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COMPETENCY AND NEEDS OF TECHNICAL VOCATIONAL TEACHERS IN THE DIVISION OF AKLAN

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ABSTRACT

This research aimed to assess the general and technical competency of Technical Vocational Education (TVE) teachers in the schools Division of Aklan. It also determined the competency needs and gaps in teaching TVE in the implementation of the program. The study was participated by 118 TVE teachers. Mixed-methods research design using sequential strategy was employed in this study. The Philippine Professional Standards for Teachers was used as guide for assessing the general level of competency while self-assessment guide of TESDA was used to assess the level of technical competency. The quantitative data were used as bases in the conduct of focus group discussions to triangulate the responses in the survey. The general competency level of TVE teachers was described as "highly proficient" while the technical competency level was reported on the "advanced" level. The gaps identified were: (1) teacher-subject mismatch, (2) inadequate skills in applying math and science principles in technical training, (3) struggle in promoting understanding of global labor markets, (4) inability to lead workplace communication (5) lack of content knowledge and pedagogy, (6) lack of competence in assessment and reporting, (7) insufficient trainings related to area of specialization, and (8) expired and unaligned national certificates (nc).The competency needs identified were:(1) activities that would enhance competency, (2) motivation and opportunities to acquire/enhance, and apply competency, and (3) renewed professionalism and rejuvenated teaching advocacy and calling.

Keywords: *technical vocational education, general competencies, technical competencies*

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INTRODUCTION

The ever-changing educational landscape in the Philippines has brought dynamic innovations in teaching and learning. These changes had kept teachers on their toes to embrace these changes to remain relevant in the 5th industrial revolution and to lead the 21st-century learners who are critical thinkers (Gepilla, 2020), creative, communicative, and collaborative—these challenges made teaching one of the most complicated jobs today.

It is believed that learner success is a pinnacle in the teaching-learning direction of every education theory. How a student acquires knowledge using approaches and strategies of a certain theory is paramount in the process. Thus, the focus and the roles of both the teacher and the learner are critical to the study of needs analysis and the propriety of applying approaches and strategies in a given context.

The researcher of this study has observed that technical vocational education (TVE) is taught in the Division of Aklan by specialists; however; these teachers have limited opportunity to undergo skills training in their respective schools due to insufficient maintenance and other operating expenses (Areza, 2020). Gempes et al. (2018) revealed in their study that Department of Education (DepEd) teachers experienlced inequity in attending seminars and training.

It was also noted that only few could avail of these seminars and training. Although the Technical Education Skills Development Authority (TESDA) provides free training, faculty cannot actively take part due to their voluminous workload and class schedule and other functions. Unfortunately, despite these possibilities for teachers to enhance their careers, just a minority have taken them. As a result, teaching TVE may not be successful, as the curriculum demands faculty to have established proficiencies in order to provide quality education.

The need for TVE teachers to strengthen their teaching skills is a must to facilitate the swift development of research in the DepEd, which is in urgent need to improve people's quality of life. To become a research-based institution that implements research-oriented strategies and capitalizing on instructors' expertise, teachers' fundamental excellence, competence, and industry awareness are evaluated so that gaps may be recognized and adequate solutions can be provided.

Consequently, the existing competencies of TVE teachers must be appraised. In this way, it would be easier to find out what needs to be changed, improved, or updated to evaluate the actual state of teachers' knowledge, attitudes, skills, and strong aspects of their practice and their weaknesses (Stronge &Tucker, 2016).

The study, therefore, assessed the existing TVE teachers' teaching in an identified Technical-Vocational school in the schools Division of Aklan. It likewise described the level of competencies in teaching the subject in terms of seven domains of Philippine Professional Standards for Teachers (PPST) (DepEd Order No. 42, 2017) vis-a-vis the Basic competencies of the TESDA program (TESDA, nd).

Research Questions

Specifically, this study answered the following questions:

1. What is the demographic profile of TVE teachers in the Division of Aklan in terms of:
    1.1. gender;
    1.2. age;
    1.3. undergraduate course and major;
    1.4. areas being taught;
    1.5. years in teaching;
    1.6. years in teaching TVE;
    1.7. trainings attended; and
    1.8. National Certificates?
2. What is the general level of competence among TVE instructors as evaluated by the instructors themselves in terms of the PPST (DepEd Order No. 42, 2017) such as:
    C.1. content knowledge and pedagogy;

C.2. learning environment;
C.3. diversity of learners;
C.4. curriculum and planning;
C.5. assessment and reporting;
C.6. community linkages & professional engagement; and
C.7. personal growth & professional development?

3. What is the level of technical competency of TVE teachers (TESDA, nd) in terms of:
TC.1. leading work place communication;
TC.2. applying math and science principles in technical training;
TC.3. applying environment principles and advocate conservation;
TC.4. utilizing IT applications in technical training;
TC.5. leading small teams;
TC.6. applying work ethics, values and quality principles;
TC.7. working effectively in vocational education and training;
TC.8. fostering and promoting an inclusive learning culture;
TC.9. ensuring a healthy and safe learning environment;
TC.10. ensuring and enhancing professional practice;
TC.11. developing and promoting appreciation for cost and benefits of technical training; and
TC.12. developing and promoting understanding of global labor markets?
4. What are the gaps identified in teaching TVE in the Division of Aklan?
5. What are the competency needs of TVE teachers in the Division of Aklan?

RESEARCH METHOD

Research Design

This study utilized mixed-methods design specifically the sequential explanatory technique (Creswell, 2009). Fraenkel, Wallen, and Hyun (2013) define mixed-methodologies research as the use of the combination of quantitative and qualitative methods. In this design, the researchers initially gather quantitative data, followed by the gathering of qualitative data to supplement and refine the quantitative findings. The sequential explanatory technique is a prominent mixed-methods design strategy that generally appeals to academics with strong quantitative backgrounds (Creswell, 2009).

Population and Sample

The target respondents of this study were the one hundred ninety-two (192) TVE teachers teaching in an identified school in the division of Aklan. Using the Slovin's formula, the sample size for the teacher-respondents is one hundred eighteen (118) out of 192.

