

QUALITY OF TECHNICAL VOCATIONAL EDUCATION AND TRAINING OF TECHNICAL VOCATIONAL INSTITUTIONS: IMPLEMENTATION, EMPLOYABILITY AND CHALLENGES

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Abstract:

A hallmark of Technical Vocational Secondary Education programs delivered utmost development of the individual as a total person equipped with technical vocational and academic competencies, proper work ethics and desirable values that made the person economically stable, responsible, law-abiding citizen, productive and competitive in the world of work. Quality Technical Vocational education supported by competent teachers, teaching techniques, suitable teaching and learning facilities, equitable learning opportunities for all students, a pleasant learning atmosphere. The study used the mixed-method explanatory sequential type of design. A modified questionnaire was used for data collection, and it was pre-tested for reliability using Cronbach's Alpha reliability technique. Instrument was validated using content validity with 9 experts and underwent reliability testing. Statistical tools used were frequency and percentage distribution, mean, and standard deviation. The result revealed that there were only two Technical Vocational schools implemented strengthened Technical Vocational Education Programs and Training in the division of Negros Occidental. Results of the study revealed that the quality level of technical vocational education and training implementation that was executed by technical vocational institutions, as evaluated by teachers and students on their area of specializations in terms of selected variables, was generally high. The first three highest qualities of Technical Vocational Education and Training of Technical Vocational Institutions students' employability, as assessed by Partner Industries their supervisor, were in Reliability, Technical skills, and working with others, with the mean of the other two interpreted high in Adaptability, followed by Communications and work with ethics considered low. On the basis of the findings of the study, strategic competency-based program is recommended.

Keywords: Quality, Implementation, Employability and Challenges

Introduction:

Quality education allowed people to develop all their features and abilities to reach their full potential as human beings and members of society highlighted by (Wenceslao 2018).

Philippines affirmed its commitment to achieve Sustainable Development Goals by 2030 synchronized with the development plans for 2040. DepEd supported its efforts on the attainment of this education goal (SDG 4), which aimed to ensure inclusive and equitable quality, technical vocational education and promote lifelong learning opportunities for all. (D.O.no.024. S.2022).

Similarly, Secondary technical vocational institutions under DepEd allowed TESDA to act as a complementary unit that focused on promotion and strengthening the quality of technical education and development skills programs as well as CHED to make a meaningful impact to serve thousands of learners.

Schools data revealed that there was low proficiency level of Technical Vocational learners in academic and technical skills for the past three consecutive years, there had no National Certificate passers or NC holders. So, It was essential to transform Technical Vocational Education and Training of Technical Vocational Institutions to ensure its continuity, adaptability, sustainability and quality.

In this light, the researcher motivated to investigate Quality of Technical Vocational Education and Training of Technical Vocation Schools implementation, employability and challenges since the researchers want to know the school's performance as assessed by teachers and students.

Literature Review:

Quality of Technical Vocational Education and Training

Quality technical and vocational education and training (TVET) helps individuals enhance their knowledge of science and technology in a wide range of occupational areas that require technical and professional competences as well as specialized occupational skills. As a result, national technical vocational education and training systems must create the knowledge and skills that allow the workforce to become more flexible and responsive to the needs of local labor markets while competing in the global economy. Some countries have implemented technical vocational education and training reforms aimed at incorporating workplace-based learning and training into the vocational education curriculum. Its systems must also open and inclusive to provide learning and training to the most disadvantaged people. The opportunity for people in urban and rural communities to equip themselves to lead productive and satisfying lives may undoubtedly be critical to the prosperity and well-being of the community (Brillantes et.al, 2019).

Technical Vocational Education and Training of Secondary Technical Vocational Schools

The education or training process where it involves, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills relating to occupations in various sectors of economic life and social life, comprises formal (organized programs as part of the school system) and non-formal (organized classes outside the school system) approaches (UNESCO, 2019). It provides for the secondary student's career options through the strengthened technical vocational education programs through equipping students with certifiable technical, vocational, industrial and other relevant skills, with academic competence. It refers to a type of educational institution, which, depending on the country, may refer to either secondary or post-secondary education designed to provide vocational education or technical skills required to complete the tasks of a particular and specific job (Kong, 2017).

Its priority is training which is an action of a certain task to help them improve their performance or knowledge to the highest possible standard, they must be effectively and efficiently trained. Training is one of teaching strategies or flexible instructions under strengthened technical vocational education and program and competency-based curriculum, equips students technical skills based on the interest of the students, the need of the community and the capability of the school to offer such specialization. (Vandenberg, 2020)

Quality is a simple notion to apply in the vocational education industry. Quality is interpreted and applied differently by practitioners in diverse fields (as cited by Laranjo, 2020). It is commonly understood to refer to a training program that is strategically prepared in collaboration with stakeholders, is linked to the goals of training and skill creation, is incorporated into all areas of the training process, and provide useful training relevant to industry. Only a well-planned and managed training program can result in benefits. That is, adding value to vocational education programs required a purposeful and planned approach to quality. Few would argue that vocational education must be of high quality if it is to be effective. (as cited by Perez, 2018).

The quality of technical vocational education learning is essential because student expectations are changing as schooling, workplace training, and secondary education change. Students want curricular content that is relevant to them, as well as teaching and learning techniques and support services. An efficient vocational education system addressed the demands of millions of individual students seeking to better their professional skills and career prospects.

