ENGAGEMENT OF MULTI STAKEHOLDERS IN TVET SECTOR:

Policy Analysis and Recommendations

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IN PARTNERSHIP
PHILIPPINE EMBASSY OF WELLINGTON AND DIPLOMATIC LEAGUE
Engagement of Multi-Stakeholder in TVET Sector: Policy Analysis and Recommendations

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This paper is a collective effort from the contributors, that shared common beliefs that the Philippines Technical Vocational Education and Training (TVET) needs to develop to realize its full potential and cope with the 4th Industry Revolution (4IR).

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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>TVET</td>
<td>Technical Vocational Education and Training</td>
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<td>EDCOM</td>
<td>Congressional Commission on Education</td>
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<td>TESDA</td>
<td>Technical Education and Skills Development Authority</td>
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<td>PPP</td>
<td>Public-Private Partnership</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>PCCI</td>
<td>Philippine Chamber of Commerce and Industry</td>
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<td>PET</td>
<td>Pre-Employment Enterprise Training System</td>
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<td>DET</td>
<td>Dual Education and Training</td>
</tr>
<tr>
<td>4IR</td>
<td>4th Industrial Revolution</td>
</tr>
<tr>
<td>IT</td>
<td>Information Technology</td>
</tr>
<tr>
<td>TVIs</td>
<td>Technical Vocational Institutes</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<tr>
<td>ILO</td>
<td>International Labor Organization</td>
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<tr>
<td>SDG</td>
<td>Sustainable Development Goals</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>ATC</td>
<td>ASEAN Technical and Vocational Education and Training Council</td>
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<tr>
<td>IoT</td>
<td>Internet of Things</td>
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<tr>
<td>AI</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td>1IR</td>
<td>First Industrial Revolution</td>
</tr>
<tr>
<td>2IR</td>
<td>Second Industrial Revolution</td>
</tr>
<tr>
<td>3IR</td>
<td>Third Industrial Revolution</td>
</tr>
<tr>
<td>CET</td>
<td>Continuing Education and Training</td>
</tr>
<tr>
<td>MOE</td>
<td>Ministry of Education</td>
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<tr>
<td>SSG</td>
<td>SkillsFuture Singapore</td>
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<tr>
<td>NMYC</td>
<td>National Manpower and Youth Council</td>
</tr>
<tr>
<td>BTVE</td>
<td>Bureau of Technical and Vocational Education</td>
</tr>
<tr>
<td>BLE</td>
<td>The Apprenticeship Program of the Bureau of Local Employment</td>
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<td>NTESDP</td>
<td>National Technical Education and Skills Development Plan</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Description</td>
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<tr>
<td>--------------</td>
<td>------------------------------</td>
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<tr>
<td>DA</td>
<td>Department of Agriculture</td>
</tr>
<tr>
<td>SPCF</td>
<td>Systems Plus College Foundation</td>
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<td>RIA</td>
<td>Regulatory Impact Assessment</td>
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Executive Summary

This paper is intended to serve as a reference/support for policy makers, academe, and the businesses, in making policy decisions (regulatory, non-regulatory, and mixed options) towards the development of Technical Vocational Education and Training (TVET) in the Philippines.

Education is one of the fundamental rights of a human. The Sustainable Development Goal (SDG) 4 promotes quality education amongst all people, and delivery of quality TVET is one of the targets that needs to be achieved by 2030. What is very challenging today in terms of quality education is the Covid – 19 Pandemic, which reversed the development progress the world has achieved over the years. The TVET education system focuses more on skills development rather than theoretical training, this is very difficult unless alternative measures that are still accessible will be in place. According to the UN, even remote learning remains out of reach for at least 500 million students¹.

Regionally, the ASEAN adopted the Future ASEAN Agenda for Technical and Vocational Education and Training (TVET). The Agenda identified the following areas of focus on TVET for the region:²

- Enhancing the relevance and quality of TVET regulations and strategies
- Establishing public-private models for skill standard development and assessment
- Strengthening the leadership of business membership organisations in TVET
- Rebranding TVET
- Mobilising companies to engage in TVET
- Ensuring sufficient funding for TVET
- Improving the quality of training delivery
- Deepening the collaboration of TVET schools with business and industry
- Intensifying research on TVET and future skills needs

The Philippines through the Congressional Commission on Education (EDCOM) recommended tri-focalizing the Philippines’ education system. Therefore, it created three education subsectors in the Philippines: primary education, higher education, and technical vocational education and training (TVET). Furthermore, the Philippine Congress also passed the Education Reform, which created the Technical Education and Skills Development Authority (TESDA) in 1995.

Despite all the efforts on TVET, there are still several problems in TVET that persists till today. The major challenges identified by the NTESDP are:³

- advent of the Fourth Industrial Revolution which will accelerate the convergence of industrial technology and information technology and will pervade all facets of human activities
- meet the very huge demand for skilled and conscientious workforce in the priority industries identified by the NTESDP

¹ UN Department of Economics and Social Affairs. *SDG Goal 4*
³ https://drive.google.com/file/d/1hlCkeoeUynOPI6Z0ENOJfOoVlyOcSkD6/view
• deliberately and affirmatively address the needs of the Filipino workforce who have been excluded and left behind by a fast growing Philippine economy, which largely focused on major urban areas and the formal employment sector.

A study by United Nations Educational Social and Cultural Organization (UNESCO) in 2010 showed that the Philippines have some stark challenges in TVET. As cited in their paper, the challenges are

• poor coordination and cooperation between implementers, industry, commerce and stakeholders (European Training Foundation, 2003);
• lack of alignment between technical qualifications earned in vocational schools and with degrees from colleges (Kuczera, Kis & Wurzburg, 2009);
• lack of funding (Hoeckel, 2008);
• lack of awareness or limited knowledge of TVET programmes (Quay Connections in OECD/CERI, 2009); and,
• being regarded as second class education and for less fortunate or less intelligent individuals (Tilak, 2002).

On the front of market trends the 4IR is also poised to affect education drastically. The 4IR has now evolved into a broader concept that refers to technology that applies to all sectors that combine the physical, digital and biological worlds. The education sector can introduce modalities of 4IR, e.g., simulation and modeling, to augment human skills with artificial intelligence, data analytics, and algorithm, ultimately reducing efforts on time-consuming and complex tasks. The researchers will coin this as 4IR’s Pedagogical Revolution.

Given all those aforementioned development in TVET, the objectives of the study are the following:

• Codification of existing policies that will fully utilize the existing legal framework of the Philippines on TVET.
• Identify a clear way forward to up-skill and right-skill the TVET students to adapt to the 4IR and the increasingly developing global standards.
• Develop policy/ regulation options to create an impactful implementation of the PET System in the Philippines.

The policy paper conducted a multistakeholder consultation, soliciting the inputs from the industry, government, and the academe. Afterwards, the researchers employed a basic regulatory impact analysis that gave an extensive analysis of the problem, identification and discussion of policy options, basic cost-benefit analysis, and recommendation. The findings of the researchers are the following.

| Effect 1: TVET system will not respond to practical skills needed by the industry. | Effect 2: Inconsistent training regulations resulting in an ineffective learning system/ affect quality of training education and skills development training. | Effect 3: Less motivation for the industry resulting in fewer investments and fewer options for our TVET graduates even abroad because of the lack of skill |
**Core Problem:** The Philippines’ TVET system does not quickly respond to the needs of the industry, often being overtaken by the fast-changing technological development (4IR). Limited participation of other stakeholders in the administration of TVET and the slow and untimely updating of training regulations that meet the global standards exacerbates the lag.

<table>
<thead>
<tr>
<th>Cause 1: Limited participation of private sector/industry in TVET governance</th>
<th>Cause 2: Updating the timeline of training regulations and competencies cannot cope with the industry’s demand.</th>
<th>Cause 3: TVET Industry Stakeholders not incentivized to do business in the Philippines</th>
</tr>
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</table>

Circling back to the Objectives and Statement of the Problem of this policy paper, the researchers have identified three (3) major problems in the TVET sector, i.e., (1) outdated training system, (2) lagging on Industry 4.0, and (3) government, academe, and industry coordination and cooperation.

The interviews have validated the literature review that identified the abovementioned problems, and through stakeholder inputs, the researchers have identified with specificity the underlying issues that needed actions and the following policy solutions/options:

1. **Amendment of TESDA Law to delegate assessment responsibilities to the business sector/business chambers**
   - Revisit R.A. 7796 or TESDA Act of 1994 (Section 25) and re-examine the need to decentralize some of TESDA’s functions, i.e., Competency Assessment and Certification
   - Expand the priority sectors based on the needs of the regional and local industries through regular assessment and consultation.

2. **Annual updating of training regulations**
   - Collaboration between the Industry Board of TESDA and Education Task Force of PCCI
   - Upgrading to technology-driven modalities of education
   - Yearly updating of training regulations of TESDA

3. **Market Incentives for the Industry Stakeholders**
   - PET and DET System Consultation and Ratio of Classroom is to Field Education
   - Industry and Student Tenure Bond
   - Upgrading Equipment and Technology

After careful consideration, the researchers have decided to recommend a mixed option adopting all the abovementioned solutions to properly address the problems of TVET in the country.
I. INTRODUCTION

Background

Philippine TVET

Education is one of the fundamental rights of a human, and it allows one to gain an advantage in securing employment and continue to pursue personal development. Hence, the Philippines sees education as means to improve the quality of living of an individual. Nonetheless, some individuals that do not have the capability to avail of complete and advanced education opt to take vocational courses as an alternative for a formal academic degree.

Technical Vocational Education and Training (TVET) is an educational concept not new in the Philippines. In 1991, the Congressional Commission on Education (EDCOM) recommended tri-focalizing the Philippines’ education system. Therefore, it created three education subsectors in the Philippines: primary education, higher education, and technical vocational education and training (TVET). The Philippine Congress passed the Education Reform, which created the Technical Education and Skills Development Authority (TESDA) in 1995. TESDA is the lead agency mandated to provide and promote skills training development and programs under technical education. Nevertheless, TESDA should involve multi-stakeholders, e.g., academe and industry sectors, enabling skills development training.