The key informants of this study were the Supervisor of the TVE program, six (6) school heads of the TVE schools and, seven (7) area coordinators of the TVE subject. A focus group discussion (FGDs) with the key informants were conducted by teleconference with the zoom program. There were two sets of FGD. The first set was intended for the Supervisor of the TVE program and the school heads while the second FGD was held exclusively for the seven (7) TVE teachers who also act as subject coordinators of the identified tech-voc schools.

Instruments

The tool was developed based on the Philippine Professional Standards for Teachers (PPST), these are a public statement of what teachers should know, value, and be able to do in their professions and is based on the National Competency Based Teachers Standards (NCBTS) divided into four professional

levels: Beginning, Proficient, Highly Proficient, and Distinguished and there are seven Domains, 37 Strands, and 37 Indicators for each Career Stage (DepEd Order No. 42, 2017). The TESDA Self-Assessment Guide was also employed in this study to measure the level of technical ability of TVE teachers. SAG was used to assess the technical competence of TVE teachers. It assesses an individual's talents, expertise, mindset, and work habits in connection to a competence element or set of competency components (TESDA, nd).

An interview guide was used in collecting the qualitative data of the study. The result from the interview was used for triangulation of the results. The interview guide was prepared when the quantitative data is available and was presented to the research expert for validation.

Data Gathering Procedure

Prior to conducting the study, the researchers secured permit from the Schools Division Superintendent in the Division of Aklan. Following the approval, copies of the endorsement letter from the Office of the Schools Division Superintendent were distributed to the six Tech-voc schools in the Division of Aklan via their school administrators, and the researcher distributed the questionnaires using a virtual survey via Google Forms as one of the most viable options for data collection during the Coronavirus disease (COVID-19) pandemic.

A virtual survey is a type of primary data collection method that involves the use of a computer and varying levels of interviewer engagement. While virtual surveys are not new, their utility was highlighted in the wake of the outbreak.

The researcher invited the TVE Supervisor, Head Teachers, and TVE Teachers of the Tech-voc schools in the Division of Aklan to the FGD.

Participants were invited to participate in an online discussion using the Zoom platform to freely discuss and share their own thoughts on the gaps in the implementation of TVE programs. The researcher provided a quick overview of the study's scope, its objectives and the initial result based on the survey questionnaire. Questions were raised to clarify the result of the quantitative survey using an interview guide. The discussion was screen recorded to ensure the completeness of information and data needed in the study. Screenshots of the discussion were taken to document the conduct of the FGD.

The FGD for TVE teachers was done in a separate schedule. There were seven teachers who participated in the discussion. The researchers made a brief introduction of the study, its objectives and the initial results. Questions were raised to clarify the result of the quantitative data using an interview guide. The teachers gave their opinions as their clarifications in the FGD.

Following data analysis, the study's final findings were presented to the respondents to ensure the accuracy of the results. The main output was presented to the management committee of the Division of Aklan during the Division Monitoring, Evaluation and Adjustment.

Data Analysis

The data were presented and analyzed using the median to represent the level of competency of the TVE teachers in the school's division of Aklan. The PPST and SAG scoring guidelines were used. The PPST was used to evaluate TVE teachers' general competency using the following scale:

Median (Md)	***Description***	***Verbal Interpretation***
1.00-1.49	Beginning Teachers	Those who have obtained the credentials required for admission into the teaching profession They have a thorough understanding of the subjects/areas in which they have been trained, both in terms of content and pedagogy.
1.50-2.49	Proficient Teachers	Those who are professionally capable in the utilization of skills necessary to the teaching and learning process. They offer targeted instructional programs that adhere to curricular and evaluation criteria.
2.50-3.49	Highly Proficient Teachers	Those who have continuously demonstrated exemplary performance in their teaching profession. They demonstrate a wide and nuanced understanding of the teaching and learning process.

3.50-4.00	Distinguished Teachers	Those who uphold the highest teaching standards based on worldwide best practices. They have an excellent ability to improve their own and others' teaching practices.

To interpret the level of technical competency of TVE teachers, the following scale was be used:

Median (Md)	*Description*	*Verbal Interpretation*
1.00-1.49	Basic	Has common knowledge or basic concepts in the field.
1.50-2.49	Limited	Has gained classroom experience or pre-service training; utilizes reference material to answer questions; is focused on learning; is expected to need help.
2.50-3.49	Intermediate	Able to complete task with minimal guidance; may need help from expert from time to time.
3.50-4.49	Advanced	Can perform tasks without assistance; is considered as "person to ask" when difficult questions arise; assists in the development of reference and resource materials in the organization.
4.50-5.00	Expert	Is recognized as an authority in the area; can provide guidance, solution, and answer difficult questions in the field; is considered as "go to" person in the organization.

Thematic analysis was used to assess qualitative data. The verbatim responses of the participants in the FGD was interpreted by providing closest possible meaning which was categorized to formulate themes. The themes represented the perceived response to questions utilized during the FGD.

Ethical Consideration

The following ethical principles as discussed in APA (2017) were observed: (1) Permit to do the study in the schools Division of Aklan and teacher-participants was secured from the Schools Division Superintendent. (2) Participants were informed that no harm would come to them in relation to the study. (3) The right to self-determination. (4) Confidentiality was maintained.

RESEARCH FINDINGS AND DISCUSSION

This section offers the results and interpretation of the data collected. The results were presented both in tabular and textual form and discussed, analyzed, and interpreted according to the information sought in the problem statement.

Demographic Profile of TVE Teachers

Gender. As to gender, there were 66 (55.9%) female TVE teachers and 55 (44.1%) male TVE teachers in the Division of Aklan.

*Age***.** In terms of age of TVE teachers in the division, 80 (67.8%) were aged 21-30, 25 (21.2%) were aged 31-40), seven (5.9%) were aged 41-50, and six (5.1%) were aged 51-60.