According to Queensland research, students demand abilities that are examined and recognized against industry requirements, not merely courses, certificates, and prizes. Furthermore, they state that they want to be certain that the technical vocational institutions in which they enroll, the teachers who teach them, and the hands-on experience they receive are those required by industry, both nationally and internationally (Salatan, 2019). The quality of technical vocational education and training is significant because it can help to the acquisition of useful pre-employment skills that prospective employers required to graduates. Teachers are expected to have current and relevant technical understanding as well as instructional skills. (Albarico et al., 2018)

Quality vocational education have become more important to industry because employers see a skilled workforce as essential to gaining and maintaining a competitive advantage. Employers want students who understand their work, their product, or their services, who are creative and adaptable, and who can become multi-skilled. Industries expect vocational graduates to have the information, abilities, and attitudes necessary for industrial innovation and practice. (Naelga et. Al 2017). Technical vocational education demonstrate continuous progress in its operations and in providing results of high quality. Implemented ideas and practices of quality assurance should be a priority for

educators and managers. In fact, it is necessary to modify the current process activities to accommodate the new demands for skill development. Vocational education cannot automatically attain the quality that stakeholders want by relying on its current resources (Orbeta, 2019).

Implementing a reinforced technical vocational curriculum effectively is critical for students to gain the knowledge and skill set required to compete in the labor market. Teachers must use proper teaching practices to improve curriculum implementation in Technical Vocational Education Training schools. (Perez, 2018).

Acquiring advanced technical abilities necessitates specialized education or training, sometimes with a hands-on component and a wide range of advanced topical aspects. The majority of occupational fields included technical skill requirements, with the biggest concentrations being employment in areas requiring scientific, technological, engineering, computational, and mathematical ability (Galvez, 2020).

Strengthened Technical Vocational Education Program

The Department of Education's Strengthened Technical-Vocational Education Program (STVEP) has revitalizes the existence of Public Technical Vocational High Schools, which are known to be demand-driven institutions committed to producing graduates with competencies, training, and values for higher learning, entrepreneurship, and life-long gainful employment. (TechVoc Manual Operation) Through highly qualified competent teachers, it aspires to equip students with technical vocational training and skills, as well as academic know-how, to prepare them for the needs of the community and the global workplace. Similarly, technical vocational schools are designed to generate graduates who can effectively respond to the needs of the competitive workplace by employing highly qualified and competent individuals. It also equip students with certificate, technical vocational, industrial, and other applicable skills that enable them to be productive citizens of the world. (Jovellanos, 2019)

Program implementation of strengthened technical vocational either taken singly or in combination with student development services are highly significant predictor of students' performance in technical vocational education as well as their performance in on-the-job training as one of the topmost priorities. Effectiveness and strengthening implementation of the Technical Vocational curriculum create more opportunities that reduce its vulnerability to external threats. The program implementation affect students' performance and manifested desirable outcome. (Blane et. Al 2019).

Given the need for new links between education and the workplace and the community, technical and vocational education exist as part of a lifelong learning system tailored to the demands of each country and global technological advancement. This system should be aimed at removing barriers between levels and areas of education, between education and the world of work, and between school and society through appropriate integration of technical/vocational, (general education at all levels. (Perez, 2018).

The quality of technical vocational education and training institutes is critical for producing qualified and employable graduates. If graduates of technical vocational education and training lack the competence required by the labor market and are unable to cope with cutting-edge technology and machines, their efficiency called into question. There is a need to provide graduates with the skills they need to work in actual employment and develop toward better working conditions and, eventually, better prospects. It involve an understanding of the consistency of the existing technical vocational education and training system, as well as this program's potential to fulfill rising labor market demands. 2017 (Japan International Cooperation Agency).

Qualification of Technical Vocational Teachers

Technical educators are critical agents of social transformation. Their duties underpin the required developments in the formation of technical employees and the country's labor force. From the fundamental domains of technology to its most complicated manifestations, technical teachers are the driving force behind the achievement of every technician who contributes to nation-building. The Commission on Higher Education (CHED, 2007) issued the Policies and Standards for the Bachelor of Technical Teacher Education in Memorandum Order Number 56 series (BTTE). These regulations and recommendations are in accordance with the requirements of RA 7722, the Higher Education Act of 1994. The goal is to rationalize the country's undergraduate teacher education to stay up with societal changes. The K to 12 Program was just implemented by Republic Act 10533 (2013). Thus, curricula of tertiary education have been adjusted and modified for alignment. (Villanueva, 2021.)

Embedded in the education system is the Philippine Qualifications Framework (PQF) which has 8 levels. Levels 1-5 (National Certificate I-IV and Diploma) are TVET qualifications and Levels 6-8 (Baccalaureate, Post Baccalaureate, and Doctoral and Post-Doctoral Degrees) are higher education qualifications of technical vocational teachers.

Participation of TESDA Technical Skills Development Authority (TESDA) awards National Certificate I-IV and Diploma to those who pass the competency assessment for all the competencies required in a qualification level or Certificate of Competency if only a competency or a cluster of competencies in a qualification is achieved. • National Certificate I and II are offered in the Technical Vocational-Livelihood track of Basic Education Program of DepEd. Technical Vocational Education and Training (TVET) qualifications are also offered as an integral or articulated component of

the ladderized Bachelors' Degree programs in CHED's eight priority disciplines; engineering, agriculture, education, health, maritime, criminology, hotel and restaurant management/tourism and Information and Communication and Technology (ICT)(USEC Malaluan, 2020)

According to Sern (2018) the development of teachers, the teaching profession, and future educators is critical to the organization and quality of the educational system. Technical-vocational specialties, on the other hand, are well geared to create competencies and abilities in students who will become the highly trained workers that the sectors require. The teacher education program for technical vocational courses yields two complementary concepts on teacher education and technical vocational courses. To adequately educate technical vocational teachers to effectively instruct all students, training programs must first identify and then execute evidence-based management practices. Evidence-based classroom management practices are classified into five categories: maximizing structure and predictability posting, teaching, reviewing, tracking, and evaluating expectations, active participation of students in observable ways, continuum of strategies to recognize appropriate behavior, and continuum of student behavior. (Singson et.al. (2018).

