

# WHAT'S NEW? EXPLORING INNOVATIVE PRACTICES IN TVET

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*What can innovation bring to the changing technical-vocational education and training landscape?*

Innovation, although generally defined as an action or process of change, creating new methods, ideas, or products (Lexico, n.d.), can be described in different ways depending on context. In fact, when you search for the said term on Google, it will show about 3,290,000,000 results in 0.44 seconds.

This term, mostly a business lingo, is specifically defined in this context as “the process of translating an idea or invention into a good or service that creates value or for which customers will pay (Business Dictionary, n.d).” On the other hand, if you look into it in management lenses, it can be interpreted as “anything that substantially alters the way in which the work of management is carried out, or significantly modifies customary organizational forms, and, by so doing, advances organizational goals (Michelman, 2007).”

Additionally, we can reflect on the Philippine Quality Awards (PQA) definition, where innovation is considered as “making meaningful change to improve services, processes, or organizational effectiveness and

create new value for the stakeholders,” being a breakthrough improvement in the said aspects of organizational management (National Institute for Science and Technology, 2017).

With these definitions, you may see how even in different contexts, innovation, is an important factor for development and transformation. The United Nations Educational, Scientific and Cultural Organization – International Centre for Technical Vocational Education and Training (UNESCO – UNEVOC) further pointed out that for most institutions worldwide, innovation is the “main driver of future social and economic development (2019).”

Innovation brings new ideas, new solutions, and new opportunities we can use to address rapid transformational changes brought by different technological, economical, and even environmental factors. We have developed a number of new machines that ease our work processes; new products that are in trend with our current lifestyles; and new practices that help mitigate and eliminate to some extent,

effects of global warming and climate change over the years.

With all these changes, come differences in our workforce and skills development landscape as well. In the advent of the said changes, especially now with the Fourth Industrial Revolution (4IR), the approaches in understanding and developing the technical-vocational education and training (TVET) sector continue to vary. What are the innovative ways we are working on now for TVET?

### INNOVATION IN TVET LENSES

In connection with the extensive and multi-faceted meaning of innovation, UNESCO – UNEVOC, considering definitions from different sectors and practices, explains that innovation “comprises substantial change in the way TVET is practiced by an institution, making it progressively more relevant to its economic, social and environmental context (2019).”

Dissecting this general TVET innovation meaning, we can focus on the ‘substantial changes’—the systematic alterations to new processes that are seen not only theoretically, but also performatively; and the relevance of these changes to the stakeholders of the sector, TVET systems, and networks.

This definition simply means that TVET institutions could be actors of innovation, bringing **new and better products, services, and processes** for partners and students for better and more efficient delivery of tech-voc training and/or programs; and at the same time, users of innovation, where they utilize

the innovative practices and products to **operationalize TVET**.

### Zooming into the TVET Definition of Innovation

In practice, this particularly refers to the transformation of certain procedures towards more effective and more efficient delivery of TVET programs and addition of value and positive impact to tech-voc trainees and other sectoral partners through innovation such as reviewing and amending organizational operations, reinventing products, introducing a new methodology, and the like.

On the other hand, TVET stakeholders may also employ innovative practices and use new technologies or services to better the implementation of existing training and tech-voc programs. To further look into these types of innovation, this paper will look into some examples of these innovative practices:

#### Innovation in TVET products/ services

A good example of reinventing new ways to practice TVET is the “Skills for Innovation Hubs” of UNESCO-UNEVOC and different TVET providers worldwide.



Fig. 1. UNESCO-UNEVOC i-hubs logo

This project adopts an innovative systematic approach at the institutional level, “combining innovation and skills for employability, growth

and development within the institution’s environmental outreach” so the technical-vocational institutions (TVIs)’s program offerings are ensured to be most innovative and fitting to address the changing needs of the TVET sector worldwide.

#### Innovation in TVET organizational practices

UNESCO – UNEVOC in their Trends Mapping report on Innovation in TVET in 2019 further mentioned that besides introducing innovation in products and services, it is also vital to transform organizational programs in the institutions.

According to the same report, innovating project “planning, financing, human resource management, administrative structure, and internal monitoring and communication” practices may further help in strategically transforming TVET programs for the better.