Undergraduate course or major. Career preparations in terms of their undergraduate course/major were mostly BSED HE/TLE consisting of 43 (36.4%) teachers, followed by BS Industrial Arts consisting of 31 (26.3%) teachers, then 31 (26.3%) teachers had "Other" courses, while only seven (5.9%) and six (5.1%) teachers consisted of BS Info Tech and BSEED/BSA graduates, respectively.

Areas being taught. The range of areas being taught by the TVE teachers in the division was Home Economic taught by 51 (43.2%), Industrial Arts taught by 36 (30.5%), Agri/Fishery taught by 14 (11.9%), and Computer and Entrepreneurship taught by 17 (14.4%) TVE teachers.

Years in teaching. The length of teaching in terms of years was generally high for five years and below with 42 (35.6%) teachers, followed by 6-10 years for 38 (32.2%) teachers, 11-15 years for 18 (15.3%) teachers. The groups who have been teaching for 16-20 years and above 30 years numbered to seven (5.9%)

teachers each, while 21-25 years only numbered to five (4.2%) teachers, and only one (0.8%) teacher had 26-30 years of experience.

Years in teaching TVE. When teachers were classified according to years of teaching TVE, 49 (41.5%) were at five years and below, 37 (31.4%) were at 6-10 years, 17 (14.4%) were at 11-15 years, while only four, six, and five teachers had been teaching TVE for 16-20, 21-25, and above 30 years, respectively.

Trainings attended. When asked about the trainings they had attended, the majority of the TVE teachers, or 73 (61.9%), had attended the INSET, while 19 (16.1%) teachers had no training at all, and 10 teachers had Trainers Methodology (TM). Those with NC-related training and those who attended Development of TVL Modules as training numbered 7 (5.9%) each, and 2 (1.7%) of the teachers had only attended webinars.

National certificates. In terms of National Certificates (NC), a large number of teachers, 49 (41.5%) had no NC at all, 34 (28.8%) teachers had HE/TLE related NC, 18 (15.3%) teachers had Industrial Arts related NC, 12 (10.2%) teachers had Agri-Fishery related NC, and only 5 (4.2%) teachers had Computer, and Entrep related NC.

Table 1. *The Demographic Profile of the TVE Teachers in the Division of Aklan*

Profile	**f** **n = 118**	**%**
Gender		
Male	52	44.1
Female	66	55.9
Age		
21-30	80	67.8
31-40	25	21.2
41-50	7	5.9
51-60	6	5.1
Undergraduate Course/Major		
BS Industrial Arts	31	26.3
BSED HE/TLE	43	36.4
BSFED/BSA	6	5.1
BS Info Tech	7	5.9
Others	31	26.3
BS Nursing	3	9.7
BSED-Other Major	15	48.3
BS Electrical Engineering	2	6.5
BS HRM	6	19.3
BS in Business Administration	2	6.5
BS in Tourism	3	9.7
Areas being Taught		
Industrial Arts	36	30.5
Home Economics	51	43.2
Agri/Fishery	14	11.9
Computer and Entrepreneurship	17	14.4
Years in Teaching		
5 years and below	42	35.6
6-10 years	38	32.2
11-15 years	18	15.3
16-20 years	7	5.9
21-25 years	5	4.2
26-30 years	1	.8
above 30 years	7	5.9
Years in Teaching TVE		
5 years and below	49	41.5

6-10 years	37	31.4
11-15 years	17	14.4
16-20 years	4	3.4
21-25 years	6	5.1
above 30 years	5	4.2
Trainings Attended		
No Training	19	16.1
INSET	73	61.9
Trainers Methodology	10	8.5
NC Related Trainings	7	5.9
Webinars	2	1.7
Development of TVL Modules	7	5.9
National Certificates		
No NC	49	41.5
Industrial Arts Related	18	15.3
HE/TLE Related	34	28.8
Agri-Fishery Related	12	10.2
Computer and Entrep Related	5	4.2

Perceived General Competency Level of TVE Teachers

The perceived competency level of TVE teachers aligned with the PPST domains was gauged based on the median (Md) and interquartile range (IQR) are, presented in Table 2. Generally, the TVE teachers reported "Highly Proficient" competency level (Md=3.0, IQR=1.0). They were "Distinguished" in the parameters of “Learning Environment and Community Linkages & Professional Engagement” with the same values for a median of 3.5 and IQR of 1.0, and were "Highly Proficient" in “Content Knowledge and Pedagogy”, “Diversity of Learners”, “Curriculum, and Planning”, “Assessment and Reporting”, and “Personal Growth and Professional Development”, Md=3.0 and IQR=1.0, for each parameter, respectively.

Table 2. *Perceived General Competency Level of TVE Teachers*

PPST Based Competencies	Median	IQR	Interpretation
C.1	3.00	1.00	HPT
Content knowledge and its application within andacross curriculum areas	3.00	1.00	HPT
Research-based knowledge and principles of teaching and learning	3.00	1.00	HPT
Positive use of ICT	3.00	1.00	HPT
Strategies for promoting literacy and numeracy	3.00	1.00	HPT
Strategies for developing critical and creativethinking, as well as other higher-order thinking skills	3.00	1.00	HPT
Mother Tongue, Filipino and English in teachingand learning	3.00	1.00	HPT
Classroom communication strategies	3.00	1.00	HPT
C.2	3.50	1.00	DT
Learner safety and security	3.00	1.00	HPT
Fair learning environment	3.00	1.00	HPT
Management of classroom structure and activities	3.00	1.00	HPT
Support for learner participation	4.00	1.00	DT