The partnership between the private and public sector is crucial for an effective policy implementation. Same can be said for the TVET sector development in the country. A public-private partnership (PPP) will address the gaps that the government regulators cannot fill with their given resources. With the capacity of the private sector driven by market development, problems, inter alia.: employment mismatch for TVET, delivery of global quality skills, globally competitive workforce, and decent employment for the Filipino people can be addressed. The data below as cited by ADB in 2018 shows the Gross Domestic Product (GDP) results of increased PPP investments in Developing Asia. The table below shows effects on the fields of sanitation, safe drinking water, and electricity.
The positive correlation will also apply to other industries such as TVET if carried out with proper strategy. This paper shall explore partnership strategies among the government, industry, and academic stakeholders.

Pre-Employment Enterprise Training System

The Philippine Chamber of Commerce and Industry (PCCI) is as stated in their site profile is a non-stock, non-profit, non-government business organization comprised of small, medium, and large enterprises, local chambers and industry associations representing various sectors of business, all working together to foster a healthier Philippine economy and improve the viability of business in the community. The PCCI continues to develop its processes for a vibrant business environment in the Philippines.

On the field of labor, the PCCI is currently developing the Pre-Employment Enterprise Training (PET) System. The PET system is PCCI’s answer to the country’s challenges on skills training. The PCCI puts premium to the value of skilled labor force for a vibrant business environment in the country. Furthermore, this is a market incentive for the businesses to explore investment opportunities in the country. Currently, PCCI is one of the leading advocates of a better TVET system in the Philippines. The researchers are benchmarking from the PCCI’s Dual Education and Training (DET) best practices, its Toolkit, and the Train the Trainer Program. The PET system aims to better prepare the students for more industry-oriented training that maximizes the training’s potential of getting the students assured employment after graduating.

The PET system is still in its infancy in the Philippines, although best practices from Singapore have proven that it is a viable solution for a more vibrant TVET industry in the country. The PET system will improve the existing training modes, and it will be driven by industry developments that are ever-changing and fast-paced. The market paradigm has developed to a more digitized and high productivity/output-driven; hence, it is imperative that the skills training for the people cope with such a change in the world. Otherwise, the Filipino people will not benefit

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4 PCCI. (N.D). About PCCI.
from this opportunity. This market development is called the 4\textsuperscript{th} Industrial Revolution or Industry 4.0.

\textbf{Industrial Revolution 4.0}

The Philippine economy is divided into three sectors: Agriculture, Industry, and Service. Throughout the years, the Philippine economy is driven by the service sector and known as the source of human development capital for service trade. During the last century, there has been a shift in the labor market affecting the Philippine economy and the engagement of multi-stakeholders. It is the effect of Industrial Revolution 4.0, also known as 4IR. Moreover, with the Covid – 19 affecting countries and labor services, technology and digitalization are pivotal to coping.

Industry 4.0 focused on the digital revolution, which derived from the 3\textsuperscript{rd} Industrial revolution that focused on using Information Technology (IT) and electronics. The 4IR aims to optimize the operation of companies to have an efficient and faster production. The impact of 4IR in the labor market and production value chain has been evident, especially with the current situation in covid – 19 pandemics. Hence, the shift of the labor market expects that industry 4.0 will bring an increase in employment and displacement. The more that the skills and capacity of our labor pool need to advance.

TESDA, as the lead agency for TVET, must prepare and create new approaches in upskilling and right-skilling the students to be work-ready and globally competitive workers that match the standards of 4IR and even more.

\textbf{Role of Multi-stakeholders}

TVET plays a crucial role in achieving sustainable development as it takes part is producing skilled workforce that the country needs, but with such a tremendous task at hand, the government alone cannot handle it. A government has limitations, especially during the Covid – 19 Pandemic, and with other considerations in place, like limited training capacity, it will need help from the academe and the business sector.

The government is expected to take the lead in protecting the rights of Technical Vocational Institutes (TVIs) and TVET students as they are the legally sovereign body capable of establishing system and order for a state. This is through creating laws and regulations and enforcing them. The academe on the other hand is critical in honing human capital that can respond to societal requirements by providing quality education for students to grow into qualified professionals. The academe is pivotal because it provides the knowledge pool for sustainable learning. Lastly, the industry provides employment to TVET graduates, hence boosting the standard of living of its employees and as well as the economic health of the community in which the business is located, and subsequently the country where it operates. The industry provides a striking balance for the regulators as the regulated entities.
In 2010, TESDA had 126 technology institutes nationwide to make vocational education accessible to individuals. Furthermore, TESDA has also provided guidelines, standard quality vocational education training, and policies to technical vocational institutes nationwide, whether privately owned or state-owned universities or colleges.

Despite all efforts by the government, the Philippines is not exempt from challenges that come in implementing TVET programs. The researchers looked into gaps in maximizing the government's capacity in handling the development of TVET in the country. Therefore, as one of the reasonable solutions, the engagement of the industry sector is pivotal in the skills development program of TESDA. The industry sector, including the national and local chambers of commerce such as the Philippine Chamber of Commerce and Industry, initiated many efforts in working with the government, particularly with TESDA, in promoting Vocational Training in the Philippines. For instance, their efforts have been fruitful, but more can be done for the Philippines' TVET sector to match global standards and trends, e.g., 4IR.

Another perspective to this development paradigm is giving due importance to the Technical Vocational Institutions (TVIs). The TVIs are specialized training platforms that focus on TVET. These TVIs need to work very closely with TESDA to improve their quality of education. If the Philippines wants to develop the TVET sector fully, the academe should be engaged well. Currently, TESDA is keeping a program registration and accreditation project for TVIs, among other support programs.

The privately led academe wanted to improve their quality of education while at the same time contributing to their finances. The industry aims to create a competitive job-ready workforce that will generate income. In comparison, the government intends to create more employment and contribute to the productivity and sustainability of the Philippine economy. Regulators should consider the interests and challenges of the three (3) stakeholders.

Statement of the Problem

Banking on the statements from the Background of the Study, the major problems that the Philippines currently faces in TVET are outdated training system, lagging on Industry 4.0, and government, academe, and industry coordination and cooperation.

The Philippines have just recently incorporated the German Government's Dual Education and Training (DET) System to improve its training modality in the K to 12 Program. Currently, TESDA claims that this is the preferred modality of training in the country. In 1994 the Dual Training System Act was enacted, which served as the legal framework in implementing such in the country. Regardless, the recent developments in K to 12 and the Philippines’ complacency to traditional training modes have proven to disincentivize the implementation. Many businesses balk at the cost of training. Under the Dual Training System Act of 1994, they have to pay 75% of the minimum wage for the training expenses of the school and the allowance of the trainees.

Furthermore, a low number of training institutions offering dual training, the lack of a database of participants and schools offering the program, and the lack of scholarships for students during training or before they are entitled to receive an allowance also adds to the
challenges. We cannot say that DET is the preferred modality of teaching in the country. The Philippines need to take action to maximize the potentials of this program.

On another front, a study by the Asian Development Bank in 2021 says the Philippines is lagging behind its Association of Southeast Asian Nations (ASEAN) counterparts in the Global Innovation Index of 2019 with a rank of 54th. While other ASEAN countries such as Malaysia (ranked 35th), Viet Nam (42nd), and Thailand (43rd) have outranked the Philippines. The abovementioned data only shows how the Philippines still lacks in its capacity to innovate and cope with Industry 4.0. A study by the International Labor Organization (ILO) in 2017 said that the industry perceives advancement in technology as the most significant market opportunity by 2025. The last major challenge that the researchers have identified is the coordination and cooperation of efforts among the industry, government, and the academe. It is imperative for a reasonable regulatory practice that stakeholders consult; otherwise, the regulation might turn out dysfunctional or serve the government solely. One of the problems identified above, i.e., challenges in implementing the DET, is the lack of incentives for the industry in adopting the DET.

The Philippines should address the abovementioned challenges with a whole of government approach with strong coordination and cooperation with industry and academic stakeholders.

Objective of the Study

This research paper primarily intends to identify the interests and challenges of the academe, industry, and government stakeholders in developing the TVET sector. This paper intends to address the following:

- Codification of existing policies that will fully utilize the existing legal framework of the Philippines on TVET.
- Identify a clear way forward to up-skill and right-skill the TVET students to adapt to the 4IR and the increasingly developing global standards.
- Develop policy/ regulation options to create an impactful implementation of the PET System in the Philippines.

5 The Development Asia identified several challenges including the low number of training institutions offering dual training, the lack of a database of participants and schools offering the program, and the lack of scholarships for students during training, or before they are entitled to receive an allowance in using Dual Training System to Improve National Education.

6 The same study found that only 27% of Philippine enterprises are currently actively upgrading their technology. Costs seem to be a major reason, as over 30% of firms cited high fixed-capital costs as the main barrier to upgrading their technology and another 15% cited high licensing costs. While this is a significant improvement from the previous year's ranking of 73rd, the Philippines is still behind fellow Association of Southeast Asian Nations (ASEAN) member states such as Malaysia (ranked 35th), Viet Nam (42nd), and Thailand (43rd).

7 Asia Development Bank. (2021.). Reaping The Benefits Of Industry 4.0 Through Skills Development In The Philippines
II. REVIEW OF RELATED LITERATURE

TVET in Global Development

The Sustainable Development Goals (SDGs), otherwise known as the global goals, is a set of development goals with specific targets and indicators that aims to address the world’s most pressing problems. The Global Goals include Quality Education – SDG 4 and Decent Work and Economic Growth – SDG 8. The development of the TVET sector means achieving some of our targets under SDG 4 and SDG 8.

The provision of quality and equitable education specifies under its target 4.3 says that "by 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university". Also, target 4.4. states that "by 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship". By the adopted Global Goals, the UN asks the member states to provide equal access and eventually increase the skilled youth and adults substantially. What this is for TVET is creating a sustainable development mechanism accessible for the sector’s stakeholders. This alone calls for an overhaul of the approach towards TVET development on a global scale.

What is very challenging today in terms of quality education is the Covid – 19 Pandemic, which reversed the development progress the world has achieved over the years. What is even more challenging is that educational institutes are supposed to factor in face-to-face and practical training unavailability. In the case of TVET, which focuses more on skills development rather than theoretical training, this is very detrimental unless alternative measures that are still accessible will be in place. According to the United Nations (UN), even remote learning remains out of reach for at least 500 million students.