Qualifications of Technical Vocational Teachers

Evidence-based practice training is required for instructors to adopt and sustain such practices. TESDA (2018) established the standards in the training regulation for Trainers Methodology (TM) to become relevant to the teaching skills linked to technical-vocational education. A trainer's competencies are divided into two categories: basic and core competencies. The same competencies are necessary for a trainer throughout all National Certificate (NC) courses. To qualify a candidate as a TVET trainer/technical trainer, competency assessor, or training facilitator/coordinator, TESDA administers an evaluation. The program for the Bachelor of Technical Vocational Teacher covers a variety of courses linked to trainer methodology. (TESDA, 2020). However, the alignment of the trainers' methodology principles, the competency hierarchy, and the curriculum mapping are not fully incorporated into the curriculum (Yildirim et.al, 2019.).

Quality of Technical Vocational Teachers/Trainers

The quality of teachers/trainers has a significant influence on the assessment of quality in technical vocational schools. The teacher/trainer must be suitably trained for the role of imparting information and must be conversant with the concepts and practices of vocational education. This characteristic focuses on their credentials, experiences, competences, capacities, and learning of desirable skills to carry out specified tasks. (Joo, 2018). Furthermore, competent teaching techniques, appropriate teaching and learning facilities, equitable learning opportunities for all students, the provision of a pleasant learning environment, and communal aid to students and instructors all contribute to the quality of instruction. Quality learning instructions emphasize the need of adequate personnel, educated competent instructors who are the result of good teacher education (Adegoke (2007), as quoted by Blane 2019). For theoretical and practical vocational teacher education, a thorough preparation in occupational skill acquisition, sciences, and specialized knowledge is necessary.

The vocational training program meets the recognized need to improve one's level of life (Blane, 2019) According to Vandenberg 2020, one of the indicators of standards in teacher education is the quality of a teacher in charge of training. The global shortage of vocational specialists has a substantial influence on the growth and quality of vocational education. Most of the equipment and machinery at certain schools are easily abandoned due to a lack of experienced personnel since they lack competent hands to handle them.

Theoretical Framework of the Study

This study was anchored on All-Round Educational Quality theory by Zhang (2020), which stated that an application of all-round quality management in education, whose core concept was the continuing emphasis on quality improvement. It means that an organization, which was based on full participation, treated quality as its center. All members benefited from this organization, and thus the organization achieved long-term success.

All-round quality management placed emphasis on the transition of the forms of management, which was shifting from the traditional one-dimensional view of performance to the full range of view on quality. As the continued expansion on the concept of education quality, the quality of education was not only to train students to possess knowledge, but also to help them have other various qualities and such as working attitude, sense of cooperation and competition, professionalism, moral cultivation, environmental adaptability and mental endurance capabilities and demonstrable skills (Evans et.al, 2020).

Continuous Quality Improvement Model by W. Edwards Deming as cited by O Donnell(2022), discussed the concept of continuous improvement that it was a deliberate, defined process which focus on activities that were responsive to community needs and improving the well-being of the group of people. It was a continuous and on-going effort to

achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality for state and local program levels.

This model offered several strategies to support continuous improvement in an organizational setting such as created constancy and purpose toward improvement of product and services, instituted training on the job, leadership, a program of education, and included everyone in the transformation of the organization and served as the foundation of resulting quality organization (Deming, 2017).

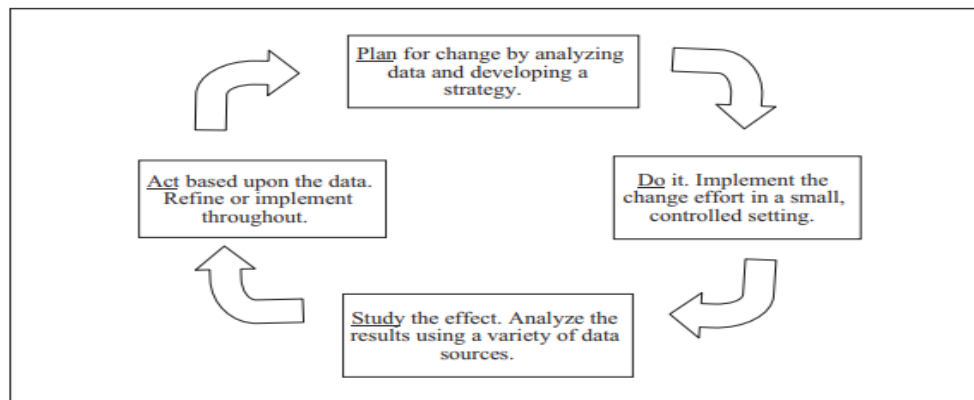


Figure 1. The Deming cycle showing the plan-do-study-act process of continuous improvement

Source. Adapted from Kelemen (2003, p. 26).

