultivating professional and technical talented individuals needed by industry and society. Collaboration as between the government, industry, parents and academia is required in order

to increase the confirmation and respect accorded to professional and technical personnel of various fields. This can also encourage the general public to select TVE to further their education, thereby improving the quality of human resources in each occupation. Therefore, an effective certification system adopted by the industry should be established to integrate the resources of government, schools, training institutions, industry, guild/association, and nonprofit organizations, thereby facilitating collaboration as between stakeholders and various respective organizations, so as to make their cooperative linkage more effective as between schools, various respective organizations, and stakeholders. Professional and technical talented individuals cultivated through collaboration and integratation as between government, industry, academy, training organizations, guild/association, and nonprofit organizations, can lay a solid foundation for industry to lead industrial development. With the aim of strategic long-term development, such talented individuals are expected to drive the overall economic development of the nation and contributing to the stability of society.

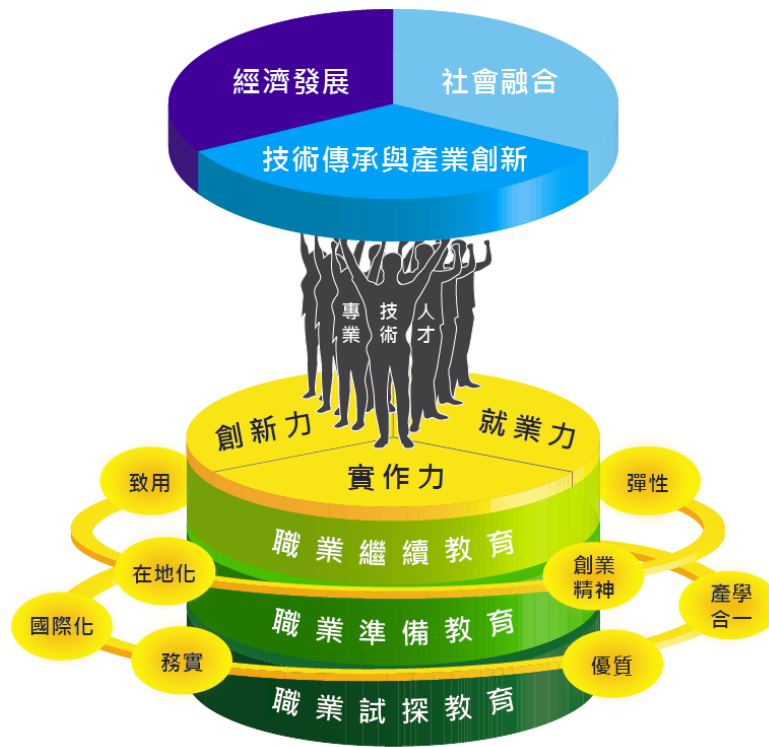
Furthermore, to deepen the cultivation of industrial talent, TVE must continue to develop in a global perspective and maintain continuous alignment with foreign counterparts. The government agencies and educational institutions should actively promote international exchanges, establish systematic and institutional mechanisms for recruiting, nurturing,

and retaining talents, and also increase the willingness of overseas professionals to come to and stay in Taiwan. Schools should enhance students' communication skills in both their native language and other foreign languages, respect and understand multiculturalism, encourage cross-border exchanges and experiential learning activities, as well as promote and strengthen the international influence of TVE in Taiwan.

TVE should also be brought into in accordance with the 17 sustainable development goals (SDGs) proposed by the United Nations in the 2030 Agenda for Sustainable Development, and promote the concept of sustainable development in enterprises, including Environmental, Social and Governance (ESG) principles. Accordingly, TVE can serve as the foundation and momentum for promoting the sustainable development of society.

In sum, the Guidelines aim to develop professional and technical talented individuals with practical and innovative abilities to be employable. Through career exploration education, career preparation education, and continuing education, TVE can become the backbone of national economic development, social cohesion, the passing down of skills, and industrial innovation.