In terms of Decent Work and Economic Growth – SDG 8, the world’s economic progress has been declining even without the Covid – 19 Pandemic. The target of SDG 8, particularly 8.1, is to "sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 percent gross domestic product growth per annum in the least developed countries". But with the world in constant decline, it is proving to be even more difficult to achieve target 8.1. Regardless, to this end, target 8.2 identifies actions that may contribute to achieving higher levels of economic productivity, i.e. diversification, technological upgrading, and innovation, including a focus on high-value-added and labor-intensive sectors. This ties in directly to the economic directions of 4IR. In coping with 4IR, the countries must develop their industries towards digitalization, technological upgrading, innovation, and high-value-added and labor-intensive sectors. The 4IR industries are high-value-added but highly technical. Intensive and specialized training is needed for a country’s labor force to adapt to the 4IR industry.

With vibrant high-value creating industries, the economic growth of the countries will surely rise. These economic trends are a real challenge for the developing economies as they do not

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8 UN Department of Economics and Social Affairs. SDG Goal 4
9 UN Department of Economics and Social Affairs. SDG Goal 8
have enough resources to cope with the global movement. Hence, they cannot maximize the opportunities of a developing 4IR that is the sweeping global economic paradigm.

Regional Context of TVET: The ASEAN TVET Council

On the regional level, ASEAN recognized the need to be well-prepared for the challenges brought by the 4IR. In November 2019, Heads of States/ Governments of 10 ASEAN adopted the ASEAN Declaration on Industrial Transformation to Industry 4.0. In the Declaration, ASEAN adopted the need to enhance human resource development and capacity building to catch up on frontier technologies and innovation to Smart Factories, digital value chains, and digital literacy by focusing on the up-skilling and re-skilling of the workforce, including MSMEs.

The ASEAN is primarily an economic and social development cooperation among states. Although it has political systems in place, the economic and social pillars of the ASEAN are the more vibrant ones in terms of development. This is primarily because it is easier to make economic and social compromises than political ones. The ASEAN adopted the Future ASEAN Agenda for Technical and Vocational Education and Training (TVET). As cited in the ASEAN site, the Agenda’s working group consisted of 20 TVET champions from chambers, associations and companies from all 10 ASEAN member states. The ASEAN Secretariat and the German Government’s Regional Cooperation Programme for TVET in ASEAN (RECOTVET) support the working group as part of a regional learning process among the ASEAN member states. The Agenda identified the following areas of focus on TVET for the region:

- Enhancing the relevance and quality of TVET regulations and strategies
- Establishing public-private models for skill standard development and assessment
- Strengthening the leadership of business membership organisations in TVET
- Rebranding TVET
- Mobilising companies to engage in TVET
- Ensuring sufficient funding for TVET
- Improving the quality of training delivery
- Deepening the collaboration of TVET schools with business and industry
- Intensifying research on TVET and future skills needs

The Philippines, through TESDA, is the inaugural Chair of the ASEAN Technical and Vocational Education and Training Council (ATC) from 2020 to 2022. The ATC is a regional, inter-sectoral TVET body tasked with the coordination, research and development, and monitoring of regional education programmes to support the advancement of TVET in the region.

The ATC will serve as a cross-pillar/cross-sectoral coordination mechanism on TVET and shall:

- Provide policy recommendations pertaining to the quality of TVET and its relevance to current and future industry requirements;

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Seel, F Thao Dinh Phuong. (2020). IMPLEMENTING THE FUTURE ASEAN AGENDA FOR TVET: A Compendium of Case Studies
• Facilitate mutual learning and innovations through sharing of good practices on TVET-related programmes;
• Develop a comprehensive, integrated, and inclusive regional plan on TVET; and
• Support regional knowledge management on TVET.

According to a press release from the Philippine News Agency (2020), TESDA Secretary Isidro Lapeña said that "skills development is one of the priorities of the ASEAN today, given the technological transformations and other global developments that are continuously affecting the education and employment landscapes."

Secretary Lapeña was also quoted saying, "with the establishment of the ATC, we are looking forward to a more concrete and coordinated action in terms of policy making and program implementation from all the key players in skills development -- such as government, business and industry, academe or training institutes at the ASEAN level."

Secretary Lapeña also mentioned that TESDA would go in the same direction for the Filipino workforce to ensure competitiveness and the ability to adapt to the changes happening in the workplace, both locally and overseas.

TVET in the Industrial Revolution 4.0

The 4IR is a widely used but often misunderstood concept. Not just a term that impacts the use of technology in the workplace, the 4IR has now evolved into a broader concept that refers to technology that applies to all sectors that combine the physical, digital and biological worlds.
These technologies include (among others) cyber–physical systems, the Internet of Things (IoT), artificial intelligence (AI), cloud computing, and cognitive computing.\(^{11}\)

This industrial revolution differs from past industrial revolutions in a lot of aspects. The First Industrial Revolution (1IR) was a transition from manual labor to a mechanized way of manufacturing. On the other hand, the Second Industrial Revolution (2IR) exacerbated the transfer of people, items, and ideas through the introduction of an extensive railway and telegraph. Lastly, computers, digitalization, and the internet were introduced in the Third Industrial Revolution (3IR), a completely drastic global change.

These revolutions are primarily economy affecting, but the 4IR builds from the past processes impacted the way of life. 4IR revolutionized a far wider array of technologies with applicability towards all industries and sectors in terms of economic life. In terms of way of living, the 4IR made an impact that transcended human existence by introducing artificial intelligence, cloud computing, and cognitive computing.

\(^{11}\) The term 4IR was first conceptualized to describe data exchange technologies used in manufacturing. However, it has now acquired a broader meaning (and is sometimes referred to as the “Fourth Industrial Revolution”), where it refers to technologies applied across all sectors that combine the physical, digital and biological worlds. These technologies include (among others) cyber–physical systems, the Internet of Things (IoT), artificial intelligence (AI), cloud computing, and cognitive computing. (ADB, 2021)
breakthroughs in biological science, creating objects with 3D printing, etc. It is a revolution that introduced technological breakthroughs in physical, digital, and biological spheres.

The 4IR is not only changing our world in terms of its scale but also with its speed. It took 75 years for fixed-telephone lines to reach 100 million users, while Apple apps introduced in 2008 only took three (3) years to get 100 million users.\(^{12}\)

The 4IR is also poised to affect education drastically. With the emergence of the Covid-19 Pandemic, we have seen the world of academic learning turned upside-down. It forced the people to adopt modalities that have not been considered efficient for the past years. Even in 2021, the world is still looking for ways to cope with Covid-19’s challenges towards education. Finding plausible alternative modalities in education is made possible by the 3IR and 4IR. The education sector can introduce modalities of 4IR, e.g., simulation and modeling, to augment human skills with artificial intelligence, data analytics, and algorithm, ultimately reducing efforts on time-consuming and complex tasks. This kind of education is possible through 4IR. The DET system is also possible as an alternative through the 3IR. 4IR can improve through the 4IR with simulations and artificial intelligence. In short, while the other industrial revolutions have impacted our economies, the 4IR is more pertinent to our daily lives in how we work and how we study, technically revolutionizing education.

The researchers will coin this as 4IR’s Pedagogical Revolution. With the introduction of fast computer-based learning, educators can facilitate teaching and training anywhere and anytime. The 4IR exacerbates this learning condition with the possibility of ample data storage and transfers. Now, we can store and manage data in a scale, which transcends human capacity in a level that even the people who developed the computer and internet could not possibly imagine. Learning conditions are also changing so that people do not necessarily need the skill to create all values but create technology/intelligence, which will generate these values: the 4IR changes the learning approach and even the output of learning. According to Chang and Wills, using a blended learning approach, which integrates e-learning and classroom-based learning, could increase learners’ satisfaction and performance by about 15% compared to only the classroom teaching approach.\(^{13}\)

It is time to retire from traditional pedagogies and introduce a systemic shift in education. For sure, with the persistence of the Covid-19 Pandemic, the world can no longer go back to formal learning modalities. Otherwise, it will be a health risk that is unmanageable even with the presence of vaccines. Billions of people will need to be vaccinated first to go back to a complete face-to-face learning method possible again globally. With the introduction of the PET system, which is primarily industry driven, it is a perfect opportunity to cope with industry demands that incorporate the 4IR. Furthermore, DET maximizes also other means of immersion for the students to maximize their learning.

The modalities of learning which are not mutually exclusive but need more study, coupled with the 4IR modalities of education, can undoubtedly be revolutionary learning methods that the researchers will also study in the regulatory options of this paper. Furthermore, there is no

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12 Menon & Fink. (2019). *The Fourth Industrial Revolution and Its Implications for Regional Economic Integration in ASEAN.*

13 Chang, V and Wills, G (2013) *A university of greenwich case study of cloud computing: Education as a service.*
literature available that talks, particularly about this subject matter. It is a literary gap in policy that
the researchers will explore.

TVET Pre Employment System: Benchmarking from other Jurisdictions Singapore

Effective policies are usually a product of thorough benchmarking from other jurisdictions. Global standards are even benchmarked from national best practices agreed on a multilateral level and eventually cascaded among countries as model.

Germany’s dual vocational training system has an excellent global reputation as it acts as a best practice transition between school and the workplace. The Vocational Training Act of 1969, which was updated in 2005, allows students to go to school and work at the same time as part of their knowledge acquisition. Typically, students will spend 70% of time at work and 30% at school, and most apprenticeships take around two to three years to complete. This dual vocational training system allows the students to gain meaningful employment experiences and earn a small wage as part of their contract, usually equivalent to around €300 - €600 a month while being able to contribute to Germany’s economic growth.14

After which time, students are awarded industry recognized qualification given by a Chamber of Commerce or guild. This is the standard across Germany allowing a young person who completes a placement in one state to be confident that their qualification would be accepted in another. By standardizing the structure with around half of all school leavers that go into the dual education system, many students are able to obtain the necessary training before beginning their chosen profession. Consequently, this also decreases the youth unemployment rate in Germany. In fact, the German dual studies system is so well-regarded that many young people are able to find work even in foreign countries following graduation.

