

Digital Knowledge Sharing in TVET

Dr. Abbes Sebihi¹⁾
SEAMEO VOTECH

Abstract— Digital technologies are reaching ever further into remote parts of the world, changing how people access, use, and create information and knowledge. Knowledge sharing is important in improving the quality of training and skills development in the Technical Vocational Education and Training (TVET) institutions. In this borderless world, information technology enables knowledge sharing activities to be carried out more efficiently, quickly and widely. On this purpose, the Regional Knowledge Platform has been designed as a knowledge and stakeholder platform to join forces and pool resources on TVET in South East Asia. It offers easy access to all relevant information on Technical and Vocational Education and Training (TVET) and TVET initiatives across the region. It is designed for continuous learning, regional interaction and sharing outcomes.

Keywords: *Digital, Knowledge Sharing, TVET*

I. INTRODUCTION

Digital technologies have changed how organizations work, creating new jobs and replacing others. For workers, this means re-skilling themselves in order to thrive in a high-tech working environment (UNESCO-UNEVOC, 2013).

For educators, this means integrating ICT in skills development, not just in the course materials but also in course delivery. Technology can make it easier to deliver TVET to more people. More than 80% of the youth populations are now online (ADB 2015). Students can use their own digital devices to access courses through the internet. Skills for technology-oriented jobs are also best acquired in a high-tech learning environment. As of today, more than two-thirds of students at an Engineering Department at a University in Saudi-Arabia, for example, chose popular social media platform Facebook as their preferred way of knowledge and information-sharing in an academic context, too, as show findings from a study conducted (Balubaid 2013).

According to Bimbe et al, (2015); the next 15 years will see a rapid acceleration in new ways of creating, finding, and sharing, knowledge, and this will mean new opportunities and challenges for development agendas and effort s worldwide. Some estimate that by 2020, up to 100 billion devices will be connected to the internet, and that by 2025, nearly all of the world’s population will be online.

Moreover, through new technologies there are fewer barriers to joining in, knowledge creation is becoming more social and participative, and the line between consumer and producer is blurring.

Most countries in Southeast Asia are now positioning technical and vocational education and training (TVET) in the mainstream of education system thus becoming a priority in their education agenda to support the socio-economic development of their respective nation (Paryono 2015).

As teaching and learning are becoming increasingly dynamic and changing more rapidly, ICTs need to be fully integrated into all parts of TVET to avoid being simply an

“add-on” (UNESCO, 2016). Likewise, four steps may be identified: plan, build, create, teach (ADB 2017).

Knowledge-sharing, to begin with, may be defined as “the process of exchanging knowledge (skills, experience, and understanding) among researchers, policymakers, and service-providers” (Tsui 2006). The distinction between knowledge sharing versus information sharing is based on the former’s two-way - rather than one-way - communication between interacting participants, resulting in exchange rather than transmission and receiving (Savolainen 2017).

Besides that, RKP provides a lasting space to facilitate, harmonize and consolidate TVET (Technical Vocational Education and Training) stakeholder cooperation and exchanges within Southeast Asia (SEA), and beyond. This process of knowledge sharing and collaboration is expected to result in improving TVET systems, education and training of TVET personnel, standards/curricula, along with promoting good practices and continual learning in the region. The platform strives to involve stakeholders in order to set the ground by creating the necessary preconditions for TVET Quality Improvement and Regional Harmonization in South East Asia.

Opportunities for Knowledge Sharing and development

As a principle, when individual knowledge, i.e. sharing of job-related knowledge, is being transformed into organizational knowledge, it has a better chance of being retained within the organization (Pangil, Nasurddin 2009). Likewise, recent research conducted in the Indonesian university context shows that lecturers assume a key role in creating a knowledge-sharing culture and environment encouraging students (Sriratanaviriyakula, El-Den 2017).

Digital technologies will create opportunities for more effective development in the following ways (Bimbe et al. 2015):

- **Access and availability:** If the growing range of digital materials are made open and available it will improve information access, lower barriers to market entry, and enable a much wider cross section of the

population to acquire knowledge skills and credentials through online learning .