Promotion of purposive learning	3.00	1.00	HPT
Management of learner behavior	3.00	1.00	HPT
C.3	3.00	1.00	HPT
Learners' gender, needs, strengths, interests, and experiences	3.00	1.00	HPT
Learners' linguistic, cultural, socio-economic and religious backgrounds	3.00	1.00	HPT
Learners with disabilities, giftedness, and talents	3.00	1.00	HPT
Learners in difficult circumstances	3.00	1.00	HPT
Learners from indigenous groups	3.00	1.00	HPT
C.4	3.00	1.00	HPT
Planning and management of teaching-learning process	3.00	1.00	HPT
Learning outcomes aligned with learning Competencies	3.00	1.00	HPT
Relevance and responsiveness of learning programs	3.00	1.00	HPT
Professional collaboration to enrich teaching practice	3.00	1.00	HPT
Teaching and learning resources including ICT	3.00	1.00	HPT
C.5	3.00	1.00	HPT
Design, selection, organization, and utilization of assessment strategies	3.00	1.00	HPT
Monitoring and evaluation of learner progress and achievement	3.00	1.00	HPT
Feedback to improve learning	3.00	1.00	HPT
Communication of learner needs, progress And achievement to key stakeholders	3.00	1.00	HPT
Use of assessment data to enhance teaching andlearning practices and programs	3.00	1.00	HPT
C.6	3.50	1.00	DT
Establishment of learning environments that are responsive to community contexts	3.00	1.00	HPT
Engagement of parents and the wider schoolcommunity in the educative process	3.00	1.00	HPT
Professional ethics	3.50	1.00	DT
School policies and procedures	3.00	1.00	HPT
C.7	3.00	1.00	HPT
Philosophy of teaching	3.00	1.00	HPT
The dignity of teaching as a profession	4.00	1.00	DT
Professional links with colleagues	3.00	1.00	HPT
Professional reflection and learning to improve practice	3.00	1.00	HPT
Professional development goals	3.00	1.00	HPT
Over-all	**3.00**	**1.00**	**HPT**

TVE teachers in Aklan Division have consistently showed high levels of performance in their teaching practices. They show a thorough and in-depth comprehension of the teaching and learning process.

This result exhibited an improved perception of TVE teachers of their general level of competency compared to the earlier findings of Gepila Jr. (2020), where teachers only considered themselves as generally proficient. Compared to the findings of Gepila Jr., the teachers' high competence in curriculum planning in the present study support the findings of Pablo (2021). However, the present study opposes Pablo in community linkages and professional engagement.

The TVE Supervisor was asked what it takes to be a competent TVE teacher during the FGD. According to her, a competent TVE instructor is someone who is professionally equipped and trained to teach a complex subject, especially if it is industry related. Furthermore, she stated that competent TVE teachers possess the necessary attributes or talents and display appropriate teaching skills. Subject matter knowledge, pedagogy, skill processes, resourcefulness, behavior motivation, and evaluation are also expected of teachers. Professional TVE teachers attend conferences, lectures, and trainings, have strong classroom leadership, excellent speaking competence, enough content knowledge, use a range of teaching approaches or practices, and are passionate about school (Castillo, 2021).

Perceived Technical Competency Level of TVE Teachers

When asked about their perceived level of technical competency, the teachers were "Advanced" in general (Md=4.0, IQR=0.75), as depicted in Table 4. Specifically, they reported their level of technical competency as "Expert" in “applying work ethics, values, and quality principles” (Md=4.5, IQR=1.0), and "Advanced" in all other parameters such as “leading workplace communication” (Md=4.0, IQR=0.25), “applying math and science principles in technical training” (Md=4.0, IQR=1.5), “applying environment principles and advocate conservation” (Md=4.0, IQR=1.0), “utilizing IT applications in technical training” (Md=4.0, IQR=1.0), “leading small teams” (Md=4.0, IQR=0.5), “working effectively in vocational education and training” (Md=4.0, IQR=1.0), “fostering and promoting an inclusive learning culture” (Md=4.0, IQR=1.0), “ensuring a healthy and safe learning environment” (Md=4.25, IQR=1.0) and in “ensuring and enhancing professional practice” (Md=4.0, IQR=1.0).

Table 3. *Perceived Technical Competency Level of TVE Teachers*

Technical Competencies Based on TESDA Self-Assessment Guide	Median	IQR	Interpretation
TC.1	**4.00**	**0.25**	**A**
Communicate information about workplace process	4.00	1.00	A
Lead workplace discussions	4.00	1.00	A
Identify and communicate issues arising in the workplace	4.00	1.00	A
TC.2	**4.00**	**1.00**	**A**
Identify math and science manifestations in the course content and the workplace	4.00	1.00	A
Relate math and science concepts to common and workplace situations	4.00	1.25	A
Assess trainee's internalization of math and science concepts	4.00	1.00	A
Introduce further enhancements	4.00	1.00	A
TC.3	**4.00**	**1.00**	**A**
Follow environmental workplace practices	4.00	1.00	A
Contribute to improve environmental work practices	4.00	1.00	A
Recognize and report potential environmental threats	4.00	1.00	A

TC.4	**4.00**	**1.00**	**A**
Set-up work environment	4.00	1.00	A
Utilize word processing application	4.00	1.00	A
Utilize presenter application	4.00	1.00	A
Utilize spreadsheet application	4.00	1.00	A
Utilize internet and www to communicate and collect information	4.00	1.00	A
TC.5	**4.00**	**0.50**	**A**
Provide team leadership	4.00	1.00	A
Supervised team performance	4.00	1.00	A
TC.6	**4.50**	**1.00**	**E**
Observe workplace policies and guidelines	4.00	1.00	A
Observe proper conduct in dealing with learners and parents	4.00	1.00	A
TC.7	**4.00**	**1.00**	**A**
Work within the vocational education and training policy framework	4.00	1.00	A
Work within the training organization's quality framework	4.00	1.00	A
Manage work and work relationships	4.00	1.00	A
Perform a client –focused approach to work	4.00	1.00	A
TC.8	**4.00**	**1.00**	**A**
Practice inclusivity	4.00	1.00	A
Promote and respond to diversity	4.00	1.00	A
Develop and implement work strategies to support inclusivity	4.00	1.00	A
Promote a culture of learning	4.00	1.00	A
Monitor and improve work practices	4.00	1.00	A
TC.9	**4.25**	**1.00**	**A**
Identify occupation health and safety (OHS) responsibilities	4.50	1.00	E
Identify hazards in the learning environment	4.00	1.00	A
Assess risks in the learning environment	4.00	1.00	A
Develop and implement actions to ensure the health and safety and welfare of learners and/or candidates	4.00	1.00	A
Provide appropriate occupational health and safety (OHS) requirements to learners and/or candidates	4.00	1.00	A
Monitor occupational health and safety (OHS)arrangements in the learning environment	4.00	1.00	A
T.10	**4.00**	**1.00**	**A**
Model high standards of performance	4.00	1.00	A
Determine personal development needs	4.00	1.00	A
Participate in professional development activities	4.00	1.00	A
Reflect on and evaluate professional practice	4.00	1.00	A
T.11	**4.00**	**1.00**	**A**
Study and evaluate training cost components and benefits	4.00	1.00	A
Monitor conduct and results of training	4.00	1.00	A
Promote awareness of the cost and benefits of training	4.00	1.00	A