Following the best practices of Germany in the DET, Singapore’s answer to the 4IR was very elaborate and included the PET system. Their independence from Malaysia was a starting point on their value towards education. According to The Head Foundation in 2016, with a strong reform culture, well-funded pre-employment education and training (PET), and continuing education and training (CET), Singapore has successfully addressed skills demand in every phase of its development15.

The PET system in Singapore has developed to be an answer of society for the learners to enter the workforce correctly. The government supports the industry and the academe. The Ministry of Education (MOE) maximizes its Institutes of Higher Learning (Institutes of Technical Education, Polytechnics, and universities). A broad array of education was provided to their learners with the introduction of the PET System. It consists of highly intensive general education, academic development, and well-rounded high-quality vocational training. About 25% of students in Singapore go to ITE for full-time study as a continuance of their secondary schooling. In 2014,

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14 Expatrio. (N.D). German dual apprenticeship system
15 National educational systems may be depicted in terms of a number of characteristics, two of the most common being institutions and qualifications. In terms of institutions, two sectors can be highlighted for Singapore, the preemployment training (PET) and the continuing education and training (CET). (Ramos & Gopiathan, 2016)
almost 90% of ITE graduates found jobs within six months of graduation (MOE, n.d).\textsuperscript{16} The aforementioned figures are attestations of how strong TVET is in Singapore.

Singapore is introducing the SkillsFuture Singapore (SSG), synergizing the PET system and their CET. The SSG as a government arm will work with the educational institutions to build a vibrant landscape of high-quality, industry-relevant training. SSG will also work closely with the industry to coordinate its skill requirements with other government agencies.\textsuperscript{17}

\textbf{TVET in the Philippines}

President Fidel V. Ramos founded the Technical Education and Skills Development Authority (TESDA) by signing the Republic Act No. 7796, also known as the "Technical Education and Skills Development Act of 1994," on 25 August 1994. This law brought together the National Manpower and Youth Council (NMYC), The Bureau of Technical and Vocational Education (BTVE), and The Apprenticeship Program of the Bureau of Local Employment (BLE). The goal of TESDA is to encourage and engage business, labor, local government entities, and technical-vocational institutions to participate fully in the development of the Philippines' workforce. Senator Joel Villanueva, who served as the Secretary of TESDA from 2010 to 2015, expanded the agency's services by launching the TESDA Online Program in 2012. The TESDA Online Program aimed to provide educational opportunities to all Filipinos at their own pace and on their own time through online courses made available through the TESDA online facility.

Senior High School, formed by implementing the K-12 curriculum in 2013, added two years of specialized upper secondary education. Then-Secretary Villanueva stated that "TVET will play a central role in the new education model that prepares students for tertiary education, middle-skills development, employment, and entrepreneurship." Amongst the three tracks that senior high school students may choose, one of which is Technical-Vocational-Livelihood.

The current status of TVET in the country, based on the latest statistics released by TESDA for the first quarter of 2021, shows that out of the 123,402 enrolled students, 191,848 were able to graduate and 160,495 were assessed, and 149,598 were certified. Statistics show that TESDA had reached 8.3 percent of its target enrollment output and 14.33 percent of its target graduate output as of March 2021. While TESDA Region V contributes the most to the overall number of graduates with a 22.04% accomplishment rate, BARMM was able to produce 3,422 graduates or 1.78% of the graduating batch even though TESDA has not set a target for this region.

\begin{tabular}{|c|c|}
\hline
\textbf{ENROLLED} & \textbf{GRADUATES} \\
\hline
\end{tabular}


\textsuperscript{17} SSG’s mission will be to drive and coordinate SkillsFuture, and promote a culture of lifelong learning in Singapore. It will maximise synergies between pre-employment (PET) and continuing education and training (CET). SSG will work with educational institutions and training partners to build a vibrant landscape of high-quality, industry-relevant training. SSG will also work closely with industry to ensure its skill requirements are met, in coordination with other government agencies. (MOM (2016)).
A study by United Nations Educational Social and Cultural Organization (UNESCO) in 2010 showed that the Philippines have some stark challenges in TVET. As cited in their paper, the challenges are “poor coordination and cooperation between implementers, industry, commerce and stakeholders (European Training Foundation, 2003); lack of alignment between technical qualifications earned in vocational schools and with degrees from colleges (Kuczera, Kis & Wurzburg, 2009); lack of funding (Hoeckel, 2008); lack of awareness or limited knowledge of TVET programmes (Quay Connections in OECD/CEPI, 2009); and, being regarded as second
class education and for less fortunate or less intelligent individuals (Tilak, 2002).” Some of the challenges identified by UNESCO are still persisting and needs to be addressed for a developed TVET system in the country. To this end, TESDA continues to improve its national development plan.

TESDA National Development Plan 2018 – 2022

The Philippines, through TESDA has formulated the National Technical Education and Skills Development Plan (NTESDP) 2018-2022, which encourages different sectors to participate and come up with policies and programs that may contribute to the Philippines’ human capital development. The NTESDP plans to meet the demands of the different sectors involved and gears towards a globally competitive workforce and sustainable and inclusive growth for the country by enhancing the capabilities of Filipino employees.

The major challenges identified by the NTESDP are:

• advent of the Fourth Industrial Revolution which will accelerate the convergence of industrial technology and information technology and will pervade all facets of human activities
• meet the very huge demand for skilled and conscientious workforce in the priority industries identified by the NTESDP
• deliberately and affirmatively address the needs of the Filipino workforce who have been excluded and left behind by a fast growing Philippine economy, which largely focused on major urban areas and the formal employment sector.

The NTESDP has three strategic responses to the prevailing challenges of TVET: Agility, Scalability, and Flexibility and Sustainability. Agility refers to the quick and creative ways to adapt to the technological advancements brought by 4IR. To meet the demand for competent and committed workers in the priority industries, which expect to provide higher economic value and significantly larger job markets, NTESDP plans to upscale the TVET programs through Scalability. Flexibility and sustainability pertain to NTESDP’s action to social equity and poverty challenges, especially for the labor force in the urban areas, left by the fast-paced development of the Philippine economy. The priority industries of TESDA are the following:

• Tourism
• Construction
• Information and Communications Technology (ICT) and IT-BPM
• Transport, Communication and Storage
• Agriculture, Fisheries and Forestry (including agro-processing)
• Manufacturing (including food manufacturing and electronics)
• Health, Wellness and other Social Services

18 UNESCO. (2010). Increasing Public Awareness of TVET in the Philippines: A Case Study
Poverty is strongly associated with educational attainment, and Filipinos from the primary sectors often lack education and skills, leading them to land jobs with minimal income. Flexibility aims to provide lenient educational approaches for people in the primary industry to assist them in getting more familiar with the industry and technology breakthroughs at a pace that allows them to learn more successfully. On the other hand, sustainability ensures development wherein the people’s natural resources will not deplete. Their income levels are adequate to lift them out of poverty. Their lifestyle is respected and allowed to develop on their terms.

TVET Pre Employment and Dual Training System in the Philippines

The Head Foundation states that the Philippines is facing the listed challenges below in its TVET sector.21

- Induce greater participation of the private sector to reduce government expenditure while improving efficiency.
- Continue supporting community-based programs while reviewing the efficiency of some school-based ones
- Reduce government costs through the rationalisation of TVET providers
- Develop appropriate performance standards for TVET providers
- Update and enforce accreditation standards
- Foster closer school-industry links, in particular for school-based programs to improve the relevance of curriculum to labor market needs
- Increase industry participation in the TESDA Board
- Improve targeting of financial assistance for TVET.

The Philippines’ industry, government, and academe have introduced the PET and DET system concept to cope with the challenges. In the context of the Philippines, the PET System aims to prepare the students in such a manner that they meet the industry qualifications perfectly. This training involves training with the industry personally and ultimately being absorbed in the company’s workforce after graduation. There are currently several items to be accomplished to this end, primarily PET Program Manuals which should contain the (1) Name and Definition of the Qualification; (2) Competency Map of the Qualification; (3) Curricula and Training Plans and the (4) Assessment and Testing Procedures.22

The Department of Agriculture (DA), Philippine Chamber of Commerce and Industry (PCCI), and the PCCI Human Resources Development Foundation will jointly develop and implement the PET System in Agriculture Qualifications to address the challenges. Agriculture is one of the industries focused on by the PET system of the PPCI. It manifests through a Memorandum of Agreement signed by the parties on 25 January 2021.

Although there are current efforts to implement the PET system in the Philippines, the project is still in its infancy stage in the country. The PCCI has only been able to approach this with certain government agencies, but a whole-of-government approach is still lacking. Secondly,

22 PCCI HRDF. (ND). PCCI signs MOA with Department of Agriculture to Implement Pre-Employment Enterprise Based Training (PET) Programs in Agriculture Qualifications.
shared ownership of the project is still being discussed among stakeholders since this is an industry-led initiative. It is ideal that regardless of who led the idea, it is supported because it is for the betterment of the Filipino people. Unlike DET, the PET system does not yet have a legal framework enacted by Congress for continuity and proper enforcement.

Currently, there is limited open-source literature about the PET System in the Philippines. The only ones available currently in 2021 are news articles of PCCI and DA. The researchers have included requests for public documents from PCCI regarding PET.

The DET System in the Philippines, on the other hand, is more developed. Anchored from the Republic Act 7686, otherwise known as the Dual Training System Act of 1994, the government intended to increase the TVET’s responsiveness to industry demands. The DET is a scientifically determined mix of on-site practical and classroom theoretical instructions. A cost-benefit study led by the PCCI Human Resources Development Foundation and K to 12 Plus Project showed the following benefits of the DET for industries:

1. Combined short-term and long-term benefits to firms engaged in dual education outweigh the overall costs, ranging from 20 to 75% higher than average costs
2. Firms in the Manufacturing and Hospitality sector benefit the most from dual training, outweighing costs by at least 30%
3. Large and medium-sized firms benefit the most from dual training

With these findings, it is only logical that the industries in the Philippines adopt the DET framework for their training. However, this is not always the case. A study by UNESCO in 2005-2006 sampled Systems Plus College Foundation (SPCF). Out of the 43 students, only 14 were able to have their training in the industry. UNESCO has identified the following challenges:

- The unavailability of industries that will match the computer technician occupational profile
- There are only a small fraction of industries that are willing to accept DTS trainees
- The weak economy that results in the industries’ less inclination to invest in vocational education and training
- The DTS is not embedded within the structural organization or with the day-to-day work of most of the industries
- The lack of support of some of the school’s employees in the system’s implementation
- The inadequate role of TESDA in strengthening the linkages of the educational institution and the industries

The challenges posed by UNESCO continue to persist today. The article by TESDA itself reported that the Australia-New Zealand Chamber of Commerce needs to develop a dual training program where college students will have longer working hours in companies.