- Quality and relevance of knowledge: digital technologies have the potential for high impact by disrupting current regimes of knowledge production and publication, and enabling poor regions to become producers rather than net recipients of relevant development knowledge about themselves.
- Information overload and homogenization of Knowledge: Efficiencies in making knowledge available and accessible have reduced, in the minds of the public, the need for information intermediaries and professionals. When most information needs can be fulfilled online, the increasingly relevant skills that go into curating materials, making it visible, and helping to guide people to what they need, become largely invisible.

Key Success Factors in Introducing Digital Learning in TVET

First of all, it has been found that, vocational teaching, as well as learning, is linked to its “teaching context”, comprising its specific vocational subject, the setting, desired objectives and outcomes, the type of qualification, learners’ profiles, level and the consideration of various learning styles (Faraday et al. 2011).

The successful introduction of digitalization is more likely if there is (ADB 2015):

- A holistic approach, so that technology in TVET institutions is an integral part of a wider digital strategy with compatible technology at all levels of education;
- Use of public-private or public-public partnerships to create a vision and raise funds for the introduction of new technology; future-preparedness and adaptability of facilities and equipment to prevent them from becoming obsolete and to allow for the incorporation of new technology;
- Blurring of the distinction between formal and informal learning, the inclusion of technologies that do not require literacy (e.g., radio and videos), and local language content; and
- Teacher and manager training to maximize the use of new technology and the adaptation of teaching materials for ICT-enabled delivery.

More generally, the following factors have proven decisive in online collaboration tools as a type of now widely-used ICT-based cooperation: history, outcome expectations, perceived organizational or management support and trust (Paroutis, Saleh 2009).

It is particularly important to take these key elements into account in order to ensure success in any tool implementation. A study conducted involving University lecturers in Malaysia shows that more attention as well as an investment should be directed towards user-friendliness of e-

communication tools in order to facilitate the online knowledge-sharing process (Hassandoust, Kazerouni 2009).

The Regional Knowledge Platform in South East Asia

There has been an increase of online-based networks, referred to Communities of Practice (CoPs), recently - including, but not limited to - the IT and education sector. As Sharrat and Usoro point out as early as 2003, for CoPs “to maximise their value in knowledge management terms, practitioners need to understand the mechanisms and processes that underpin members’ decisions to share what they know”.

In line with this development, the RKP on TVET is institutionally established in the SEAMEO work structures; under the leadership of the SEAMEO Regional Centre for Vocational and Technical Education and Training (VOCTECH) and supported by the German government’s Regional Cooperation in TVET Programme (GIZ-RECOTVET).

In line with SEAMEO VOTTECH’s objective of becoming a “knowledge-sharing organization”, implying the development of a knowledge-sharing platform (The World Bank Group 2016), it primarily caters to all eleven SEAMEO member countries comprising ten ASEAN members’ viz. Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam, along with Timor Leste.

Its vision is to contribute to the improvement of the quality of TVET systems in Southeast Asia and beyond characterised by qualified TVET personnel, demand-side orientation and increased regional harmonisation; and RKP has the mission to provide relevant, up-to-date and action focused knowledge on TVET personnel development for Southeast Asia and beyond through effective knowledge sharing. The target groups of the RKP include TVET personal, TVET policy makers, TVET research community and the private sector, considering as a secondary target group.

RKP Format

The platform formats are categorised into active and passive formats: Passive format refers to opportunities for users to access and look up knowledge and information. The RKP’s passive formats include publications and materials, the conference section, an event calendar, communities of practice, partner resources and databases. They ultimately aim to facilitate contact and networking.

Active formats refer to opportunities for users to directly take part and contribute to discussions, network, learn directly and potentially co-create knowledge. The platform, in this regard, offers e-courses, communities of practice (e.g. based on RECOTVET technical working groups and RCP research groups), forums (e.g. taking up discussions of the Regional Policy Dialogue) and articles. The operationalization of active formats will require content alliances with other regional stakeholders given the need for their moderation to win and secure a stem of committed users.