T.12	**4.00**	**1.00**	**A**
Identify current and future trends/concerns	4.00	2.00	A
Assess new developments	4.00	1.00	A
Utilize labor market information to best effect	4.00	1.00	A
Over-all	**4.00**	**0.75**	**A**

The overall technical competency result showed that TVE teachers in the Schools Division of Aklan could perform tasks without assistance; are considered "person to ask" when difficult questions arise; assist in developing reference and resource materials in the organization.

TVE teachers' perceived technical competency based on TESDA standards is generally 'Advanced' in this study. It contradicts the findings of Villanueva (2018), who showed that college-level teachers were only somewhat proficient in the various areas of the technical-vocational streamlining of the K–12 curricula.

However, it was a sad revelation during the FGD with TVE teachers that generally, the teacher-participants had not attended training seminars that could enhance their technical competency (Almerez, et al., 2019). It indicates that the school principal is unconcerned about the professional growth of his or her teachers. It was also disclosed that the teachers paid for their own trainings with their own money. This suggests that their schools do not have a budget for professional development for their teachers. As a result, other teachers began looking for scholarships. Teacher A mentioned that TVE training has always been an issue in their school and division. Teacher B and Teacher C added that developing human resources to develop them into skilled and self-reliant teachers was one of the many hindrances in the delivery of TVE (Almerez, et al., 2019). Teachers' re-training programs, according to Head Teacher B, are critical for improving and developing not only their performance abilities and knowledge, but also their technical competencies in order to effectively teach and learn.

Gaps Identified in Teaching TVE in the Division of Aklan

In this study, gaps were identified using thematic analysis of the TVE teachers and school Heads in Focus Group Discussion (FGD). These gaps include (1) Teacher-Subject Mismatch, (2) Inadequate Skills in "Applying Math and Science Principles in Technical Training", (3) Struggle in Promoting "Understanding of Global Labor Markets", (4) Inability to "Lead Workplace Communication" (5) Lack of "Content Knowledge and Pedagogy", (6) Lack of "Competence in Assessment and Reporting", (7) Insufficient Trainings Related to Area of Specialization, and (8) Expired and Unaligned National Certificates (NC).

Teacher-Subject Mismatch. Policymakers have identified teachers' mastery in teaching the subject as one of the regulatable features and crucial variables that can predict quality education. Teachers, according to scholars, are among the most essential classroom instruments for predicting students' potential intellectual development and lifetime achievements (Chetty et al., 2014). As a result, a considerable emphasis has been placed on upgrading teacher qualifications as a means of promoting student learning. According to Shafi and Sultan (2014), teachers' educational qualifications influence students' performance.

For the supervisor of the TVE program, a teacher's qualification is very important, especially in a Technical-Vocational training institution. She emphasized that *"Teachers qualification is very important in fact before a teacher can be employed he/she must pass the minimum requirements…."*

However, some instances hamper the delivery of quality education in teaching TVE because of teacher-subject mismatch. Teaching a course without appropriate training in that course has been a controversial practice that several instructors are aware of, plenty have witnessed, yet very few have spoken publicly about owing to its pervasiveness (Hobbs, 2015).

The supervisor of the TVE program added that "*Some teachers are teaching specialization subjects without proper training. This is because we lack specialized teachers to teach the subject.*"

Teacher 2 mentioned her lack of competency in handling the new TVE subject when she said:

> *"As of now, my National Certificate is not relevant anymore (Food and Bev) because the subject that I am handling now is Food Processing NCII. I was given this subject to teach even if it is not aligned to the NC that I am having because of lack of teachers to handle the specialization."*

Head Teacher B supported Teacher 2 when she reiterated, *"We have no choice, we cannot hire one teacher to teach one subject only..."*

This was also affirmed by Principal C, who said, "The principle in teaching vocational subjects is that *you cannot teach if you have not specialized in it. It also follows that students' achievements are dependent on the quality of input that the teacher delivered."*

Interventions, however are provided to address the gap. These interventions were mentioned by Head Teacher B:

> *"Should a teacher have to teach TVE subjects but a graduate of other courses, they are sent to trainings that address the needs and expertise of technical vocational training. One of the best strategies is sending them to TESDA training."*

This was supported by Principal A when she said that:

> *"Trainings were provided for them, prior to appointment they were sent to extensive trainings in Iloilo for three weeks to understand basic concept in teaching senior high school students covering core subjects and specialized subjects. Teachers were encouraged to undergo trainings relevant to the TVE subjects they would be handling. Likewise, they were encouraged to take the NC assessment and certification to ensure they possess the qualification to teach the specialized subject."*

Inadequate Skills in "Applying Math and Science Principles in Technical Training". TVE Teachers are amenable of their lack of math and science abilities which impede the delivery of TVE lessons that need math and science application.

During the focus group discussion, teachers expressed their lack of knowledge about these disciplines.

Teacher B said, "*I'm not that expert in mathematics, so yes, I really need some more training in applying mathematics and science in teaching TVE."*

Teacher D added:

> *"More training in applying my mathematical and scientific skills to technical training is something I believe I need. Because there is still opportunity for improvement. The more I participate in appropriate training or seminars, the more experience I get and the further my personal and professional development."*

Same observations were also discussed during the focus discussion of Head Teachers about TVE teachers' mathematics and science skills.