Regardless of all these challenges, the Philippines can only move forward. It is undeniable that these new learning modalities will impact the learners in the country, especially TVET. The government, academe, and the industry should ensure the students are well equipped with

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23 SEA-VET.NET. (2016). Cost-Benefit Study On Dual Training System In The Philippines
25 Chris Ward, board member of the Australia-New Zealand Chamber of Commerce, said that there is a need to develop a dual training program where college students will have longer working hours in companies (TESDA (2016))
employable skills, work knowledge, and proper attitude. The three stakeholders must strive to revolutionize the practice and value of learning, cope with the 4IR's Pedagogical Revolution.
III. METHODOLOGY

Conceptual Framework

Multistakeholder Consultation:
Relevant Government Agencies, Private Sector, and Technical Vocational Institutes

- Analysis of the Problem/Context: Context analysis of the current system
- Identification of Options: Regulatory, non-regulatory, and/or mixed options
- Evaluation of Options: Causal and proportionality analysis
- Planning for Implementation, Monitoring, and Evaluation: Implementation strategy and proportionality analysis
- Advocacy: Outreach programs to put forward measures

Research Design

This policy paper is primarily a qualitative study that employed research methodologies to create substantive academic and policy value. The researchers have chosen a purely qualitative method as an approach to codification because a quantitative or mixed study is not plausible yet, given the Philippines’ infancy of the PET system. Several interviews that the researchers conducted gathered insights from the experts in the TVET sector in the Philippines. These include representatives from national government agencies, academic institutions, and the private sector to substantiate the Philippines’ experience in TVET, DET, and the PET system.

Ultimately, the researchers will give regulatory and non-regulatory policy options for the effective and efficient implementation of the PET system in the Philippines, incorporating all of the recommendations and feedback by the three stakeholders. The researchers employed a basic Regulatory Impact Assessment (RIA) with fundamental cost-benefit analysis.

To triangulate/validate the data and to further generate policy ideas from the multi-stakeholders, the researchers will also employ a documentary analysis from open-source and documents provided by the respondents.

Sampling Method

The sampling method used in this paper is purposive. For government stakeholders, the agencies chosen are those involved with TVET. For industry stakeholders, the researchers chose business chambers that are dealing with PET and DET. For academe, the researchers chose institutions directly training students using DET and the new learning modalities in the Philippines.
Research Instrument

The interviews followed a semi-structured research framework wherein the researchers only had guide questions/topics to help the interview. However, if the interviewer deems it proper to deviate from the guide questions, it is allowed as long as it substantiates the research's purpose.

Following the principles of doing proper research, all guide questions/topics follow the research objectives. Below are the guide questions/topics for the interviews:

- General introductions
- What activities or projects does your institution have for TVET in the Philippines?
- The value proposition for the academe/government/industry in developing TVET as a sector in the Philippines
- Challenges of the academe/government/industry in developing TVET as a sector in the Philippines
- Adapting Philippines’ TVET to the 4th Industrial Revolution
- Pre-Employment Training System in the Philippines
- What policy recommendations can you recommend in developing the existing policies for PET in the country?

Limitation of the Study

This study was only limited to the Philippines’ PET and DET Systems. Policy options, on the other hand, are flexible to regulatory and non-regulatory options. This paper was written from June to August of 2021. The gathering and processing of data are limited. Hence, the regulatory impact assessment of the research will only be in the basic form. Consultations with the stakeholders will also be within the duration of the study.

In terms of practicality, with the Covid-19 Pandemic, data gathering was only be limited to online methods. The researchers employed a Premium Account of Zoom Meeting for the interviews.

Ethical Considerations

The researchers will only use the data gathered in this research for this policy paper. Use of the data beyond this paper shall be informed and consented to the specific persons interviewed. The nature of participation in this research is also voluntary. The researchers solicited consent from participants before the interview for recording and conduct of the interview.
Lastly, reporting and advocacy of the paper shall put due credit to the proponents, contributors, and consultants of this paper and the respondents. They have participated and gave their ideas in the paper.
IV. RESULTS AND DISCUSSION OF POLICY OPTIONS

This Chapter of the paper presents the results and discussions of policy options using data gathered from available online sources and through consultations with relevant stakeholders from the industry, academe, and the government.

Problem Analysis

Circling back to the Objectives and Statement of the Problem of this policy paper, the researchers have identified three (3) major problems in the TVET sector, i.e., (1) outdated training system, (2) lagging on Industry 4.0, and (3) government, academe, and industry coordination and cooperation.

The interviews have validated the literature review that identified the abovementioned problems, and through stakeholder inputs, the researchers have identified with specificity the underlying issues that needed actions. Below is a problem tree that specifies the core problem and its corresponding effects and causes. The problem tree also connects directly to the policy options recommended in the latter sections of this Chapter.

<table>
<thead>
<tr>
<th>Effect 1: TVET system will not respond to practical skills needed by the industry.</th>
<th>Effect 2: Inconsistent training regulations resulting in an ineffective learning system/affect quality of training education and skills development training.</th>
<th>Effect 3: Less motivation for the industry resulting in fewer investments and fewer options for our TVET graduates even abroad because of the lack of skill</th>
</tr>
</thead>
</table>

**Core Problem:** The Philippines' TVET system does not quickly respond to the needs of the industry, often being overtaken by the fast-changing technological development (4IR). Limited participation of other stakeholders in the administration of TVET and the slow and untimely updating of training regulations that meet the global standards exacerbates the lag.

<table>
<thead>
<tr>
<th>Cause 1: Limited participation of private sector/industry in TVET governance</th>
<th>Cause 2: Updating the timeline of training regulations and competencies cannot cope with the industry's demand.</th>
<th>Cause 3: TVET Industry Stakeholders not incentivized to do business in the Philippines</th>
</tr>
</thead>
</table>
Policy Options

To address the aforementioned problems, the researchers identified three (3) policy options, i.e., (1) amendment of TESDA Law to delegate assessment responsibilities to the business sector/business chambers, (2) annual updating of training regulations, and (3) Market Incentives for the Industry Stakeholders.

Option 1 - Amendment of TESDA Law to delegate assessment responsibilities to the business sector/business chambers

The government agency mandated to set direction, promulgate relevant standards, and implement programs geared towards a quality-assured and inclusive technical education and skills development certification system is TESDA. It was established with Republic Act 7796, otherwise known as the "Technical Education and Skills Development Act of 1994". Among its mandate is the skills and competency assessment of the TVIs and Technical Institutes of TESDA.

In the interview with industry representatives led by the PCCI and TVI stakeholders, the researchers have solicited challenges, including the limited participation of the business sector/industry in TVET governance. This results in the following repercussions:

1. Not all sectors are represented adequately to the industry consultation of TESDA

The NTESD of TESDA aims to create a medium-term plan for the middle-level workforce. Its priority is to create a competitive and ready workforce to cope with the current global labor market. Nonetheless, the industry consultation of TESDA does not cover all the relevant industries in the Philippines. Otherwise, the country would have already caught up with the 4IR.

Currently, TESDA is prioritizing seven sectors, i.e., tourism, construction, IT-BPO, transportation, manufacturing, wellness, and agriculture. It is evident that not all industry sectors are accounted for. Hence, the other sectors are overlooked. As mentioned by TESDA in their interview with the researchers, several training regulations for the different sectors are currently being updated and revisited.

Updating the TESDA Board of Industry will help cope with the current demand of the global labor market in upskilling and right-skilling the students of TVET in the Philippines. TESDA should relay extensive consultations to the other sectors as well. Reforms will provide a new perspective in the training, assessment, and overall regulation. Additionally, TESDA Board must also have training and programs related explicitly to TVET. For instance, the German-Philippine Chamber of Commerce and Industry created an Industry Placement Committee composed of private companies, non-governmental organizations, technical vocational institutes, and individual experts in TVET to review and assess the current TVET students in Marawi. Representation of the various industries in the Philippines, specifically the private sector, will encourage others to develop the TVET sector in the country.
An in-company trainer may help facilitate the training of TVET in the industry, which will know what their company needs precisely. TESDA may coordinate with in-company trainers in technical level consultations.

2. **Legal limitations on the participation of the industry in the assessment of competency and skills framework of TVIs**

As part of its mandate, TESDA is assessing the skills and competency frameworks of TVIs and TIs. The recommendation is also to cope with the demands of the 4IR and other developments in the industry. TESDA, as the instrument of the government, plays a centralized role in the administration of TVET policies in the country. By law, they are the only ones permitted to conduct such assessments. The assessment should be industry-driven to cope with the demands of the industry like 4IR. However, the legal barriers of the law pose a challenge for the private sector/industry to participate in conducting a direct assessment of the competency and skills framework of TVIs. Germany employs their business chambers to do the necessary assessments. Decentralizing some of TESDA functions could empower the industry to lead in the abovementioned aspect. However, amending legislation, the law that created TESDA (R.A. 7796), is a lengthy process.

<table>
<thead>
<tr>
<th>Effect 1.1: The industry stakeholders might outsource or retrain the hired personnel, which will add cost</th>
<th>Effect 2.1: Programs implemented by TVIs may be inconsistent with the actual needs of the industry and possibly be inconsequential.</th>
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</table>

<table>
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<tr>
<th>Effect 1: TVET policies and training are not aligned with the needs of non-priority industries.</th>
<th>Effect 2: Ineffectual conduct of the assessment of competency and skills.</th>
</tr>
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</table>

**Core Problem:** Limited participation of private sector/industry in TVET governance

<table>
<thead>
<tr>
<th>Cause 1: Not all sectors are adequately represented in the industry consultation of TESDA</th>
<th>Cause 2: Legal limitations of the law on the participation of the industry in the assessment of competency and skills framework of TVIs.</th>
</tr>
</thead>
</table>

| Cause 1.1: Prioritization in the development of training regulations based on the | Cause 2.1: Centralized system of government and interpretation of the law is | Cause 2.2: Amendment of the law is very challenging in the PH. |
1. Revisit R.A. 7796 or TESDA Act of 1994 (Section 25) and re-examine the need to decentralize TESDA’s functions, i.e., competency assessment and certification.