In a separate report from the Asian Development Bank (ADB), additional efforts in quality management and assurance in TVET provision in the private institutions are highlighted as needed innovation in different country case studies. Internal efficiency and sustainability in TVET governing agencies should also be taken into consideration to veer away from issues concerning operational processes including over-centralization, underuse of physical facilities, etc. (2014).

Changes in both TVET products/ services and operational processes should be continuous and responsive to the current and future TVET situation, especially in the development of the skilled workforce of the world.

#### Significance of Innovation in TVET

In response to the global need for adaptation to the changing landscape, especially in TVET, innovation offers solutions to different challenges these changes bring.

Innovation plays a crucial role in achieving the global Sustainable Development Goal on education—ensuring equal access to affordable and quality TVET for all (SDG 4.3) and increasing the number of youth and adults with relevant skills for employment, decent work, and entrepreneurship (SDG 4.4).



Fig 2. SDGs 4.3. and 4.4

TVET, focused on training and educating people towards the development of their practical technical skills, socioemotional skills, and entrepreneurial skills, is a way to further empower our people, which is the main goal of the Education 2030 agenda stated in this SDG.

Regarding this, the United Nations reported that although the Southeast Asian region has the highest progress in achieving the general goals of SDG 4, they noted that significant

acceleration of initiatives should be done so we can catch up on achieving goals until 2030. Additional efforts in closing the gap in providing access to quality education across the region should also be prioritized since 2015 data show that in Thailand, 51 and 57 percent of females and 38 and 41 percent of males, respectively, achieved minimum reading proficiency, while these rates are at 96 and 91 per cent, respectively, in Hong Kong (2019).

Huge disparities like this should be eliminated if we want to ultimately achieve the personal growth of every individual and overall sustainable development for our planet.

## CURRENT TVET INNOVATIVE INITIATIVES

The following are some cases where innovation paved the way towards technical education and skills development:

### **International Efforts**

#### Information and Communication Technology (ICT) Initiatives

Following several global discussions forming the Education 2030 agenda is the recognition of the use of information and communications technology (ICT) in forwarding a new style in teaching TVET. It is believed that utilizing different ICT materials could “create transformative changes in skills development and TVET, going beyond the traditional view of ICT for increasing access to education (UNESCO, 2017),” and help achieve the global education SDG.

In fact, many declarations like of the Shanghai Consensus from the 3rd International Congress on TVET and the Qingdao Declaration during the International Conference on ICT and post-2015 education recognize how ICT could potentially level up learning experiences for TVET students and enhance the quality of tech-voc education they can access by supporting open education resources and solutions, facilitating other lifelong learning pathways, enabling online learning, and improving systems that ensure quality and recognition of learning (UNESCO, 2017).

More specifically, UNESCO cites that ICT improves TVET learning pedagogies in four ways (2017):

- 1.) **promoting life-long learning** by extending the flexibility of the platforms of learning for different types of TVET learners such as using several computer software and informal learning classrooms;
- 2.) **enhancing learning engagement and social learning** with blended learning and ‘flipped classroom’ techniques where students are given the opportunity to prepare more at home for activities that encourage them to engage with their co-learners and facilitators to deepen knowledge and social networks;
- 3.) **providing authentic and simulated learning** through new environments that could even be virtual. With the use of ICT, student can further put theory into practice in safe and

controlled environments with their learning facilitators; and

- 4.) **promoting reflective learning and knowledge creation** that paves the way to new industry and tech-voc knowledge and more innovations that can be used to further improve TVET practices.

Some TVET institutions are already injecting this innovative practice into their teaching methodologies, but the study further recommends the conduct of more extensive and specific studies centered in assessing the actual impact of the use of ICTs in these institutions.

The figures below show data on the level of ICT development in the world by region and the country-level comparison in the largest-ranging region among them. With two to about-nine range of values, the Asia-Pacific region has the largest range of ICT development in the world.