To ensure quality technical vocational education strongly correlated with the strengthening of professional management, leadership capabilities, mobilized financial and physical resources. It was also connecting with establishing an effective qualifying structure and monitoring mechanism for driving the whole system of technical vocational institutions (Galvez (2021). These two theories were important in illustrating the aspect of quality of technical vocational education and training in technical vocational institutions implementation, employability and challenges.

Conceptual Framework

Quality was the degree to which a service or product measure up with set standard and requirement. It can also be defined as an assessment of how well a delivered commodity conformed to the customer's expectation (Innocent et.al,2018).

In accordance with the guiding principles of technical vocational education Section 1 Manual Operations for Public technical Vocational High schools stated that Technical Vocational Secondary Education programs provided utmost development of the individual as a total person equipped with technical vocational and academic competencies, proper work ethics and desirable values that made the person economically stable, responsible, law abiding citizen, productive and competitive in the world of work.

Vocational education cannot function properly unless there was high quality in the standard of teaching, materials available, teaching methods and proper evaluation of students in the program. The assessment of quality teaching was an on-going, multi-dimensional process which should be based on process and product (Blane 2017).

Technical vocational institutions challenges were needed to address, managed transitions, and adapted changes on school governance, teaching-learning process as the major contributing factor for a performance. The need to tackle behavioral, structural, socio-cultural, economic, technological issues of technical vocational schools affected changes for development and progress to sustain towards the achievement of DepEd vision, mission and values.(Gonzaga 2020).

Events have shown that countries and individuals were not able to harness human and non-human resources efficiently towards the realization of specific socio-economic and technological goals which brought us to the fact that

there was a need for ensuring quality vocational education program. Successful implementation of any education program and the effectiveness in achievement of set goals depend very much on adequate materials and resources available. The input on individuals and institutions of learning, can determine to a large extent the realization of the philosophy of vocational education (Evans et.al 2017).

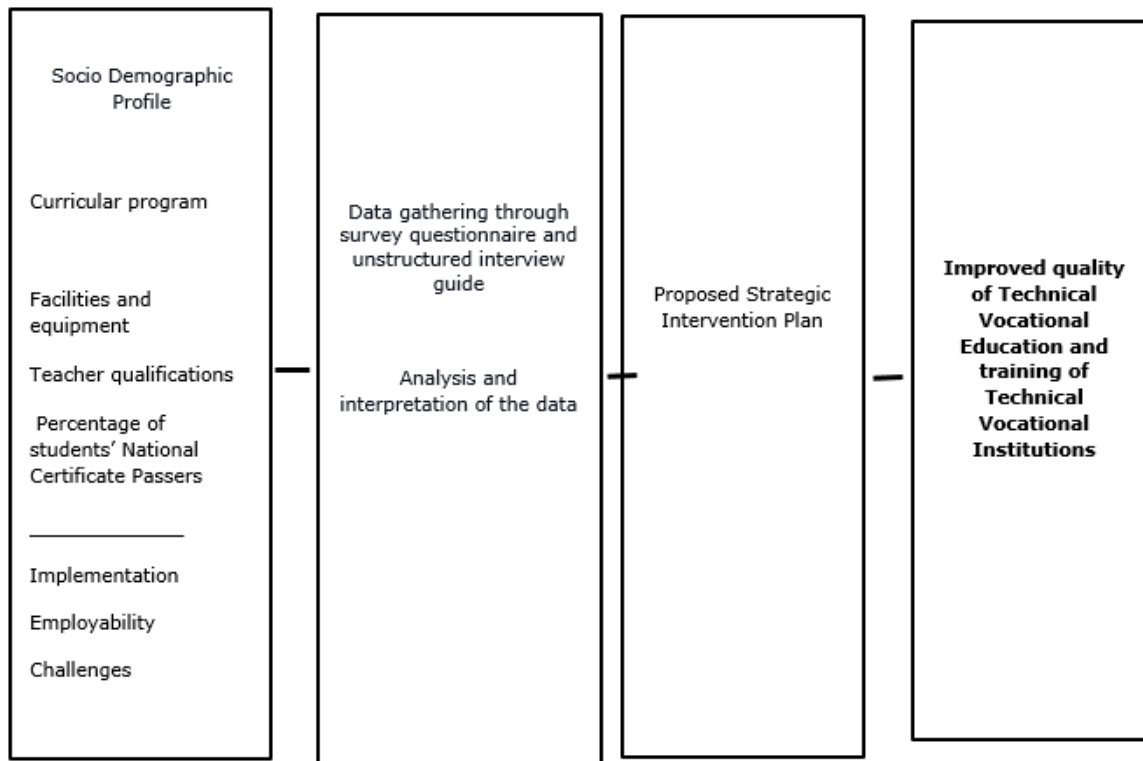


Figure 1: Schematic diagram of the study

High quality teaching instruction can be regarded as the goodness or effectiveness in teaching/instruction which can result in student learning and satisfaction. Quality teaching and learning with competent teachers, adequate facilities and equipment in vocational education therefore ensured that students acquired knowledge, skills and competences that were appropriate for their area of responsibility. There was the need to have teaching standards, effective curricular programs and experts for specialized technical skills training and quality management to meet the desired quality technical vocational education (Perez, 2018).