The research recognized the importance of assessment for TVIs and graduates of the TVET Sector. Hence, the researchers believe that there is a need to re-examine certain functions of TESDA, specifically in evaluation and assessment. The Republic Act No. 7796, also known as the TESDA Act of 1994, set the guidelines and objectives of TESDA. Notably, Section 25 of the TESDA Act, also known as "Coordination of All Skills Training Schemes" emphasized the pivotal role of TESDA in assessing and evaluating programs. Affirmingly, House Resolution 182 created the TESDA Philippine TVET competency assessment and certification system (PTCACS), reiterating the role of TESDA for assessment.

In the interview with the TVIs and industry, the respondents highlighted the current best practices. The Partnership of TVIs and various industry stakeholders enables the students to be equipped with the industry's latest technology. The industry shares its equipment. Conversely, the industry was able to continue the training of their employees with the assistance of the TVIs, which facilitates the training. The Kto12 Project conducted by the GPCCI and PCCI brought together the companies and schools to realign the curriculum to the particular courses perceived relevant by the industry. The industry is an essential player in this spectrum.

Furthermore, in Germany, the business chambers are the ones contracted for the assessment because they are the ones who have the technical expertise and equipment to conduct such assessments. They also serve as external auditors because they are not proponents nor recipients of the training regulations. As mentioned in one of the interviews, "you can not check your paper." Lastly, this will force the training output to adjust to the industry and market standards.

Therefore, the researcher recommends amending R.A. No. 7796, Section 25 to explore delegating the function of assessment and evaluation to the industry sector. Upon discussion with the multi-stakeholders, various challenges had been identified, specifically on the assessment and evaluation of TVET students. The efforts conducted by the multi-stakeholder in upskilling and right-skilling the students of TVET to cope in the global labor market shows that industries have the knowledge and expertise to evaluate and assess the current needs of the TVET sector. The industry can provide the students the necessary skills to cope with the current trends of the labor market, distinctly the 4th industrial Revolution.
2. *Expand the priority sectors based on the needs of the regional and local industries through regular assessment and consultation.*

In amendment of the pertinent laws and issuances of the government, the priority sectors may be expanded and account for the other sectors also. The researchers propose that the Philippines follow the best practices of the German government, wherein the business chambers are employed with the assessment. With such involvement, TESDA and the industry should have more intensive industry consultation with the local and regional initiatives.

The Industry Board of TESDA can lead this, strengthened by the mechanisms of the business chamber like the Education Task Force made for the PET System.

**Option 2: Annual updating of training regulations**

Change is the only constant thing that exists, and the Philippines is not an exemption from all the developments happening around the world. However, stakeholders mentioned during the interview that the Philippines is falling behind in terms of global competitiveness. The researchers have identified the following problems that relate to the challenge the country is facing.

1. **TESDA has a different timeline in terms of updating its training regulations compared to the industries.**

   TESDA has mentioned that they update their training regulations every three (3) years, whereas the industry members revise their training regulations yearly. This is a problem as the education sector could find difficulty in coping with the current trends if the training regulations are outdated.

2. **Skillset mismatch**

   The stakeholders have mentioned that a skilled workforce is important in the country's competitiveness as it attracts foreign investors. Skilled labor is an incentive for the industry because it assures management that capable personnel can handle and develop their business in the country. Conversely, lack of skilled labor disincentivizes the companies to allocate their investments in the Philippines, especially on highly technical work in line with the 4IR.

   Lack of regular and frequent updating of training regulations will result in the persistence of the status quo on the skillset of the Filipino people, always behind. The skills and training of the students should match the requirements of the industry.

3. **Global Pandemic and the 4th Industrial Revolution**

   The COVID-19 Pandemic has challenged the Philippines’ health sector and the country's education system. One of the stakeholders has mentioned that this Pandemic has produced two positive outcomes: people gaining awareness in terms of health and safety, and the country being forced to move towards digitalization despite being a global
crisis. However, there is still an evident gap between the Philippines' technological progress and other countries.

<table>
<thead>
<tr>
<th>Effect 1.1: The Philippines will become less competitive globally in terms of technological and skills advancement</th>
<th>Effect 2.1: Disincentivizing the industry resulting in lack of foreign investors in the country</th>
<th>Effect 2.2: Lack of job opportunities for skilled graduates</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Effect 1: The Philippines cannot cope with the global trends brought by the 4th Industrial Revolution and the Pandemic</th>
<th>Effect 2: The skills taught by the TVIs do not match the needs of the industry</th>
</tr>
</thead>
</table>

Core Problem: Updating the timeline of training regulations and competencies cannot cope with the industry's demand.

<table>
<thead>
<tr>
<th>Cause 1: Rapid technological advancement</th>
<th>Cause 2: Policy of TESDA's training regulations is updated every three years while global best practice is every year</th>
<th>Cause 3: Limited and inconsistent linkage among the government, academe, and industry stakeholders</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Cause 1.1: Fourth Industrial Revolution and demand of the market</th>
<th>Cause 2.1: TESDA Circular No. 046-2021</th>
<th>Cause 3.1: Government - Political limitations, e.g., change in administration and policies, Industry - business priorities of the sector not aligned with the government, Academe - differentiation of TVIs and TESDA training institutes</th>
</tr>
</thead>
</table>

TESDA Board has, as a matter of policy, set to review promulgated TRs that have been in effect for three (3) years or more or even earlier if there are significant changes in the program based on the needs/requirements of the industry.
Recommendations:

1. **Collaboration between the Industry Board of TESDA and Education Task Force of PCCI**

   TESDA’s Industry Board would be the ones to examine and review the demands of the country’s industry. In contrast, the Educational Task Force would look into the current state of the Philippine educational system and make actionable recommendations and proposals focusing on areas for development to address the needs of 21st-century learners.

   The researchers proposed this to fill the gap of academe in consultations and decision making. The Education Task Force of the PCCI is composed of experts in the field of education and TVET. They are currently studying how the PET system can be appropriately introduced to the Philippine educational processes.

2. **Upgrading to technology-driven modalities of education**

   The fast-paced changes brought by the 4th Industrial Revolution and the Pandemic have urged the country to shift its attention to alternative and modern training modalities other than the regular face-to-face interaction.

   To cope with these developments, the Philippines must also be able to ride the waves of technological advancement by being up-to-date with the current educational trends, particularly in digitalization such as Virtual Reality (VR). Investing in VR equipment is cost-saving as companies no longer have to spend so much on different types of machinery for training. The TVIs and TESDA could instead conduct the training through VR. It will help the students and companies in terms of training and assessing the qualifications of a company applicant.

   The education sector can also introduce modalities of 4IR, e.g., simulation and modeling, to augment human skills with artificial intelligence, data analytics, and algorithm, ultimately reducing efforts on time-consuming and complex tasks. These modalities of education can also circumvent the need for face-to-face training.

   However, despite the solution, we recognize that budget is a big consideration because procuring these items is very costly. Discussions with the industry may include negotiations on these training modalities.

3. **Yearly updating of training regulations of TESDA**
The researchers have discovered that TESDA reviews its training regulations every three (3) years as a matter of policy. In contrast, the global best practice, particularly in Germany, is to update the training regulations every year.

Germany has become one of the EU's most robust economies because of the big brand names and their commitment to promoting skills and skilled labor essential for economic development. Germany is putting a premium on its skilled labor by updating its training regulations yearly. They even retorted, “not yet enough” because advancement in technology happens every day.

As the Philippines shifts to industry-driven education and training system, the researchers propose for TESDA to adhere to the global standard to address the gap between the skills taught in the TVIs and the demands of the industry. Today's trends are tomorrow's news. As one of the stakeholders has mentioned, the field diversifies every day, and the government has to catch up.

Option 3: Market Incentives for the Industry Stakeholders

The researchers recognize that there is a lot to learn from the experiences of the Dual Education and Training, In-Company Trainer, and other innovative projects and policies for the TVET sector. The industry stakeholders should be incentivized enough to achieve a flourishing industry-driven TVET sector and continue to improve their efforts.

In the interview with industry stakeholders, the researchers have found out that apart from challenges experienced by the companies, they would appreciate more incentives in the field as the Philippines move forward to developing the TVET sector.

1. Local training does not meet business standards

The companies mentioned a mismatch in training resulting in them spending again on training their personnel despite the training provided by the TVI's/ TESDA. The business standards are also fluid and change rapidly. These considerations make it more difficult for the TVIs to cope with the demand of the industry.

If the labor pool does not meet the industry's standards, it disincentivizes them to conduct their business. Furthermore, should they set up their business in the Philippines, they will need to either retrain and equip these employees that meet their demands or outsource personnel that can provide the necessary skills. These outsourced employees are often from outside the country. Philippine jobs are not going to Filipino people. A manifestation of this is the jobs generated by the casino industry of China in the Philippines that saw the surge of Chinese citizens.

2. Retention of Employees in the Philippines

The retention period of employees to a company is very thin. The global opportunities for skills far outweigh local options, which is why trained and skilled Filipinos go abroad for employment. More opportunities outside the country is not necessarily a negative connotation. The researchers would like to highlight that financial security for the
Filipino people is of primary importance. If they can secure themselves by going abroad, it is a valid option. Furthermore, skilled labor opportunities in the country are not as developed as globally, wherein they harness the 4IR and other developments in technology.

In connection to the above situation, the researchers also want to emphasize the need to up-skill and right-skill the Filipino people to have a better retention period in the companies abroad.

3. Favorable Business Environment

For companies, it is hard to decide where to put investments. A consideration is a favorable business environment, e.g., does the Philippines have the appropriately skilled labor to accommodate your business, does the Philippines have a market for their products, can equipment be tested, repaired, or even procured with proper regulation, and tax exemptions. Those are just some considerations businesses related to TVET are considering in putting their investment in the country.