Principal A reiterated:

> *"Based on observations, most students struggle with measurement activities, such as those found in Carpentry classes. We have teachers who are Engineering graduates, so I do not see a problem with their math and science skills but rather with the teaching strategies they need to improve in order to better train students."*

Head Teacher A added:

> *"Technical training needs a huge amount of math and science in teaching measurements, size, length, width and etc. produce output. Both are needed in technical training because this is the application of something new or advance creation that helps invent new products that are expected from TVE students and that teacher must have more training on these disciplines."*

There is a growing requirement to grasp the meaning of and be able to speak on topics having a mathematical element in both every day and professional life. When learners apply mathematics to domains they are familiar with, the subject's value as a tool for understanding and modeling reality becomes apparent. Upper secondary school mathematics should be related to the study orientation selected in such a manner that it strengthens both mathematics and course-specific courses. Many of the aims of the program-specific studies need a basic understanding of mathematics (Skolverket, 2000).

Struggle in Promoting Understanding of Global Labor Markets. Despite the tough curriculum that highlights the need for all TVE graduates to be globally competitive, school heads reflected on how TVE teachers designed a learning environment to prepare their students to be globally competitive. They observed, for example, that teachers have varied teaching approaches when it comes to incorporating global market principles into their topic.

Principal A reiterated:

> *"To compensate for lack of learning resources, tools, and equipment, teachers use contextualized materials to provide students with lessons that require hands-on experience to harness their technical-vocational skills through their chosen specialization subjects, thus preparing them for the needs of the community and the global workplace. However, these materials are not always quality assured."*

Head Teacher A also said, *"The teachers are attempting to incorporate the global concepts of the market in teaching the TVE subjects by showing pictures of materials or equipment that is not available, of course, this attempt is not enough and comparable to the realia."*

Authentic objects such as foreign currencies, pottery, jewelry, clothing, and artwork, according to White and Toms (2009), can affirm the relevance of global experiences and leave an indelible imprint on a learner. This may motivate the student to learn more about the world around him or her, as well as pique the learner's interest through touch and sight.

The Supervisor insisted:

> *"Teachers must incorporate concepts of the global market in their lessons by using and manipulating materials and machines available because TVE as a subject is industry-based. That is where students understand the first concept of labor works, the global market, and the global market's relationship to the labor force."*

TVE teachers discussed how they tried to include global labor market principles into their TVE curriculum implementation in a separate focus group discussion.

Teacher D said:

> *"Personal Entrepreneurial Competency is one of the competencies we developed in TVE. The learner sets an action plan on his or her own to enhance and develop his or her PECs in Shielded Metal Arc Welding (SMAW). As a result, my lesson's notion of global markets is incorporated. They also have a Work Immersion program in which they are taught not just by the teacher but also by supervisors from various shops and businesses in the real industry."*

Teacher A reiterated, *"By allowing my students to use an updated and high-tech tool and equipment used in the actual industry in their performance task inside the classroom is a way of adopting how the global landscape of work is doing."*

Educators must educate global tolerance with the awareness that the new workforce may work for a foreign corporation in America or elsewhere as the globe becomes "flat" with products and services and people travel from one nation to another (Friedman, 2005). As a result, educators must provide pupils with global market information that will have a direct influence on their future work choices (Dowling & Welch, 2005).

Inability to Lead Workplace Communication. While it is true that TVE teachers' communication skills in the workplace (inside Laboratory) are very important in the delivery of TVE instructions, it is doubly true

that this skill is still a challenge for every TVE teacher. School Heads shared their observations about how TVE teachers struggle in their workplace communication.

According to Jurik et al. (2014), learners and instructors should communicate because verbal instructor-learner relationships and learner qualities are significant for learning motivation.

In this study, TVE teachers are observed to have a low ability in leading workplace communication.

Head Teacher A observed that:

> *"Sometimes, information and ideas are not delivered smoothly during classes. Some teachers lack communication skills, they often do code-switch to make their lessons clear for their students. What are the usual solutions if they lack vocabulary skills."*

TVE teachers also shared their difficulties in leading workplace communication.

Teacher B said, "*The challenge that I had encountered in teaching TVE includes language barrier, and the need to translate the concepts or examples into mother tongue before my students can understand my lessons."*

Teacher A added, "*When delivering my lesson, I utilized our language, "Filipino" or "Aklanon." I frequently ask my students to repeat or paraphrase the ideas or directions provided to them so I can be assured that they understand the topic."*

The TVE Supervisor, however, reiterated, *"Teachers' communication skills are expected to exceed expectation. Since we are preparing our students to become globally competitive, the role of the teacher is very big. They should communicate well in the standard language in the industry."*

There is both expressive and receptive communication going on. Faculty must be competent of listening to and communicating concepts to their students. Teachers must think clearly in order to communicate the issue. They must be able to break down tough topics for their students and break them down into simpler components and procedures. They must be able to modify their communication strategies in order to suit the needs of all learners, regardless of ability or learning style.

Lack of Content Knowledge and Pedagogy. The way teachers connect their instructional methods to their subject content determines their conceptual understanding about what they teach. The convergence or formulation of instructors' teaching competence with subject matter understanding is referred to as pedagogical content knowledge.

According to Gipps and Brown (1999), teachers need a variety of educational approaches to suit a variety of contexts. This is certainly not the case of TVE teachers.

Teacher D mentioned that:

> *"In terms of content and pedagogy in teaching TVE, I do not have the full understanding of how and what will I do to cover the range of topics so that my students can really understand well and put it into practice inside the Laboratory. Most of the time, I need to ask co-teachers who have been teaching the subject for several years for advice or turn to our school head for clarifications."*

The majority of the teachers in this study had acquired their tacit knowledge through socialization or apprenticeship, as defined by Hegarty (2000).