Technical vocational schools teachers prioritized technical skills which was an enrichment of learning experiences and skills development of students in their own field of specialization in technical vocational high schools under strengthened technical vocational education program and non-technical skills as part of their specialization course outlay which considered the most important employability skills to develop to all learners like communication, adaptability, reliability, and work ethics. It was essential in building positive team dynamics and relationships with peers and reinforce functional skills and made learners productive and dependable. (Khirotadin et.al 2019)

To understand better the quality of technical vocational education and training of technical vocational institutions the flow of this research and be able to suggest the formulation of making a strategic intervention plan. The diagram illustrated in the first box was the socio - demographic profile which included curricular program, facilities and equipment, student safety and health, community involvement and teacher qualifications, technical skills and work ethics towards implementation, employability and challenges that led to determine the quality of technical vocational education and training of technical vocational institutions that may create a proposed for upgrading strategic intervention plan as shown on the third box.

Methodology:

Research design

This study employed a mixed-method explanatory sequential research design, which meant that data was gathered in the field at the location where respondents encountered the topic or problem under consideration. The mixed-method sequential explanatory design was divided into two phases: quantitative and qualitative. In this design, a researcher collected and analyzed quantitative (numerical) data first. The qualitative (text) data were collected and processed second in the sequence, and they aided in explaining or expanding on the quantitative results obtained in the first phase. The second, qualitative, phase expanded on the first, quantitative, phase, and the two phases were linked in the study's intermediate stage.

Respondents of the study

The respondents of the study were the selected 32 Technical Vocational teachers, 352 students and 30 Partner Industries in two technical-vocational schools. Teachers, students and partner industries answered both quantitative and qualitative questionnaires to assess quality of technical-vocational education and training of technical-vocational institutions, implementation employability and challenges. Stratified proportionate random sampling was used to select the respondents for this investigation. More than 35 Technical Vocational teachers, 352 students from Technical Vocational institutions and 32 Partner Industries were counted to calculate the sample size using Slovin's formula. To determine the percentage, the researcher divided the total number of teachers, students and partner industries by the total number of number of teachers, students and partner industries multiplied by the sample size, and then distributed the results proportionally between the two Technical Vocational schools and partner industries to determine the number of respondents per technical vocational schools.

Research Instrument

In this investigation, the researcher employed three sets of survey questionnaires in this study to collect the required data. The first set of questionnaires was used to assess the four areas as assessed by teachers, the quality level of technical-vocational education and training provided by technical-vocational institutions, implementation, and problems. The second set of questionnaires was used to determine the quality level of technical - vocational education and training of technical vocational institutions implementation and challenges along with four areas as assessed by students. The third set of questionnaires was used to determine quality level of technical-vocational education and training of technical - vocational institution's employability along with six areas as assessed by partner industries. Each of these questionnaires were consisted of different parts. The data-gathering instrument that administered to the respondents were composed of two (2) major parts. Part I was the respondent's personal information which required them to supply or check the needed information concerning implementation, employability, and challenges of technical-vocational institutions.

Part II of the instrument was the questionnaire proper consisting of 15 items to determine the implementation of technical-vocational institutions. The items were answerable of a 5-point scale: 5 (Very highly observable), 4 (sufficiently Observable), 3 (moderately observable), 2 (Needs improvement) and 1 (not observable). The corresponding numerical value was converted into scales below.

Score Range	Interpretation
4.50-5.00	Very High
3.50-4.49	High
2.50-3.49	Average
1.50-2.49	Low
1.00-1.49	Very low

To determine employability of technical-vocational institutions. The instrument consisted of 15 items that answerable using a 5-point scale:

5 (always), 4 (often), 3 (sometimes), 2 (seldom) and 1 (never).

The last part of the questionnaire which was intended only for the technical vocational teachers and students dealt with qualitative aspect of the study. This included the following question:

1. What are the challenges of technical vocational education and training of Technical Vocational Institutions in terms of;
 - a.) Equipment and facilities
 - b.) Curricular program based on industry needs.
 - c.) Skilled License faculty and staff
 - d.) Community intervention

e.) Updating technology?

Data Analysis Procedure

To come up with well-founded result different statistical tools for data analysis in accordance with the nature of the specific problems raised. The following statistical tools were used to answer questions posed in this study.

For problem 1 which determined the personal and professional profile of teachers, profile of student's frequency and percentage were used.

For problem 2 and 3 which determined the quality level of technical vocational education and training of technical vocational institutions according to selected variables as assessed by teachers, students and partner industries, the mean was used. The corresponding numerical value is converted into scales below.

For problem 4 which determined the challenges of technical vocational education and training of technical vocational institutions of teachers, students on their area of specialization in terms of equipment and facilities, curricular programs based on industry needs, skilled and licensed teachers, community intervention and updating of technology, the researcher made use of thematic approach.

Ethical Considerations

To ensure that the identity of the schools and the respondents were fully protected, the names of individual schools were hidden fully from any part of the book. In collecting the respondents' demographic profiles, the respondents' names were not required or kept on file. A letter requesting approval from the school administrator were processed to ensure that before administering the research instrument, the researcher had gathered the respondents and individually asked if they were willing to voluntarily, out of their own volition and desire, without being coerced or force, to serve as respondents of the study. The researcher had confidentially kept, gathered data in an encrypted file. The researcher disseminated the results of the through conferences and published them in a research journal.

Results and Discussion

Table 2 revealed the profile of the technical vocational schools, based on the data presented there were only two Technical Vocational schools implemented strengthened Technical Vocational Education Programs and Training in the division of Negros Occidental. Both offered specializations under industrial strands, Agri fishery Home Economics, such as SMAW, Plumbing, EPAS, ICT CSS, ICT-Programming and Cookery. Each vocational schools distinctively offered specialized course depending on the availability of laboratory shops, tools and equipment like Food Processing, Fish Culture, Plant Production, Animal Production, Carpentry, EIM, Automotive mechanic, Sewing and Cosmetology. One technical Vocational school had nine (9) Junior High School Specialization Offerings and six (6) for Senior High school. Other technical vocational school also offered nine(9) Junior High specialization offerings and seven (7)Senior High School offerings.