<table>
<thead>
<tr>
<th>Effect 1.1: PH will continue to lag in skilled labor for the 4IR</th>
<th>Effect 2.1: The economic impact of TVET driven businesses on the PH is minimal</th>
<th>Effect 3.1: The unemployment rate for PH TVET will keep rising</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect 1: With a limited market, the TVIs will not be motivated to train skilled labor properly</td>
<td>Effect 2: There will be limited investments in the country that caters to TVET</td>
<td>Effect 3: There will be fewer jobs for PH skilled labor because of limited businesses</td>
</tr>
</tbody>
</table>

Core Problem: TVET Industry Stakeholders not incentivized to do business in the Philippines
**Cause 1**: Mismatch in the training of the PH skilled labor

**Cause 2**: Retention of employees in the company is very low

**Cause 3**: Unfavorable business environment

| Cause 1.1: Rapidly changing technology, requiring more multi-stakeholder coordination, and lagging of training institutes in terms of the requirements of the industry | Cause 2.1: Better employment opportunities outside the Philippines | Cause 3.1: Limiting regulatory framework in the Philippines and the lack of proper hard and soft infrastructure in the PH. |

**Recommendations:**

1. **PET and DET System Consultation and Ratio of Classroom is to Field Education**

   The researchers recommend extensive industry and company-specific training standards that apply the PET system consultation model with the DET model of the classroom to field ratio.

   The PET and DET systems require an initial agreement with the client company/ies. The researchers recognize the benefit of immersing the students in the field. It is being implemented in the country, but this mode of learning is limited due to legal considerations. The Philippines cannot employ trainees not of legal age, and training beyond six (6) months might go against legal parameters on contract employment in the country. This legal requirement should be carefully threaded in the bilateral agreement, satisfying the Philippines' legal obligations. The parties should state that this engagement is purely training and fieldwork follows the minimum safety standards even if they are just students.

   On the other hand, the consultation system is pervasive with the PET system because training is tailored to the company’s needs. Consultation and updating is a regular practice to better fit the students to the company’s demands, which are changing as the market demands also change. The researchers would also note that TESDA is doing similar consultations but only every five (5) years.

2. **Industry and Student Tenure Bond**

   The researchers propose a bond agreement between the TVIs/ technical institutes of TESDA and the company where enrollment to employment (E2E) is applied. The
purpose for enrolment is employment/ business setup. It is then a quid-pro-quo situation should companies that avail of the PET system be assured of employment from the trainees. They will not need to train the new hires anymore on the particulars of the job. The company taught the students beforehand through the period rendered to the company as trainees required by the PET system.

With up-skilled and right-skilled employees, the work will be more efficient and generate higher income. The company will save the fund with fewer resources allocated for training.

3. Upgrading Equipment and Technology

The Philippine government should take the initiative to make the business environment more favorable to them, filling in the gap to the 4IR. To properly cope, there is a need to improve companies’ equipment, which they may lend to the TVIs for training. Equipment of such caliber needs necessary licenses like export control licenses to be imported/ exported.

The Philippines has the appropriate export control regime to accommodate the import of highly technical equipment and components. If the modality of teaching is needed to improve TVIs, the companies may coordinate with the DTI for the appropriate license of such items.

Option 4: Mixed Multi-Stakeholder Three-Pronged Approach

The mixed option combines all the three (3) options identified implemented by a robust and coordinated effort by the government, industry, and the academe. The listed action points for this option are the following:

4. Amendment of TESDA Law to delegate assessment responsibilities to the business sector/ business chambers
   - Revisit R.A. 7796 or TESDA Act of 1994 (Section 25) and re-examine the need to decentralize some of TESDA's functions, i.e., Competency Assessment and Certification
   - Expand the priority sectors based on the needs of the regional and local industries through regular assessment and consultation.

5. Annual updating of training regulations
   - Collaboration between the Industry Board of TESDA and Education Task Force of PCCI
   - Upgrading to technology-driven modalities of education
   - Yearly updating of training regulations of TESDA

6. Market Incentives for the Industry Stakeholders
   - PET and DET System Consultation and Ratio of Classroom is to Field Education
   - Industry and Student Tenure Bond
   - Upgrading Equipment and Technology
<table>
<thead>
<tr>
<th>ASSUMPTIONS</th>
<th>AMENDMENT OF LAW TO DELEGATE ASSESSMENT RESPONSIBILITIES</th>
<th>ANNUAL UPDATING OF TRAINING REGULATIONS</th>
<th>MARKET INCENTIVES FOR THE INDUSTRY STAKEHOLDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COST</strong></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
| **Administrative Burden** | ● Legal consultation costs on the amendment of the law incurred by the industry in working with the government  
● Information obligations on the expansion of priorities to the other sectors | ● Reportorial cost by the TVIs to show their progress in implementing the annually updated Training Regulations  
● Regular reporting of technological demands by the industry to the government | ● Management of constant consultations and coordination with TVIs and government  
● Administrative requirements of monitoring of agreement with the TVIs and reportorial conditions to the government  
● Reportorial requirements for compliance of strategic trade (highly technical equipment procurement) |
| **Substantive Compliance Costs** | ● The hiring of operational staff by the industry/business chambers to handle assessment and certification | ● Availing the expertise of members of industry board and education task force  
● The hiring of operational staff by the | ● The hiring of the skilled students when they graduate because of the bond  
● Cost of managing the students that |
<p>| • Availing the service of technical and industry experts for the assessment | government for the annual review of existing and more technical regulations as expanded by the re-prioritization |
| • Procuring and maintaining of new facilities, equipment, and related infrastructures | • Procuring and maintaining of new facilities, equipment, and related infrastructures |
| • Office supplies | • Office supplies |
| • Lobbying of the sector to be included in the expanded priorities | • Acquisition of VR, simulators, online modeling, and other advanced forms of training modalities for TESDA training institutes and qualified TVIs |
| • The cost incurred on recurring government-industry meetings and consultations | • Cost for the implementation of training regulations to TVIs |
| | • Cost for hiring in-company trainers and virtual training developers |
| | • The hiring of staff to intensively monitor in-company training and the training of students |
| | • The hiring of compliance staff |
| | • Procuring and maintaining of new facilities, equipment, and related infrastructures |
| | • Office supplies |
| | • Procuring necessary training materials for the students training on the field |
| | • Acquisition of new and advanced equipment/technology |
| | • Safety equipment and gears for hazardous work |
| | • The external cost of more intensive and particular training from the TVIs tailored to the company’s requirements |</p>
<table>
<thead>
<tr>
<th>Direct Financial Cost</th>
<th>Administration and Enforcement Cost</th>
</tr>
</thead>
</table>
| ● No fees transferred to government agencies | ● Cost of publicizing and familiarizing new regulations  
- The cost incurred by the government in ensuring full compliance of industries and TVIs  
- Visit of the government for audit/ compliance checks | ● Cost of publicizing new training regulations for TVIs  
- Visit of the government for audit/ compliance checks | ● The hiring of government personnel for strategic trade compliance  
- Outreach to stakeholders (government and industry)  
- Visit of the government for audit/ compliance checks |

**BENEFITS**

| One-off |  
|-----------------------|---|
| ● Government streamlined in compliance with R.A. 11032 or Ease of Doing Business Act of 2018  
- Industry-driven assessment  
- More transparency in the assessment because a third | ● Increased global competitiveness in the country  
- Coping with the barriers made by the Covid 19 Pandemic  
- Equipping trainers with the technological capacity to deliver more advanced training | ● Better and more immersive training for the students  
- Compliance with the STMA and other global export control standards for the acquisition of highly advanced technology |
| Party does checking | • Eased regulatory burden for the TVIs as they will have to coordinate instead with the industry  
• Enabling confidence building among stakeholders  
• Development of business chambers in the country to support the government efforts for economic growth | • Increased industry confidence |
|---|---|---|
| Recurring | • Encouraging industries to invest in TVET  
• Increased employability among TVET graduates  
• Strengthened role of industries in TVET administration  
• Improved government-industry collaboration  
• Enhanced competitiveness of the industries as they need to | • Annually updated training regulations that follow global standards  
• Boost the confidence of investors and stakeholders to invest in TVET in the country  
• Updates not only with the latest education trends but also with the new technologies available  
• Lessen the cost in company retraining | • Associated productivity gains and reduction of workplace inefficiency  
• Assured employment for the students  
• Assured quality employee hiring  
• Improved availability of company-specific training by TVIs  
• Enhanced availability of information for government by regular reporting |
| be up to date with new technological trends                  | Reforms in the education system and improved modalities of training |
| Regular acquisition of proper equipment by the industry       | The stronger relationship amongst stakeholders                   |
| Assurance of regularly trained assessors that are on the field itself | Highly-skilled graduates                                          |
|                                                               | Availability of regularly updated data for future policy          |
|                                                               | The decline in skillset mismatch                                   |
|                                                               | Reduction of safety, quality, and labor concerns                   |
|                                                               | The lessened unemployment rate for the skilled labor force by ensuring E2E is accomplished |
|                                                               | Investors confidence in the Philippines as a good business hub for highly technical business fields |
|                                                               | Improved market efficiency by allowing the market to develop with the academe |
|                                                               | More comprehensive macroeconomic benefits due to productivity and growth brought by the dynamic TVET sector in the country and practical coping with the 4IR |
|                                                               | Increased FDIs and liquid investments                              |
Proportionality Analysis:

*Based on the initial analysis, the option that has the highest cost is:*

Option 4: Mixed Multi-Stakeholder Three-Pronged Approach

*Based on the initial analysis, the option that has the highest benefit is:*

Option 4: Mixed Multi-Stakeholder Three-Pronged Approach

*Therefore, the recommended option is:*

Option 4: Mixed Multi-Stakeholder Three-Pronged Approach

Option 4: Mixed Multi-Stakeholder Three-Pronged Approach is the most costly and comprehensive approach out of the four (4) regulatory and non-regulatory options but also the one that yields the highest set of benefits. Furthermore, resolving the core problem will have to be approached from different angles and levels. Choosing an option will only leave a gap for further action. The conversation of which option is the best should instead be directed to prioritization and proper pacing of regulatory and non-regulatory solutions.
V. IMPLEMENTATION, SYNTHESIS, AND CONCLUSION