Head Teacher A said, *"The classroom situation and learner anticipations affects the mode learners handle activities. In a subject like TVE, the classroom atmosphere and supervision influence student learning, so pedagogy among TVE teachers must be advanced".*

Principal B agreed with Head Teacher A, and she reiterated that:

> *"An environment that is supportive and challenging fosters positive attitudes of self-esteem and motivation, and these helps to create the conditions in which technological capability can thrive. A problem-solving approach to TVE is important for developing technological literacy."*

The Supervisor of TVE program advised TVE teachers, *" Establishing technical aptitude should be arranged such that students acquire processes, principles, and abilities in a systematic rather than random manner. Master Teachers and Head Teachers are always available for mentoring".*

For policymakers, teacher quality can be defined as satisfying (or failing to achieve) a quality criteria. A trained teacher, on the other hand, may be perceived by a teacher as having good knowledge of material and pedagogy and pursuing ongoing professional development (Bolyard & Moyer Packenham, 2008).

Because the activities were based on exploration, the teacher-participants perceived TVE teaching to be demanding in general. They were also gratified because they were able to share their knowledge and abilities with their students. This shows that, despite the difficulties they faced, the TVE teachers were committed to their jobs. Furthermore, these teachers were most likely preoccupied with the task at hand.

Lack of Competence in Assessment and Reporting. Teachers get information on a student's learning growth in a number of ways. The reporting technique is used to communicate the insights gathered from assessing student learning. The goal of reporting is to provide relevant information about a student's growth to students, parents, support personnel, and other instructors.

Hill (2008) defines assessment similarly, but with a focus on students attaining their full potential: Classroom assessment's role is to improve students' learning and teachers' instruction in order to ensure that learners fulfill their individual potential.

However, this is not the situation for TVE teachers in the Division of Aklan. The majority of the school heads shared their observations about teachers' lack of competence in assessment and reporting.

Principal B said, "*Classroom observation is the usual form of assessing teachers' competence in assessment and reporting. Letters and any form of communication sent to parents to report students' progress are also checked."*

Head Teacher B added, *"Sometimes we cannot really blame the teachers for their lack of competence in assessment because some of them are not education graduates, they still need a lot of training and seminars to enhance their assessment and evaluation skills."*

In addition, Principal C shared that:

> *"One prevailing issue that even the Division Office can hardly resolve is the lack of learning materials and assessment tools designed for TVE subjects. For instance, in Grade 8 TVE subjects, teachers need to adjust the budgetary outlay since the topics are only good for 1 grading because these are designed for the TLE subject and not for TVE curriculum. Hence the teachers must look for other assessment tools on the Internet. This one factor invariably affects the teachers' performance. Added to this is the lack of relevant TVE trainings the teachers should attend to update themselves."*

Teachers must recognize that assessment is an essential in education. It has been assumed that assessment is connected to and transpires inside the teacher-student relationship.

Insufficient Trainings Related to Area of Specialization. Teacher training improves students' cognitive learning strategies and encourages the use of a deep learning strategy (Noah & Olusola, 2015) and has been demonstrated to improve students' achievement (Zachary et al., 2016). Teachers' training enhances students' learning capacity and constructs related information for students (Shaymaa et al., 2017). (Tate, Thompson, & McKerchar, 2005).

For TVE teachers, they reported that the training they received was insufficient.

Teacher A reported that:

> *"Aside from the unavailability of the seminars and training I desire, the venue was too far, and the fee was too expensive. I have been unable to attend national and regional seminars and training on TVE instruction during the last few years."*

Teacher B supported Teacher A as she reiterated, "*From time to time, there is a seminar for TVL teachers, but only a few can attend the said seminar, if I am one of the chosen participants for the training, I must be very lucky!"*

TVE teachers considered a financial problem as one of the difficulties in attending training.

Teacher C claims that:

> *"Trainings are personal sacrifice, sometimes distance is a problem (this happened during my first Station assignment at Malay National High School and my training venue at Libacao Forestry and Vocational School), the money spent and exhaustion in travel all attribute to a diminished performance in one way or another."*

Teacher D affirmed by saying, "*Because of budgetary constraints, training location constraints, and physical and health issues, I could not attend some training*."

These difficulties were also observed in the FGD of School Heads.

Principal C mentioned, *"Nowadays, seldom are teachers in TVE attend training especially that they are already pre-occupied with so many assignments or due to financial capability. Most likely, teachers attend training if it is free."*

Head Teacher B supported Head Teacher C and reiterated, "Teachers do not often attend trainings and seminars because they have to shoulder all the expenses and *incur much money."*

Head Teacher A affirmed this and said, "TVE teachers are encouraged to attend training *whenever possible, particularly those held in their district or division. However, only a few TVE national and regional training are available, and they are held in remote locations with high registration fees."*

In response to the gap mentioned above, the School Head initiated the following activities in their schools to address the gap.

Principal A shared that:

> *"The school facilitates LAC sessions, which are frequently led by the TVE Department Head and TVE Master Teachers as they cascade the key elements of whichever seminar/training or meeting (national / regional division/district)." Group chats also serve as avenues for follow-up or clarification of issues.*

Despite the hurdles they faced, such as a lack of technical training, seminars, and materials, the teachers were hopeful about their ability to compete globally. This implies that TVE teachers are not readily discouraged. These educators want their TVE programs to be recognized, competitive, and appealing, so they push for certification. The program's certification suggests quality and good organization. As a result, certification is a crucial part in establishing the TVE as a worthwhile programmed.

Expired and Unaligned National Certificates (NC). The NC qualification permitted teachers to participate in vocational training, which consists of activities designed to impart the knowledge, skills, and attitudes needed for effective and efficient performance within a career or group of career. Initial, refresher, additional, updated, and specialized job-related training were all included in vocational training (Mashongoane, 2015).

However, it was observed from the quantitative data that TVE teachers NCs are expired or oftentimes unaligned to the subjects they are teaching.