Objectives of the Platform

- Provide easy access - by i.e. operational links and a user-friendly website - to all relevant and predominantly actionable knowledge and information on TVET and TVET country information, systems, policies, events, news and initiatives across Southeast Asia on a single platform (short-term).
- Provide a platform for continuous learning, regional interaction and cooperation amongst TVET stakeholders in Southeast Asia, including, but not limited to TVET practitioners (medium-term).
- Share outputs and strengthen the continuity of regional policy dialogues (long-term).

II. CONCLUSION

Information and Communications Technologies offer the potential to profoundly affect people's educational opportunities. However, it is also important to note that ICTs are at very differing stages of adoption and development in different countries, and while experiences are starting to converge in some cases, the differences between and within countries remain great.

International TVET community should be cautious about copying solutions from certain contexts and expecting them to work well in more resource-constrained environments. In order to achieve success, interventions need to be adapted to the local context and led by local needs and knowledge.

REFERENCES

- [1] Asian Development Bank (ADB) (2017). "Preparing TVET for the Digital Age". Development Asia. ADB.
- [2] Asian Development Bank (ADB) (2015). Preparing TVET for the Digital Age. Manila: ADB.
- [3] Balubaid, Mohammed A (2013). "Using Web 2.0 Technology to Enhance Knowledge Sharing in an Academic Department". *Procedia – Social and Behavioural Sciences*. 102. 406-420.
- [4] Bimbe N.; Brownlee J.; Gregson J.; Playforth R.(2015). *Knowledge Sharing and Development in a Digital Age*. Brighton: Institute of Development Studies.
- [5] Faraday, Sally; Overton, Carole; Cooper, Sarah(2011). *Effective teaching and learning in vocational education*. London: Learning and Skills Network (LSN).
- [6] Hassandoust, Farkhondeh; Kazerouni, Mehdi Farzaneh (2009). "Implications Knowledge Sharing through E-Collaboration and Communication Tools". *Journal of Knowledge Management, Economics and Information Technology*. Available from: <http://www.scientific-papers.org> (15 June 2018).
- [7] Pangil, Faizouniah; Nuasurddin, Aizzat Mohd-(2009). "Knowledge and the Importance of Knowledge Sharing in Organizations".
- [8] Paroutis, Sotirios; Al Saleh, Alya (2009). "Determinants of Knowledge-Sharing Using Web 2.0 Technologies". *Journal of Knowledge Management*. 13 (4). 52-63.
- [9] Paryono, Paryono (2015). "Approaches to preparing-TVET teachers and instructors in ASEAN member countries". *TVET@Asia*. 5. 1-27. Available: http://www.tvet-online.asia/issue5/paryono_tvset5.pdf (23 July 2015).
- [10] Savolainen, Reijo (2017). "Information sharing and-knowledge sharing as communicative activities". *IR Information Research*. 22 (3). 1-20.
- [11] SEAMEO VOCTECH Brunei Darussalam (2018).- *Regional Knowledge Platform. Growing TVET Together*. Available from: <https://tvset-rkp.net/> (1 June 2018).
- [12] Sharrat, Mark; Usoro, Abel (2003). "Understanding-Knowledge-Sharing in Online Communities of Practice". *Electronic Journal on Knowledge Management*. 1 (2). 187-196.
- [13] Sriratanaviriyakula, Narumon; El-Den, Jamal (2017). "Motivational Factors for Knowledge Sharing using Pedagogical Discussion Cases: Students, Educators, and Environmental Factors". *Procedia Computer Science* 124 (2017) 287-299.
- [14] The World Bank Group (2016). *Becoming a-knowledge-sharing organization. A Handbook for Scaling Up Solutions through Knowledge Capturing and Sharing*. Washington, D.C: The World Bank Group.
- [15] Tsui, Lily (2006). *A Handbook on Knowledge-Sharing: Strategies and Recommendations for Researchers, Policymakers, and Service-Providers*. Edmonton: University of Alberta Press.
- [16] UNESCO (2016). *A Strategy for Technical and-Vocational Education and Training (TVET 2016 – 2021)*. Paris: UNESCO.
- [17] UNESCO – UNEVOC (2013). *ICTs for TVET.- Report of the UNESCO- UNEVOC online conference. 14 – 28 May, 2013. Moderated by Nik Kafka; "Teach a Man to Fish"*.