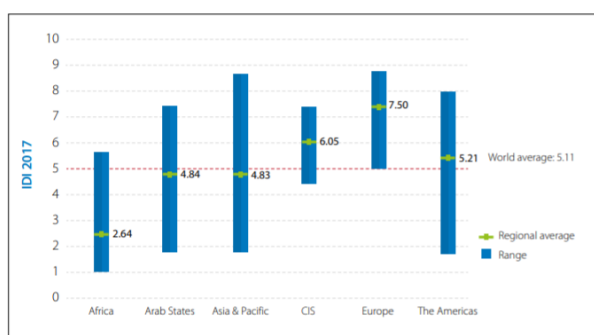


Fig. 3a. World ICT Development Index, by region (2017)

This range corresponds to additional data showing that the Asia-Pacific is home to both countries with most- (South Korea, Hong Kong, and Japan) and least- (Afghanistan, Bangladesh, and Pakistan) development in ICT.

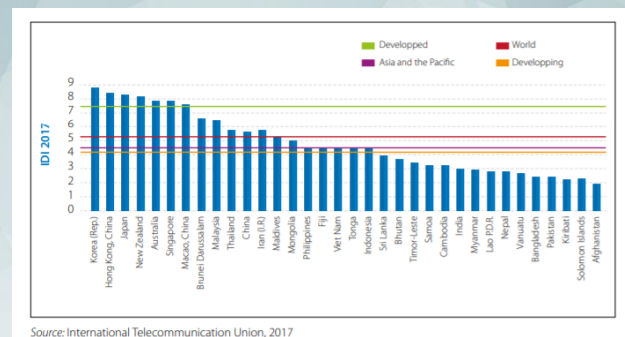


Fig. 3b. Asia-Pacific ICT Development Index, by country (2017)

### The UNESCO – UNEVOC i-hubs Project

Also reiterating previous point cited earlier, UNESCO-UNEVOC, in collaboration with different TVET institutions worldwide, innovate the way TVET programs are offered through their Skills for Innovation Hubs (i-hubs) Program. Last year, they have already piloted these i-hubs in ten locations to propagate their “commitment to innovation, specifically in the sectors of entrepreneurship, digitalization, and greening” starting in Bonn, Germany in March 28 to 29.

These i-hubs are built to optimize the TVET potential in bringing more employment opportunities, economic growth, and inclusive social development.

One of the first i-hubs pilot institution is the TESDA Women's Center (TWC) in the Philippines, also the pioneer TVET institution advocating gender-responsive and quality-assured technical-vocational programs in the country since 1998.

Ms. Maria Clara Ignacio, Center Chief of TWC further emphasized in her statement during the establishment of the Center as one of the i-hubs pilot locations, the importance of innovation of TWC in creating a conducive learning environment that will develop the skills and competencies of their trainees, responsive to today's needs. More importantly, she hopes that this innovative move as an i-hub implementer, will empower and bolster the potentials of their trainees (2019).

### TESDA-led Local Initiatives Innovation Centers

On the other hand, as the lead agency for technical-vocational education and training (TVET), the Technical Education and Skills Development Authority (TESDA), also shepherds the way to new and better TVET program-implementation in the country.

TESDA supported TWC in its journey to being recognized as one of the first i-hub implementers worldwide with the intention of better addressing issues and challenges of the current and future labor market of the country, especially in the advent of the 4IR. Being an innovation center, TWC, with the help of TESDA, is expected to help produce more skilled workers.



Fig. 5. TESDA Women's Center Façade

## Research Initiatives

Section 14 of RA 7796 explicitly defines the role of TESDA as the "research and development arm of the government" in the pursuit of relevant researches and studies in aid of policy and decision making in technical education and skills development. TESDA has developed the National TESD Research Agenda (NTRA) which intends to provide overall direction in the pursuit of research activities in aid of planning and policy decision making for the TVET sector. This encourages conduct of policy and technology researches through allocation of funding support.

Specifically, technology researches focused on studying new, advance and emerging technology that would eventually lead to innovation and development of solutions that can aid TVET instructional delivery. Further, the agency is also exploring other programs being offered by other government agencies and organizations to enhance the implementation of research in TVET.

## Innovation in Institutional Practices

Furthermore, as an agency that values a culture of innovation, TESDA continually comes up with new and better internal practices to better serve the Filipino workforce. In the past years, TESDA has reinvented several TVET projects and revolutionized processes inside the agency for more effective and efficient service.