Visual Characterization of the Implementation Plan

<table>
<thead>
<tr>
<th>Amendment of TESDA Law</th>
<th>REVISIT R.A. 7796 OR TESDA ACT OF 1994 (SECTION 25) AND RE-EXAMINE THE NEED TO DECENTRALIZE SOME OF TESDA’S FUNCTIONS, I.E., COMPETENCY ASSESSMENT AND CERTIFICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EXPAND THE PRIORITY SECTORS BASED ON THE NEEDS OF THE REGIONAL AND LOCAL INDUSTRIES THROUGH REGULAR ASSESSMENT AND CONSULTATION</td>
</tr>
<tr>
<td>Annual updating of training regulations</td>
<td>COLLABORATION BETWEEN THE INDUSTRY BOARD OF TESDA AND EDUCATION TASK FORCE OF PCCI</td>
</tr>
<tr>
<td></td>
<td>UPGRADING TO TECHNOLOGY-DRIVEN MODALITIES OF EDUCATION</td>
</tr>
<tr>
<td></td>
<td>YEARLY UPDATING OF TRAINING REGULATIONS OF TESDA</td>
</tr>
<tr>
<td>Market incentives for the Industry Stakeholders</td>
<td>UPGRADE TECHNOLOGY, EQUIPMENT, AND AND</td>
</tr>
<tr>
<td></td>
<td>PET AND DET SYSTEM</td>
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<tr>
<td></td>
<td>INDUSTRY BOND</td>
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<tr>
<td></td>
<td>STUDENT TENURE</td>
</tr>
</tbody>
</table>

Implementation Strategy

1. Amendment of TESDA Law to delegate assessment responsibilities to the business sector/ business chambers

Who will enforce the option?
Technical Education and Skills Development Authority

How will the option be enforced? Is there a duplication of effort in the enforcement process?

1.1 Revisit R.A. 7796 or TESDA Act of 1994 (Section 25) and re-examine the need to decentralize some of TESDA’s functions, i.e., Competency Assessment and Certification

1.1.1 Review Section 25, Republic Act No 7796 also known as the TESDA Act 1994
1.1.2 Conduct Policy consultation for the Amendment of the RA No 7796 with the policy and industry stakeholders
1.1.3 Review RA No 7796 and conduct assessment on the current competency assessment and certification program and projects.
1.1.4 Draft propose amendment of Section 25 and standardize guideline of competency assessment and certification base on the recommendation of the following agencies:
a. Chamber of Commerce/Private Sector
b. TVIs
c. Non – profit Organization (NGO specifically advocating TVET)

1.1.5 Updated provision shall be published on and by the following:
a. Official Gazette; or newspaper of general circulation
b. TESDA Website

1.1.6 Upon publication
a. Stakeholders shall comply with the amended provision

1.1.7 Establish an industry-led council under the business chamber to develop mechanism for competency assessment

1.2 Expand the priority sectors based on the needs of the regional and local industries through regular assessment and consultation.

1.2.1 Convening of national, regional and local based joint task force composed of representatives from TESDA and other concerned government agencies, industry, and the academe
a. Establish the mandate, plans, and programs of the joint task force to review and identify new set of priority sectors

2 Annual updating of training regulations

Who will enforce the option?
Industry Stakeholders
Public and Private TVIs
TESDA

How will the option be enforced? Is there a duplication of effort in the enforcement process?

2.1 Joint task force to meet regularly to review and update training regulations

2.1.1 Collaboration between the Industry Board of TESDA and Education Task Force of PCCI

2.1 Upgrading to technology-driven modalities of education

2.1.1 Coordinate with the industry on the new technological trends to advance pedagogical practices
2.1.2 Mapping of necessary teaching and learning resources to be prioritized
2.1.3 Explore budget options with the joint task force
2.1.4 Procurement and distribution of teaching and learning resources

2.2 Design Competency Assessment and Certification, based on the new amended provision and guidelines, mandatory to include the following:

2.2.1 Forms and exam guidelines
2.2.2 Policy for examination proper
2.2.3 Guidelines for TVET students, specifically for:
   a. Completion of Field Training
2.2.4 Guidelines for TVIs in implementation or conducting of the following:
   a. Blended learning
   b. Trainers Training Needs and Requirements
   c. Facilitation of Training of the students
   d. Partnership with Private Sector and NGOs
2.2.5 Guidelines for the stakeholders for the following:
   a. Facilitation of Training of the students
   b. Guidelines for updating Assessment Tool (this should answer the following: When should there be an update of the competency and assessment tools? Who shall be involved in the update of the competency and assessment)
   c. Partnership with TVIs and Government

3 Market Incentives for the Industry Stakeholders

Who will enforce the option?
Industry Stakeholders
Public and Private TVIs

How will the option be enforced? Is there a duplication of effort in the enforcement process?

3.1 PET and DET System Consultation and Ratio of Classroom is to Field Education
   3.1.1 Establish contact with interested industries
   3.1.2 Identify the particular needs of the industry for their employees with the following considerations:
       a. Time spent in the field
       b. Allowance
       c. Equipment sharing
       d. Application of skills
   3.1.3 Tailoring of TVI curriculum
   3.1.4 TVIs enters into a contract with the industry

3.2 Industry and Student Tenure Bond
   3.2.1 Make an agreement among the Students, TVI, and industry on Enrollment to Employment with the following considerations
       a. Terms of reference
          i. Duration
          ii. Salary/ Allowances
          iii. Job description

3.3 Upgrading equipment and technology
   3.3.1 Identifying the necessary equipment, apparatus, and materials
   3.3.2 Scout for providers and set an agreement on the acquisition
   3.3.3 Apply for the necessary import permit from the government
   3.3.4 Comply with the post-shipment verifications
   3.3.5 Utilization of the equipment, apparatus, and materials
Synthesis and Conclusion

TVET is an important driving force for any economies to foster national socio-economic development. It is an avenue to generate new employment opportunities and create a productive and sustainable labor market. Hence, TVET should not just be considered as an alternative education system in the Philippines but rather be promoted as a practical pathway to proper employment. The Philippines has much to leverage on TVET as a developing nation. There is a big potential for the Philippines to harness the essential skills of its population that could contribute to the country’s rising economy. In this paper, the researchers identified three major problems for TVET in the country. The industry cannot flourish without conquering the three major challenges, i.e., outdated training system, lagging on Industry 4.0, and government, academe, and industry coordination and cooperation.

The Philippines already has a Dual Training System Act which was enacted in 1994 to strengthen manpower education and training in the country. To further improve the training modality of the current K to 12 Program, the Philippines have incorporated the German Government's Dual Education and Training (DET) System. But the potential of the DET system has not been maximized with the low number of training institutions that offer dual training, the lack of a database of participants and schools offering the program, insufficiency of scholarships for students, among other factors.

On another front, the global pandemic has forced the country to transition from traditional training system to alternative advanced learning modalities, it is not yet sufficient for the Philippines to immediately cope with the fast-changing demand of the market. Consequently, the demands of the 4th Industrial Revolution are great but will have to be met for the country to cope with global standards. Furthermore, it may seem like TVET in the Philippines is facing an arduous path, but better coordination and cooperation amongst the major stakeholders, i.e., the government, the industry, and the academe – that are considered as the key players in developing TVET in the country will solve a lot of problems.

The researchers used Regulatory Impact Analysis/ Assessment advocated by the Organisation for Economic Co-operation and Development (OECD) globally and the Development Academy of the Philippines (DAP) locally. The researchers sought the expertise of the representatives of the major stakeholders in identifying possible solutions for these challenges, and came up with the following policy options:

1. Amendment of TESDA Law to delegate assessment responsibilities to the business sector/ business chambers that encourages the decentralization of TESDA’s functions, and the expansion of priority sectors based on the needs of the regional and local industries
2. Annual updating of training regulations through the collaboration of the Industry Board of TESDA and the Education Task Force of PCCI to keep up with the current education trends
3. Market Incentives for the Industry Stakeholders to maintain and increase their efforts to build a thriving industry-driven TVET sector
4. Mixed Multi-Stakeholder Three-Pronged Approach that encompasses all three options previously identified

The researchers strongly recommend the 4th option despite the cost and level of difficulty. The researchers see it as the option that yields the highest set of benefits and addresses not just one but all challenges they have initially identified. The researchers recognize that solving only one of the problems would just create another gap. Below are the solutions raised for the 4th option:

1. Amendment of TESDA Law to delegate assessment responsibilities to the business sector/business chambers
   - Revisit R.A. 7796 or TESDA Act of 1994 (Section 25) and re-examine the need to decentralize some of TESDA’s functions, i.e., Competency Assessment and Certification
   - Expand the priority sectors based on the needs of the regional and local industries through regular assessment and consultation.

2. Annual updating of training regulations
   - Collaboration between the Industry Board of TESDA and Education Task Force of PCCI
   - Upgrading to technology-driven modalities of education
   - Yearly updating of training regulations of TESDA

3. Market Incentives for the Industry Stakeholders
   - PET and DET System Consultation and Ratio of Classroom is to Field Education
   - Industry and Student Tenure Bond
   - Upgrading equipment and technology

In terms of implementation, the system will not be implemented all at once, and the researchers have figured that it would be best if it is to be implemented in phases to create a more coherent and structured approach.

Phase 1:

- Collaboration between the Industry Board of TESDA and Education Task Force of PCCI
- Expand the priority sectors based on the needs of the regional and local industries through regular assessment and consultation.
- Upgrading equipment and technology
Phase 2:

- Revisit R.A. 7796 or TESDA Act of 1994 (Section 25) and re-examine the need to decentralize some of TESDA’s functions, i.e., Competency Assessment and Certification

Phase 3:

- Upgrading to technology-driven modalities of education
- Yearly updating of training regulations of TESDA

Phase 4:

- PET and DET System Consultation and Ratio of Classroom is to Field Education
- Industry and Student Tenure Bond

After implementation, a similar gap analysis should be done to identify further actions to be taken in improving the implementation strategy of the policy recommendation. That is a subject for another research.

In closing, the TVET in the Philippines may be facing these challenges today, but it has a great potential to create waves of positive socio-economic development for the country. The researchers figured that it could be achieved beginning with the strong collaboration amongst the major stakeholders following the thread of recommendations in this paper. Consequently, that could produce a domino effect towards the improvement of TVET in the Philippines and eventually maximizing its vast potential.
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