Teacher B stated, "*Yes, I may have a National Certificate in Food and Beverage Services (NCII), but it is already expired. I had no chance to renew it because of the tight schedule since I started teaching in public school."*

Teacher C reported, "My NC is *already expired since February 3, 2020. I need to upgrade the competency requirements, but there is no available training yet up until this time."*

In their accounts, Head Teachers highlighted the need for every TVE teacher to take National Certificates before teaching TVE subjects. School Heads emphasized the importance of these certificates in Technical-Vocational institutions.

Head Teacher B mentioned, "*One of the requirements to teach TVE subjects aside from the appropriate majors and specializations is the acquisition of NC from TESDA, which they need to renew when expired."*

TVE Supervisor reiterated that TVE teachers are not just encouraged, but they are obliged to have National certificates. Some noteworthy observations on the TVE teachers' difficulties in renewing their NC was also mentioned:

Head Teacher A shared, *"Sometimes teachers do not renew their NC's because it will incur another financial burden to them."*

Supervisor of TVE program also reiterated that:

> *"The problem is sometimes it is costly for some teachers, especially if their specializations are not available in the province. They need to travel far to have it renewed, and that incurs many expenses; that is sometimes why teachers are not renewing their NCs."*

These difficulties, however, do not excuse TVE teachers from renewing their NCs as Head Teacher B stated, *"If teachers' NC is not aligned to the subject being taught, the school must find somebody to teach the subject."*

Competency needs of TVE Teachers in the Division of Aklan

Based on the identification, analysis, and gaps identified, the following competency needs were determined.

1. TVE teachers to prioritize the following learning activities that would enhance competency:
   - 1.1 Considering nearby institutions and organizations for educational purposes;
   - 1.2 Inviting professionals from industries such as industry, trade, agriculture, and so on to offer lectures/talks on topics related to their professions within the same environment in order to update content knowledge and pedagogy;
   - 1.3 Hosting forums and seminars based on teachers' interests and needs;
   - 1.4 Conducting interviews/conferences with fellow teachers and stakeholders to identify strengths and weaknesses in the different learning areas of TVE; and
   - 1.5 Showcase output to enhance outcomes in the TVE program.
2. Motivation and opportunities to acquire/enhance and apply skills on the following:
   - 2.1 Conducting scientific research to enhance mathematical and scientific skills;
   - 2.2 Paper preparation for presentation at technical conventions in order to improve effective communication;
   - 2.3 Improve data analysis techniques and the visual presentation of study results, such as graphs and tables.
   - 2.4 Valid and reliable test instruments and critical assessment tools must be prepared and used.
   - 2.5 Development of diverse and alternative testing tools for kids
   - 2.6 Development of resource management strategies
   - 2.7 Development of new concepts, models, and expertise in project-making activities for students
3. Renew professionalism and rejuvenate teaching advocacy and calling by doing the following:
   - 3.1 Conducting regular self-assessment;
   - 3.2 Membership/leadership in any quasi organizations, societies, academic institutions, or other technology-related organizations;
   - 3.3 Understanding of the learning outcomes to be built in Home Economics, Computer and Entrepreneurship, Industrial Arts, and Agriculture and Fishery Arts
   - 3.4 Keeping up to date with the Technical Education and Skills Development Authority's (TESDA) new competencies and training regulations; and
   - 3.5 Identifying alternate measures if the school does not have funding for the most up-to-date tools and equipment in the laboratory that will improve students' awareness of global markets.

CONCLUSION

Based on the findings of this study, the following conclusions were drawn:

1. The majority of TVE teachers in Aklan's Schools Division were female, 21-30 years old, mostly BSED HE/TLE graduates and teaching Home Economics, had 1-5 years teaching experience and teaching TVE for less than five years. The majority of their trainings were In-Service-Training (INSET), provided by their respective schools, and a large number of them had expired or no National Certificates II (NC II) at all.

2. The general competency level of TVE teachers was described as "Highly Proficient" in terms of four domains: “Content Knowledge and Pedagogy” (Md=3.0), “Diversity of Learners” (Md=3.0), “Curriculum and Planning” (Md=3.0), “Assessment and Reporting” (Md=3.0), and “Personal Growth &Professional development” (Md=3.0) while "Distinguished" in two domains; “Learning Environment” (Md=3.5) and “Community Linkages and Professional Engagement” (Md=3.5). Generally, the TVE teachers reported a "Highly Proficient" general competency level (Md=3.0, IQR=1.0).

3. The technical competency level of TVE teachers was reported to be on the "Advanced" level in terms of “Leading workplace communication” (Md=4.0), “Applying math and science principles in technical training” (Md=4.0), “Applying environment principles and advocating conservation” (Md=4.0), “Utilizing IT applications in technical training” (Md=4.0), “Leading small teams” (Md=4.0), “Working effectively in vocational education and training” (Md=4.0), “Fostering and promoting an inclusive learning culture” (Md=4.0), “Ensuring a healthy and safe learning environment” (Md=4.25), “Ensuring and enhancing professional practice” (Md=4.0), “Developing and promoting appreciation for cost and benefits of technical training” (Md=4.0), “Developing and promoting understanding of global labor markets” (Md=4.0) while they are "Expert" on “Applying work ethics, values and quality principles” (Md=4.50). Generally, the perceived level of technical competency among TVE teachers was generally "Advanced" (Md=4.0, IQR=0.75).

4. The gaps identified in teaching TVE in the Schools Division of Aklan were: (1) Teacher-Subject Mismatch, (2) Inadequate Skills in “Applying Math and Science Principles in Technical Training”, (3) Struggle in Promoting Understanding of Global Labor Markets, (4) Inability to Lead Workplace Communication (5) Lack of Content Knowledge and Pedagogy, (6) Lack of Competence in Assessment and Reporting, (7) Insufficient Training Related to Area of Specialization, and (8) Expired and Unaligned National Certificates (NC).

5. Three major competency needs identified were: (1) activities that would enhance TVE teachers' competency, (2) motivation and opportunities to acquire/enhance and apply enhanced competency, and (3) renewed professionalism and rejuvenated teaching advocacy and calling.

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