In line with the Republic Act No. 11032, otherwise known as the Act Promoting Ease of Doing Business and Efficient Delivery of Government Services, the agency has amended several internal processes mostly for front-line services like program registration and certification system.

TESDA Circular No. 18A, series of 2019, issued last June 28, 2019 details how the agency reduced the process cycle times (PCTs) of program registration processes and the assessment, certification, and issuance of National Certificates. Program registration PCT from 20 working days was reduced to 3 working days; while the PCT for Assessment and Certification was halved, cutting the 14 working days processing time to just 7 working days.

While amendments in the general Human Resource Development agenda of the agency is also being forwarded through the adherence to the Civil Service Commission (CSC)'s requirements for the Maturity Level II of the Program to Institutionalize Meritocracy and Excellence in Human Resource Management (PRIME-HRM). TESDA Human Resources Management Division (HRMD) is currently working on the arrangements for this accreditation.

In support of the economic and environmental sustainability of regional-, provincial-, and district-run training centers of the agency, and more importantly, to encourage the youth to go in to agriculture, Secretary Lapeña issued Memorandum Order no. 202, s. 2019, where all of these training institutions are enjoined to establish mini-organic farms as applicable before the end of

last year. As of December 2019, 90.2% of all these TESDA Training Institutions (TTIs) have already complied to this directive.

Strengthening and expanding the trainers pool of TESDA in the National TVET Trainers' Academy (NTTA) in a bid to facilitate and enhance delivery of skills training, is also a big step in innovating the TVET pedagogy. The agency continues to rev up and increase access to Trainers' Methodology (TM) training programs to aspiring TVET trainers and assessors.

#### Innovation in External Relations and Programs

Extending the services of the agency and embodying the TESDA Abot Lahat mantra calls for the intensified partnership and engagement to other external clients and service-providers. TESDA continues to connect with different organizations to create and implement new TVET programs for more Filipinos that need skills training, livelihood, and jobs. The following are only some of the latest projects of the agency in partnership with several national line agencies, private companies, and non-government organizations:

- 1.) **Implementation of the programs under the Fourth Industrial Revolution (4IR) Framework.** TESDA established to guide TVET players in addressing industry and labor force needs in the advent of the 4IR. Among the biggest projects under the 4IR Framework are:

- a. **Funding of the Tulong Trabaho Fund**, recently enacted by law through the Republic Act no. 11230, provides funding for necessary training programs critical to new and emerging skills relevant to the 4IR.
- b. **Implementing Dual Training System (DTS) Programs and Enterprise-based Training (EBT) Programs** to elicit more industry participation in practical skills training and employment of TVET students. Currently, TESDA is reviewing the Implementing Guidelines (IG) of the DTS to streamline its implementation. A partnership with the Bureau of Internal Revenue (BIR) is also in place to help incentivize private companies that collaborate with TESDA in implementing the DTS and EBT.

- 2.) **Adopting the "Adopt-and-Adapt strategy"** in drafting competency standards (CS) and training regulations (TR) to benchmark them with international standards and methodologies also helped the TESDA Qualifications and Standards Office (QSO) shorten the process cycle time (PCT) in drafting the CS and TRs. Extensive consultation and partnership with different industry boards, the academe, and the labor sector, is being done to achieve this.



3.) **Innovative projects** that utilize different technologies such as online platforms are also being employed by TESDA to improve TVET program implementation. One of the best examples of this is the development of the **911TESDA**—a free web-based linking program that aims to provide employment opportunities for certified TVET graduates and deliver skill-service needs of individuals, households, and enterprises connecting to the website. This was launched last July 2019. Other innovations in different areas of TVET program-implementation are among the ways we can catch up with the changing landscape of the sector.

## UNESCO – UNEVOC’S RECOMMENDATIONS

UNESCO – UNEVOC recommends the following based on their literature review and virtual conference from several TVET stakeholders globally. They divided their recommendations into three levels: system, policy, and institutional.

### System-level Recommendations

1.) **Engagement with other TVET players** could be intensified through the development and reinvention of several platforms such as local associations and councils, so they can benchmark needs of the sector and work on them hand-in-hand.