Moreover, both secondary technical vocational schools had consumable tools and equipment as per National Building Inventory record (NSBI)over all allocations were Five million Eight hundred thousand pesos(P 5,8000,000.00)and consumable tools worth one hundred thousand pesos(P100,000.00)only as per record from Maintenance and other Operating Expenses(MOOE)and Annual Procurement Plan (APP)budget. Out of 52 teachers ,31 were National Competency Certificate (NC)II holders and 21 were Trainers Methodology Holders of their specialized skills taught. Three consecutive years, none of their students took TESDA Skills Assessment and no record of NC passers. The second concern of this study was to determine the Quality Level of Technical Vocational Education and Training of Technical Vocational Institutions: Implementation, Employability and Challenges as assessed by teachers on their area of specialization in terms of curricular programs.

As shown in Table 3, the quality level of technical vocational education and training implemented by technical vocational institutions as assessed by teachers on their area of specialization in terms of Curricular Program was generally high, with a mean of 4.22. In terms of curricular programs, the first five highest quality levels were in Cosmetology (M=5.00, SD= 0.0), EPAS (M=4.88,SD=0.09), Sewing (M=4.77,SD=0.09), Food Processing (M=4.77, SD=0.09), and Plant Production (M=4.50, SD=0.00). Then, in ICT Programming, Automotive, Cookery, Fish Culture, Plumbing, EIM, Carpentry, ICT CSS, and SMAW, ten areas of specialization were interpreted as high, with scores ranging from 3.61 to 4.33. In Animal Production, the mean was (M=2.50 SD 0.00).

Table 2

Profile of the Technical Vocational Schools

Variables	F	%
Curricular Programs		
Food Processing	1	0.06
Plumbing	2	0.13
SMAW	2	0.13
ICT CSS	2	0.13
ICT Programming	2	0.13
EPAS	1	0.06
Sewing	1	0.06
Cookery	2	0.13
Plant Production	1	0.06
Fish Culture	1	0.06
Carpentry	1	0.06
EIM	1	0.06
Animal Productions	1	0.06
Cosmetology	1	0.06
Automotive Mechanic	1	0.06
Total	15	
Facilities and Equipment		
Non consumable/Tools and Equipment- (P 5,800.00) CO/RO/MOOE funds (NSBI record)		
Consumable - (P 100,000.00 (MOOE FUNDS)		
Teacher Qualification		
NC2	31	60
IM	21	40
Total	52	100
Percentage of Students' NC Passers	0	0

Table 3. Quality Level of Technical Vocational Education and Training Implemented by Technical Vocational Institutions as assessed by Teachers on their area of specialization in terms of Curricular Program

Area of Specialization	Curricular Program		
	Mean	SD	Interpretation
Asa whole	4.22	0.69	High
Food Processing	4.77	0.09	Very High
Plumbing	4.00	0.60	High
SMAW	3.72	0.41	High
ICT-CSS	3.61	0.97	High
ICT Programming	4.38	0.25	High
EPAS	4.88	0.09	Very High
Sewing	4.77	0.09	Very High
Cookery	4.33	0.88	High
Plant Production	4.50	0.00	Very High
Fish Culture	4.16	0.00	High
Carpentry	3.66	0.00	High
EIM	3.75	0.58	High
Animal Production	2.50	0.00	Average
Cosmetology	5.00	0.00	Very High
Automotive	4.33	0.00	High

The findings indicated that the implementation of technical vocational school curricular programs in cosmetology, EPAS, sewing, food processing, and plant production heavily based on teacher evaluation. They stated that these curricular programs are well-established, technological adaptability was evident, and vocational teachers taught a set of core competencies and generic abilities necessary for quick adaptation to new ideas and methods as they continue to be productive and competent in their own field of specialization. It also implied that these five specializations were interpreted very differently.

The results were generally certain when it came to the curriculum plans for technical vocational schools' teaching-learning materials, teachers' credentials, and the availability of all other materials and non-material resources. Not all of the academic programs provided by technical vocational schools, such as animal production, were properly implemented, as evidenced by the fact that it was interpreted as average and classified as the lowest mean. This implied that access to laboratory space, facilities, qualified teachers, and students are necessary for the

implementation of curricula. As mentioned, there are curricular programs that need more opportunities to foster the acquisition of enduring knowledge and values about sustainability.

These findings were supported by Chalapati (2020), who explained that the development of technical and vocational education curricula leading to higher qualifications should place a special emphasis on the inclusion of components aimed at developing attitudes in which those with broad responsibilities in technological fields continuously relate their professional tasks to more general social and ethical goals. While keeping in mind that technical and vocational education was for economic, personal, and societal gain, it better prepared the learners for life and work in general.