The core concepts of the Guidelines are illustrated as follows



經濟發展: economic development

社會融合: social cohesion

技術傳承與產業創新: passing down of skills and industrial innovation

實作力: practical ability

創新力: innovation ability

就業力: employability

專業技術人才: talented individuals with professional technical skills

職業試探教育: career exploration education

職業準備教育: career preparation education

職業繼續教育: continuing education

致用: practice

國際化: globalization

在地化: localization

務實: practicality

創業精神: entrepreneurship spirit

優質: excellence

彈性: flexibility

產學合一: industry-academia collaboration

技職教育政策綱領概念圖: conceptual diagram of the Guidelines for Technical
and Vocational Education Policies

C. Means of Promotion

- (a) To establish a flexible education system and admission channels for TVE and offer continuous vocational education to attract the public**

To cope with advancements in industry and the rapid development of emerging industries, both students and the working population must learn to adapt to future workplace and accept new challenges as well as continuous innovation. TVE should continuously deepen the coherence and relevance of the TVE system, while maintaining flexible education systems, which should be regularly revised and updated. In addition to school mergers and transformations, the education system, departments, and programs of TVE institutions should be continuously reviewed and appropriately modified in response to the changes in industrial needs, advancements in industry, and human resources requirements. Rapid adjustments should be made to the programs and departments to create a more flexible education system, which allows graduates from senior high schools to enter the workplace first before continuing their education or allow employees to take continuous education as well as obtaining professional certificates through non-formal education. These can facilitate the alignment of both school education and workplace practice. With respect to student recruitment, curriculum design, teaching and evaluation in continuing education, flexibility and practicability-oriented

should be emphasized, and a comprehensive and diversified education system in continuing education should be implemented to attract the general public, including workers, career changers and retirees in their reemployment in the workplace, in order to acquire professional knowledge and practical skills, and improve career skills.

(b) To implement effective career introduction and exploration courses, career experimentation and off-campus internships to thereby foster students' appreciation for professional skills

Young students' understanding of different occupations should be strengthened to facilitate career exploration and development in the future. Moreover, primary schools and junior high schools should encourage students to understand all kinds of career choices and organize their participation in valuable professional skills activities. Curriculum design and activity arrangement should be continuously conducted with the help of industry, guilds/associations, and nonprofit organizations, and career exploration courses, workplace experiential courses, and trainee programs should be implemented to help establish the appropriate understanding about careers. Furthermore, an appropriate understanding of TVE should be fostered amongst students, parents, and elementary school and junior high school teachers and teaching faculty, so parents and teachers can implement career exploration in family activities as well as curriculum design. At the

same time, building a clear path for TVE development and raising the attractiveness of TVE can thereby facilitate the alignment of compulsory education and TVE.

During senior high school education, schools should administer aptitude tests and interest inventories to students, in addition to providing career and vocational counseling, which guides students to engage in adaptive learning or select suitable occupations. Skill-based senior high schools should improve their professional courses and internship programs to ensure alignment with industry. In addition, such schools should arrange and implement employment-oriented hands-on courses, career experiencing, and off-campus internships to help students lay a solid foundation in basic employability and work-based competencies. Students graduating from TVE institutions are encouraged to enter the workplace first to develop an adequate professional attitude before furthering their education to enhance their advanced professional capabilities.

(c) **To enhance the digital application abilities of teaching and learning, develop diverse educational models, and flexibly adjust the mechanisms of curriculum, teaching, and quality evaluation**

To implement and enhance digital teaching and learning, TVE should improve and strengthen the digital teaching environment, establish effective teaching mechanisms, assist schools and encourage teachers to develop

digital curriculum, materials, teaching methods, and quality assessment mechanisms. By combining professional knowledge and practical experience with digital technology, TVE can enhance students' willingness to learn and promote deep learning. However, the pandemic has severely affected practical-based TVE. To meet the challenges of the post-pandemic era, TVE needs to flexibly adjust course objectives, adopt diverse teaching and assessment methods, and enhance digital application skills of teachers and students so as to develop a variety of education models and learning quality assessment mechanisms and thereby achieve educational innovation goals.

(d) To establish practical, problem-solving oriented and application learning styles to develop students' interdisciplinary and teamwork abilities

In response to industry and human resources needs arising from digitalization, intellectual, greening, sustainability and service-oriented, TVE should cultivate relevant professional talents according to the needs of large enterprise, SMEs, micro-enterprises and future industry. Not only to develop the knowledge and skills of professional and technical personnel but also to establish learning schemes oriented toward competencies and practice, problem-solving-oriented learning with its application curriculum designs can be undertaken to groom students' professional ethics, interdisciplinary integration, hands-on operating, and practical ability to perform

interdisciplinary integration, aesthetic sensibilities, and language proficiency. This can help students to adapt to situations in daily life and face future challenges in a variety of situations by equipping students with the necessary knowledge, abilities, and attitudes. TVE should also focus on integrating learning and daily life, and ensuring learners' holistic development. Finally, a system should be established to certify students' learning ability, thereby reinforcing the alignment between course content and practice.