2.) **Support mechanisms empowering TVET actors**, especially training centers, should be further increased so all stakeholders of the sector are optimizing their potentials and working on innovations that will better the implementation of tech-voc programs.

### Policy-level Recommendations

- 1.) **Efforts in internationalization of TVET programs** to ensure maximum and innovated strategies slated in policies to implement and promote tech-voc programs should be promulgated.
- 2.) **TVET policies that support development of mechanisms identifying different TVET metrics** such as skills demands, Labor Market Information Systems, and up-to-date curricula should also be in place.
- 3.) **Specific TVET legislations ensuring entrepreneurship practices** in TVET programs should also be created so they could establish steady incubator- and income-generating activities that could induce more innovative and entrepreneurial practices.

### Institutional-level Recommendations

1.) **Concrete action plans instituting efforts to innovate TVET programs**, especially in training institutions should be forwarded so institution-specific innovations that consider their own objectives, internal operations, and other factors will be developed.

- 2.) **Human resource management innovation** should also be considered so TVET players ensure that they capacitate and motivate their employees to be active actors of innovation and good implementers of TVET programs.
- 3.) In connection with improved human resource management, **enough capacity-building programs** that entice TVET trainers and curricula-developers to create more innovative teaching and learning processes should be given enough time and resources.
- 4.) **Finding alternative funding sources** to support the development and implementation of innovations in the training centers is also advisable.
- 5.) **Propagating a learner-center and practical learning environment** in the training centers is helpful in enhancing student engagement and grounding them to solve real-life problems.
- 6.) **The use of ICT** like distant learning technologies and the like is expected to help increase accessibility and improve quality of TVET teaching.

## WAY FORWARD

Although a lot has already been done, innovation should be a continuing practice and mindset, always thinking and acting on new and better ways to approach things for the development of TVET. TESDA should continue to foster an innovative environment and further intensify the implementation of these innovative products, services, and practices in service of the Filipino labor force.

Based on the UNESCO – UNEVOC recommendations listed above, the agency, in particular, could:

### System-level Entry Points

- 1.) Strengthen the existing **Recognition of Industry Bodies (RIBs) Program** that will serve as a good avenue where TESDA and the industry stakeholders may discuss and collaborate for new TVET programs; and
- 2.) **Place better monitoring mechanisms** on several TVET players, especially the training institutions, TESDA can better see what and when interventions are necessary in bolstering TVET program-implementation. There should be specific office-in-charge within TESDA that shall ensure the realization of initiatives related to innovation.

### Policy-level Entry Points

- 1.) Focus on **streamlining local efforts on innovation** so better policies on internationalization could be considered and developed later on. The agency may **establish policies on enticing local participation** of TVET institutions in the **development of innovative programs and practices**;
- 2.) **Review and improve skills need anticipation (SNA) studies** to support new policies and programs based on current and future needs of the workforce and the industry; and

- 3.) If applicable, **legislate** policies encouraging the **establishment and sustenance of entrepreneurial efforts** in training centers for self-sustainability of these institutions.

#### Institutional-level Entry Points

- 1.) **Provide assistance** (financial and such) **in placing virtual and learner-centered environments** for TVET trainees in TTIs for better learning and participation;
- 2.) **Advocate the use of ICT** in TVET teaching so learners get to use up-to-date technologies that may help them learn more, apply theory into practice, and understand how to better address real workplace concerns; and
- 3.) In support to the policy on the development of innovative programs and practices, TVET institutions, especially those TESDA-administered, should **develop their own clear and workable action plans** on how they will lay these out in their own centers. TESDA should, in turn, monitor and capacitate these TTIs in implementing their innovations.

Additionally,

- 1.) TESDA can formulate a framework which can serve as guide in institutionalizing better policies and programs that push innovation in the Philippine TVET sector. Detailing what, how, and where resources of the agency are to be utilized for introducing and sustaining revolutionary TVET services and practices in this framework should be considered.
- 2.) Following this, allocation of the agency's budget and resources: in the conduct of additional research in innovative programs and processes, procurement of new equipment, development of innovative facilities and training centers, support to existing innovative programs and practices in TVET institutions—both public and private, and others is also recommended.

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