Table 4. Quality Level of Technical Vocational Education and Training Implemented by Technical Vocational Institutions as assessed by Teachers on their Area of Specialization in terms of Facilities and Equipment

Area of Specialization	Facilities and Equipment		
	Mean	SD	Interpretation
As a whole	3.88	0.75	High
Food Processing	4.30	0.34	High
Plumbing	3.73	1.42	High
SMAW	3.63	0.15	High
ICT-CSS	3.36	0.64	High
ICT Programming	3.83	0.95	High
EPAS	4.28	0.32	High
Sewing	4.30	0.34	High
Cookery	3.82	1.49	High
Plant Production	4.70	0.00	Very High
Fish Culture	4.40	0.00	High
Carpentry	3.80	0.00	High
EIM	3.55	0.07	High
Animal Production	3.10	0.00	High
Cosmetology	4.60	0.00	Very High
Automotive	2.90	0.00	Average

The quality level of technical vocational education and training provided by technical vocational institutions, as determined by teachers based on their area of specialization, was generally high, as shown in table 4 with a mean of 3.88. Only two specializations, plant production and cosmetology, were assessed by teachers to have very high-quality levels of technical vocational education and training in terms of facilities and equipment. These two were followed by eight specializations, which were judged to have high quality levels: cookery, carpentry, fish culture, and animal production. The only least mean was in Automotive with a mean of ($M=2.90$ $SD=0.00$)

The findings showed that there were few facilitating factors that technical vocational institutions met in terms of facilities and equipment provision, with only two areas of fifteen (15) specializations interpreted as very high. The quality level of implementation is hampered by a lack of supplies, or a limited number of supplies allocated for a particular area of specialization, as indicated on the automotive area of specialization.

These results were congruent with the research of Sabit (2019), who emphasized the importance of facility provision, sufficiency, and accessibility for a high-quality and standard educational institution. Facilities at schools were tangible assets that support the efficient instruction and learning of students. There was also equipment, consumables, on-consumables, energy, water, visual and audio-visual aids, among other things, as well as buildings, classrooms, laboratories, workshops, and libraries. Additionally, Oviawe (2020) emphasized that since technical and vocational

institutions were created to serve specific functions in the teaching and learning processes, it was imperative that adequate facilities be provided in each one of them.

Table 5. Quality Level of Technical Vocational Education and Training Implemented by Technical Vocational Institutions as assessed by Teachers on their area of specialization in terms of Safety and Health

Area of Specialization	Safety and Health		
	Mean	SD	Interpretation
As a whole	4.18	0.69	High
Food Processing	4.47	0.04	High
Plumbing	4.25	1.29	High
SMAW	4.00	0.00	High
ICT-CSS	3.47	0.84	Average
ICT Programming	4.27	0.48	High
EPAS	4.61	0.19	Very High
Sewing	4.47	0.04	High
Cookery	4.02	1.05	High
Plant Production	5.00	0.34	Very High
Fish Culture	4.47	0.00	High
Carpentry	4.00	0.00	High
EIM	4.00	0.07	High
Animal Production	2.50	0.00	Average
Cosmetology	4.83	0.00	Very High
Automotive	3.91	0.00	High

Table 5 showed As a whole data were interpreted as high. Only three specializations, Plant Production (M=5.00), Cosmetology (M= 4.83), and EPAS (M=4.61), manifested as the highest mean in terms of students' safety and health, according to teachers' assessments of the quality level of technical vocational education and training carried out by technical vocational institutions. While eleven specializations with mean values ranging from 3.91 to 4.47 as indicated obviously as high and two lowest mean interpreted as low.

This implied that the integration of students' safety and health into the curriculum and programs of technical vocational education and training in vocational schools was of the utmost importance. Safety and health of students, particularly during actual skills demonstrations, were fundamental concerns that had to be met as a condition of any specializations taught to vocational students. It was crucial for students to be prepared for occupational safety and health in the workplace. Although there were two areas of specialization where students' safety and health were less stressed, as shown in the table, it was clear that both teachers and students placed importance on these issues.

The research by Suharjuno et al. provided support for this finding. (2021) about students' health and safety in the workplace and their ability to incorporate that knowledge into safe behaviors and actions. Teachers fervently adopted and included this information. It was crucial to include capacity development in workplace safety and health in educational and vocational training programs for young people. Students benefited from this knowledge and awareness of occupational health and safety not only throughout their Technical Vocational Education program but also throughout their working and personal life.

National Labor Relations Board. (2020) agreed that trainees frequently were unable to learn through trial and error due to a lack of fungible materials. Safety concerns in training sessions, such as promoting awareness of workplace

occupational safety and health (OSH) issues were sometimes ignored by students. Trainees are put at further risk due to insufficient safety regulations and their poor enforcement. created and implemented strict guidelines for OSH in workshops and added occupational safety and health components to all training programs.

Table 6

Quality Level of Technical Vocational Education and Training Implemented by Technical Vocational Institutions as assessed by Teachers on their area of specialization in terms of Community Involvement

Community Involvement			
Area of Specialization	Mean	SD	Interpretation
As a whole	4.42	0.63	High
Food Processing	4.50	0.00	Very High
Plumbing	4.58	0.72	Very High
SMAW	4.45	0.47	High
ICT-CSS	3.79	1.18	High
ICT Programming	4.66	0.57	Very High
EPAS	4.50	0.37	Very High
Sewing	4.37	0.21	High
Cookery	4.37	0.57	High
Plant Production	5.00	0.00	Very High
Fish Culture	4.30	0.00	Very High
Carpentry	4.25	0.00	High
EIM	4.56	0.61	Very High
Animal Production	4.22	0.00	High
Cosmetology	4.87	0.00	Very High
Automotive	5.00	0.00	Very High

With a mean of 4.42, which is generally interpreted as "high," Table 6 displayed the quality level of Technical Vocational Education and Training of Technical Vocational Institutions as assessed by teachers on their area of specialization in terms of community involvement. EPAS and Food Processing, EIM, Plumbing, ICT Programming, Automotive, Cosmetology and Plant Production were among the eight specializations with mean scores ranging from 4.50 to 5.00, which were interpreted as very high. Seven areas of specialization—CSS, animal production, carpentry, fish culture, sewing, cooking, and SMAW—had mean scores between 3.79 and 4.45, which were interpreted as high.