Due to the rapid changes in the future, it will be necessary for students to develop their communication, systematic thinking, problem-solving, interdisciplinary learning, and teamwork abilities and attitudes, as well as cultivating entrepreneurial spirit, acquiring knowledge related to liberal arts and aesthetics, and developing a sense of empathy, so they can respond to the need of career transformation and align with international practices in the future.

(e) To build the TVE industry-based environment to develop TVE talents' innovation spirit

Cultivation of TVE talents relies on the cooperation between academic institutions and industry. We should upgrade the equipment and facilities of TVE schools, enhance job-related learning, bring in industry resources to school, build an environment similar to industry in TVE schools, and enhance the development and design of practical courses, so students can learn the

interdisciplinary abilities, as well as experience and get familiar with practical operations through similar industry environments. Furthermore, by way of industry and academic joint research or by holding competitions innovation spirit can be stimulated and creativity can be enhanced on the part of students, and groom the future innovation.

(f) To improve teachers' abilities, and to enhance their pedagogical thinking, teaching techniques, involvement in innovative practice teaching, and their engagement in practical research which meets industrial development needs and facilitates the passing down and innovation of skills

Adopting practical teaching and practical ability development are TVE core values. To align school education with practice, TVE institutions should keep hiring professional and technical instructors as teachers and adopt diversified certification methods to recruit experts from various fields and occupations, and help teachers understand current industry trends. To foster student abilities to meet various future needs, teachers must keep up with the times and have flexible and innovative pedagogical thinking, enhance their practical teaching abilities by integrating theory, as well as acquire practical experience in industry. According to the abilities needed by students in future employment, teachers should use different teaching methods for different students and make good use of digital technology to create new teaching

strategies and curriculum content. Therefore, support systems for professional development of teachers must also focus on practicability and encourage teachers to pursue career promotion through diversely approved approaches, building cross-domain communities, employing professional function benchmarks with industry cooperation, and developing teaching materials collaboratively. This can elicit teachers' passion in teaching, thereby increasing their willingness to fully engage in practical teaching. In addition, teachers should conduct practical research to facilitate the passing down and innovation of skills.

(g) To design career function-based curriculum, enhance relevant equipment, and cultivate vocational competencies in accordance with the standards of various professional talents functions

To raise the society's awareness of the value of professional skills, TVE should not assess students according to the documents indicating their educational attainment; instead, TVE should focus on helping students acquire competencies required in various occupations and industries, and the goal should not be to blindly obtain as many certificates as possible. Therefore, industries should formulate appropriate standards regarding their own competencies required by professional and technical personnel, and these standards can serve as references for schools to design competency-oriented course content. This can encourage students to acquire the

corresponding certificates as needed, and improve relevant employability. In response to the rapid technological development and post-pandemic period, TVE should keep upgrading equipment, integrate practice facilities to improve practice learning results, design practical curriculum, and align courses with professional skills, key employability, and foreign language proficiencies so as to match the industry's need to cultivate suitable talents.

(h) To reinforce alignment between learning and practice, enhance industry-academia collaboration, increase the social responsibilities of relevant organizations in cultivating talented individuals, and develop the innovative talents-cultivation method for interdisciplinary talents

TVE is responsible for cultivating professional and talented individuals required by various occupations and industries; hence, it should be closely aligned with industrial development. In response to rapid changes in technology and the emergence of new business models, schools must keep swiftly adjusting their cultivation methods according to industrial needs. However, because of frequent changes in industrial environments, immediate adjustments of school education in the areas of faculty structure, curriculum content, and teaching equipment can be challenging. Therefore, the involvement, together with resources, of industries, guilds, associations, and nonprofit organizations is required, and constant collaboration between

schools and relevant organizations should be enhanced. Linking industry clusters through talent cultivation platforms to exhibit enterprises' social responsibility and the idea to collaborate between industry and schools to cultivate talented individuals, and related authorities should propose incentive mechanisms to encourage enterprises to actively participate in talent cultivation. Through these flexible education methods, which combine academic and training organizations or industry, academia, and training organizations, TVE can cultivate suitable talents.