Table 6 showed the quality level of Technical Vocational Education and Training of Technical Vocational Institutions as evaluated by teachers on their area of specialization in terms of community involvement, with a mean of 4.42, which is typically interpreted as "high." The nine specializations had mean scores ranging from 4.50 to 5.00, which were interpreted as very high. These specializations included EPAS and Food Processing, EIM, Plumbing, ICT Programming, Automotive, and Plant Production. With mean scores ranging from 3.79 to 4.45 six specializations—CSS, animal husbandry, carpentry, fish culture, sewing, cooking, and SMAW—were considered to have high.

Hamisu et al. (2020), who explained that social partnerships in technical vocational education and training were vehicles for beneficial outcomes, supported these findings. These included offering educational opportunities, acting as means of resolving socioeconomic issues, acting as a focal point for localized decision-making regarding vocational education and training to promote broader community well-being, and offering local insight that could guide centralized policy - making in and outside of the technology sector.

Noordin (2020) also emphasized the many ways in which students can profit from active social partnerships and community involvement. Students can anticipate a more engaging experience, improved training, increased skill development, and increased responsiveness of courses to employers' needs as institutions maintain improved co-operation with stakeholders. Students can also anticipate becoming more familiar with the applications of ideas like sustainable development in the real world. This can then result in more employment opportunities, improved access to the workforce overall, and improved integration into the labor market. The advantages of community engagement for the community are numerous. Institutions support the socioeconomic development of communities by efficiently matching training offers with training needs.

These findings were also consistent with Salleh's (2020) study, which stated that smooth links between the institution and the community improve information sharing, the transfer of scientific and technological knowledge, and the creation of shared knowledge. Institutions that collaborate with various types of stakeholders and form social partnerships are generally regarded positively. However, there are some drawbacks to community involvement. The participation of a diverse range of stakeholders in community engagement is frequently lauded for the interactions it brings to the institution's socioeconomic environment.

Conclusion:

The two technical vocational school in the division of Negros Occidental distinctively implemented various specialized technical vocational education and training program offerings as to the availability of their school plant facilities specifically their teachers, teachers' qualification facilities and equipment like laboratory shops, tools, and equipment.

Both schools had provided sufficient consumable tools and equipment funded from DepEd Central Office through regional office to school level. As per record from National Building Inventory (NSBI) through School Supply officer of the school. The two technical vocational schools had sufficient non consumable tools and equipment a total worth of Five million Eight hundred thousand pesos (P 5,800,000.00) Direct allocations from DepEd Central Office through Regional Office to Technical Vocational school. School Plant facilities and equipment were fully operational. However, both schools had suffered allocating appropriate budget in different specializations offered procuring their consumable tools for its annual fund was worth fifty thousand (P50,000.00) only as per record of Schools Maintenance and Other Operating Expenditures (MOOE).

Lack of funds to procure school supplies necessary in classroom teaching hampered the implementation of quality of technical vocational education and training in technical vocational schools. Shortage of qualified Technical vocational teachers were evident. This issue also considered a major contributing factor that technical vocational students failed to take National Competency /Skills Assessment in in two previous and recent years.

The quality level of technical vocational education and training implemented by technical vocational institutions was predominantly rated high by teachers and students on their area of specialization in terms of Curricular Programs, Facilities and equipment, students' safety and health and community involvement. It indicated that specialized offerings were very important to track and cater to the students' primary interests and potential skills. Various specialized offerings adopted by secondary technical vocational schools evoked chosen interest and talents of students, avoiding mismatch of tertiary education courses they intended to pursue.

Curricular programs of Technical Vocational Education and Training of Technical Vocational Institutions were developed with a special emphasis on including components aimed at developing attitudes in which those with broad responsibilities in technological fields constantly relate their professional tasks to broader social and ethical goals. It better prepared the student for life and work in general, keeping in mind that technical and vocational education was intended to benefit the students' economic, personal, and community well-being. Identified specialized offerings with highest quality implementation of technical vocational education and training of technical vocational schools collaboratively worked with stakeholders to master competencies and essential learning in Fisheries, Arts and Trades for higher learning.

Due to expanding number of Technical Vocational students, insufficient facilities and equipment for specific studies or specialized curricular offerings and some laboratories lack adequate space were evident.

Safety health of learners was one of the priority of technical vocational schools especially during actual demonstrable skills. Shortage of qualified tech voc teachers were also evident. External stakeholders participation was critical. Programs should be designed according to the needs of students rather than corporate expectations. There was a lack of technical vocational education teaching qualifications, national certificate holders, and training. Due to time and financial restrictions. Weak School community collaboration

Conflicts of interest. The authors declare that for this article they have no actual, potential or perceived conflict of interests.

Ethics committee approval. When designing the research instrument, ethical considerations had to be taken into account because the participants in the study were principals and other school administrators. These considerations included maintaining confidentiality, maintaining anonymity, and preventing fraud. In addition, the people who participated in the study were given a debriefing so that they would not feel uneasy. Because part 1 of the research instrument gives the respondents the choice to divulge their names and other personal characteristics, the data that were collected during the study dealt with issues of confidentiality.

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