Schools and industries should collaborate to enhance and promote internship programs. Flexible academic credit designs and student assessment methods can be applied to enhance students' practical abilities and improve learning content to ensure it aligns with industrial practice. Accordingly, students can adapt their acquired knowledge to practice, as well as participate, in social welfare activities to help others in need and achieve self-actualization. Practical learning should be conducted with equipment and internship venues provided by industry, which can serve as co-educators to cultivate outstanding professional and technical talented individuals so as to reduce the gap between learning and practice, develop the innovative talents-cultivation methods for vertical inheritance and interdisciplinary talents, and enhance skills in cross-disciplinary integration and communication, so industries can more conveniently develop and recruit talented individuals, resulting in a win-win scenario, as well as reinforced

alignment between learning and practice, together with enhanced industry-academia collaboration.

To strengthen practical connections and industry-academia cooperation, the government and industry should enhance and encourage businesses to participate with resource investment in technical and vocational education, and schools should adjust their curriculum and skills training methods in cooperation with industry, continuously enhancing their professional capabilities to cultivate the talents needed by the industry in the post-pandemic period.

- (i) **To enhance the international competitiveness of Taiwanese students, equip them with the skills required by industries, increase the willingness of foreign students to study and stay in Taiwan, and expand the international mobility of TVE talents**

To expand the international perspective of our students and strengthen the integration of TVE with the international community, the government and schools should enhance the cultivation of students' application of foreign languages and cross-cultural communication skills, while educating students to respect and understand cultural differences and values, and encourage students in technical and vocational schools to actively participate in international exchange programs, experiences, global internships or apprenticeships, in order to enhance international competitiveness and

mobility.

To attract overseas students and increase their willingness to come to Taiwan to study TVE and stay in Taiwan, the government and schools should strengthen cooperation with foreign schools, training institutions, innovative research and development institutions or industries, to actively promote international exchange and cooperation opportunities, establish a sound enrollment, talent development, and retention system, cultivate professional technical talent in response to industrial development needs through resource sharing, and also to propose incentives and reward mechanisms to actively encourage foreign professional technical talents to come to and stay in Taiwan, in order to enhance the development of foreign professional technical talents in Taiwan and thereby improve the international influence of TVE.

III. Conclusions

TVE plays an irreplaceable role in professional technical talent cultivation, fulfillment of industrial needs, and promotion of economic development. Faced with external factors, such as globalization, internationalization, structural changes in industries, the pandemic, and low birthrates, TVE policies should be continuously adjusted to periodically meet

the needs of social and economic development in Taiwan and other countries. Therefore, the Guidelines can serve as a reference for relevant authorities to promote TVE. Accordingly, the advantages and competitiveness of TVE can continually be improved in the face of challenges and changes in social, industrial, and international trends.

The implementation of the Guidelines can help to cultivate professional and technically talented individuals through TVE in our nation to acquire practical and innovative abilities and enhance their employability. These talented individuals can serve as drivers of national economic development, social cohesion, the passing down of skills, and industrial innovation, thereby becoming a reliable foundation for our society's improvement and sustainable development.

Appendix A

Framework of the TVE Guidelines

Vision

To cultivate professional and technically talented individuals, possessing practical and

Objective 1: To establish a flexible education system adapting to environmental and industrial trends and demonstrating the practical value of TVE.

Objective 2: To strengthen TVE curricula-and-faculty structures, develop hands-on abilities, spark teachers' and students' innovative thinking and the entrepreneurial spirit of teachers and students, and promote the passing down of skills and industrial innovativeness.

Objective 3: To promote collaboration between government, industry, academies, and training organizations to cultivate high level talented individuals, thereby raising society's awareness of the

Means of Promotion

To establish a flexible education system and admission channels for TVE and offer continuing vocational education to attract the public.

To implement effective career introduction and exploration courses, career experiment and off-campus internships to thereby foster students' values for professional skills.

To enhance the digital application ability of teaching and learning, develop diverse educational models, and flexibly adjust the mechanisms for the curriculum, teaching, and quality evaluation.

To establish practical, problem-solving oriented and application learning styles to develop students' interdisciplinary and teamwork abilities.

To build the TVE industry-based environment to develop the TVE talents' innovation spirit.

To improve teachers' abilities, and to enhance their pedagogical thinking, teaching techniques, involvement to innovative teaching practice, and their engagement in practical research which meet industrial development needs and facilitate the passing down and innovation of skills.

To design career function-based curriculum, enrich relevant equipment, and cultivate vocational competencies in accordance with the standards for various professional talents function.

To reinforce alignment between learning and practice, enhance industry-academia collaboration, increase the social responsibilities of relevant organizations in cultivating talented individuals, and develop the innovative talent cultivated methods for interdisciplinary talents.

To enhance the international competitiveness of Taiwanese students, equip them with the skills required by industries,

Appendix B Collaboration between relevant authorities for TVE Guidelines establishment and promotion

Means of promotion	Relevant authorities	Collaboration tasks
(a) To establish a flexible education system and admission channels for TVE and offer continuing vocational education to attract the public	National Development Council	To analyze and research into policies related to industrial development and cultivation of professional and technically talented individuals.
	Ministry of Labor	To assist in promoting continuing vocational education for employees. Assist in analyzing employment data to review talent cultivation policies.
	Ministry of Finance	To assist in providing data related to incomes and taxes, thereby helping authorities to create policies on incentive measures for companies to participate in talent cultivation.
	Competent authorities of each industry	To assist industries subject to its jurisdiction in managing employees to participate in continuing education and professional training.
(b) To implement effective career introduction and exploration courses, career experiment and off-campus internships to thereby foster students' values for professional skills	Competent authorities of each industry	To assist industries subject to its jurisdiction in providing resources related to career exploration.
	Local government	
(c) <u>To enhance the digital application ability of teaching and learning, develop diverse educational models, and flexibly adjust the mechanisms for the curriculum, teaching, and quality evaluation</u>	Ministry of Digital Affair	To assist the schools in constructing digital infrastructure and improving the digital education application capabilities through environmental enhancement.
	Competent authorities of each industry	To assist in developing diverse education models and flexibly adjusting the application of professional knowledge and practical experience combined with digital technology.
(d) To establish practical problem-solving oriented and application learning styles to develop students' interdisciplinary and teamwork abilities	Ministry of Economic Affairs	To assist in reinforcing the alignment between the practice of industries under its jurisdiction and related curricula.
	Council of Agriculture, Executive Yuan	To assist in reinforcing the alignment between the practice of industries under its jurisdiction (agriculture) and related curricula.
	Ministry of Health and	To assist in reinforcing the alignment between the practice of industries under its jurisdiction (medicine

Means of promotion	Relevant authorities	Collaboration tasks
	Welfare	and nursing) and related curricula.
	Ministry of Transportation and Communications	To assist in reinforcing the alignment between the practice of industries under its jurisdiction (tourism and transportation) and related curricula
	Competent authorities of each industry	To provide information on human resource needs for industrial development.
(e) To build the TVE industry-based environment to develop the TVE talents' innovation spirit	National Development Council	Provide information on human resource needs for industrial development.
	Ministry of Economic Affairs	Providing information concerning industries and vendors.
(f) To improve teachers' ability, and to enhance their: pedagogical thinking, teaching techniques, involvement in innovative practice teaching, and their engagement in practical research that meets industrial development needs and facilitates the passing down and innovation of skills	Competent authorities of each industry	Helping TVE teachers with industrial studies.
	Ministry of Foreign Affairs	To assist schools in conducting international exchanges.
	Council of Agriculture, Executive Yuan	To assist industries subject to its jurisdiction (agriculture) to align with teachers' practical teaching, thereby facilitating the passing down and innovation of skills
(g) To design career function-based curricula, enrich relevant equipment, and cultivate vocational competencies in accordance with the standards for the functions of various professional talents	Ministry of Labor	To assist in announcing, establishing, and integrating competency standards required by industries subject to its jurisdiction, as well as in establishing certificates for corresponding occupations.
	Competent authorities of each industry	
(h) To reinforce alignment between learning and practice, enhance industry-academia collaboration, increase the social responsibilities of	Competent authorities of each industry	To assist industries subject to its jurisdiction to collaborate with schools and actively promote the exercise of social responsibility in talent cultivation.
	Ministry of Labor	To assist in providing resources related to occupational training.
	National Development Council	To compile and provide information on future talent needs, thereby assisting schools in quickly

Means of promotion	Relevant authorities	Collaboration tasks
relevant organizations in cultivating talented individuals, and develop the innovative talents-cultivation method for interdisciplinary talents	Competent authorities of each industry	responding to the talent needs of industries.
(i) <u>To enhance the international competitiveness of Taiwanese students, equip them with the skills required by industries, increase the willingness of foreign students to study and stay in Taiwan, and expand the international mobility of TVE talents</u>	Ministry of Foreign Affairs	To assist schools in conducting international exchanges.
	Overseas Community Affairs Council	To coordinate with the government's New Southbound Policy, manage TVE for overseas Chinese students, and promote the international exchange of overseas Chinese students.
	Competent authorities of each industry	To assist schools and overseas Chinese vocational students in practical and curriculum needs.