



## Assessment of Technical Vocational Education Programs of Davao Del Sur School of Fisheries

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### *Author's contribution*

*The sole author designed, analysed, interpreted and prepared the manuscript.*

### *Article Information*

DOI: 10.9734/AJESS/2020/v7i330197

#### Editor(s):

(1) Dr. Sara Marelli, Scientific Institute and University Hospital, Irccs San Raffaele Ville Turro, Italy.

#### Reviewers:

(1) Qaisar Abbas Educaiton, Riphah International University Campus, Pakistan.

(2) Ray Wang, Hungkuang University, Taiwan.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/56214>

**Received 01 February 2020**

**Accepted 07 April 2020**

**Published 13 April 2020**

**Original Research Article**

### ABSTRACT

**Aims:** The study generally assessed the Technical Vocational Education Program of Davao del Sur School of Fisheries.

**Study Design:** Quantitative-descriptive correlation.

**Place and Duration of Study:** The study was conducted at the Davao del Sur School of Fisheries in Davao del Sur, The Philippines. The study was conducted for 10 months.

**Methodology:** This study used the universal sampling for both sets of respondents; the teachers of TVE program and the Grade 10 students. There were 32 teachers and 322 students participated in the study. The Technical Vocational Education program was assessed in terms of library facilities and internet connectivity, Science laboratory facilities, TVE laboratory facilities and the use of information and communication technology. These were correlated to the academic performances of the students.

**Results:** The findings of the study showed that in terms of population, 322 students were enrolled in the TVE program; majority of these students took the food processing technology course that comprised 39.45%. In terms of teachers' qualification, 32 were Bachelor of Art or Bachelor of Secondary Education graduates. There were 18 out of 32 teachers who were teaching in TVE programs and the rest taught in other related courses. For qualification to teach in the Program, one- third of the total faculty was handling fish culture, while two third was teaching outside the flagship courses. In the assessment of the support learning facilities, the library, internet

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connectivity, science and laboratory facilities were described as “moderately adequate”; the TVE laboratory facilities was described as “very adequate”. In the assessment of the ICT in instruction, it was described as “very effective”. The study found significant relationship between the academic performance of the TVE students and the support learning facilities and between the academic performance of the TVE students and the used of information and communication technology (ICT) in learning.

**Conclusion:** The school needs to maintain its support learning facilities and information and communication technology so that it can produce more competent TVE students. However, the school may look into industry partners so that actual application of students’ theoretical knowledge may be put into action. Moreover, tracer study may also be conducted to find the competitiveness and employability of the graduates.

*Keywords: Assessment; Technical Vocational Education (TVE); Davao del Sur School of fisheries.*

## 1. INTRODUCTION

Assessment guides the implementers to determine the successes and failures of any program. Moreover, nobody can claim success of any project unless a systematic and well-thought evaluation is conducted and nobody can either suggest improvements unless the downside of the project is determined [1]. Assessment makes valuation of a system and determines the challenges and helps the education system [2]. Assessment also looks whether the program’s educational objectives are translated into students’ outcomes [3]. Likewise, assessment evaluates educational service quality in technical and vocational courses [4]. More importantly, assessment gives feedbacks and allows the learning processes an important role [5] Thus, assessing the Technical Vocational Education program offers school administrators mirrors which could give them clear image of the program’s strengths, needs, and weaknesses. If assessment of programs is not given attention, non-delivery of the technical institution’s goals may not be enhanced. In 2015, the Technical Education and Skills Development Authority (TESDA) which monitored the Technical and Vocational Education admonished technical-vocation schools to shape up or face closure. This was due to the report that many tech-voc institutions do not measure up with the standards and producing non-competitive graduates [6]. A year later, TESDA again warned to close some programs of around 400 accredited institutions due to non-compliance to the agency’s standards [7]. Thus, assessment is one of the key elements that measures the programs’ outcomes in order to improve students’ learning [8].

In the Philippines, the Technical Vocational Education (TVE) was one of the flagship

programs of the Department of Education (DepEd) on its K-12 curriculum. Budhrani et al. [9] mention that TVE program was a competency-based formulated to produce skilled workers. Moreover, Maclean and Lai [10] point out that Technical Vocational Education prepares people for the world of work; provides young people and adults with the knowledge, skills, and competencies toward an improved quality of life. Likewise, several authors [11,12] opine that TVE increases the productivity and income of the poor, enhances employability for the unemployed, and facilitates transfer to new occupations for those currently employed. With TVE, small and medium enterprises are assured of technical labors [13] and greater enterprise-based training workers [14] because TVE program brings TVE students closer to the actual workplace [15]. In a greater sense, Moodie et al. [16] consider TVE and training promotes social justice because it has important roles in developing occupations and industries; likewise, [17,18] regard TVE to promote relevant and high-quality education.

In the local context, the Davao del Sur School of Fisheries in Malalag, Davao del Sur is one of the schools which offers Technical Vocational Education program. Students are able to choose different areas of specialization that fits their individual interest and abilities. The school provides the relevant facilities needed and supports the teachers in the teaching-learning process of the students. Moreover, the school also adheres to the standards demanded by the Technical Education and Skills Development Authority (TESDA) which sets the National Competency Assessment. Thus, an evaluation study was necessary for the school to determine the strengths and weaknesses of the TVE program and to ascertain the link between the school facilities and the academic performances

of the students. It was on this context that this assessment study was conducted.

### 1.1 Statement of the Problem

This study aimed to assess the Technical Vocational Education (TVE) program of Davao del Sur School of Fisheries. It also sought to answer the following relevant questions:

1. What is the profile of Technical Vocational Education (TVE) program in terms of Technical Vocational (TVE) courses and teachers' qualifications?
2. To what extent do the respondents assessed the Technical Vocational Education (TVE) program in terms of support and learning facilities such as library facilities and internet connectivity; Science laboratory facilities; TVE laboratory facilities; computer facilities and ICT facilities?
3. What is the level of TVE students' academic performance?
4. Is there as significant relationship between students' academic performance and the Technical Vocational Education programs facilities?
5. Is there as significant relationship between students' academic performance and the use of ICT?

### 1.2 Scope and Delimitation

This study was purposely conducted to evaluate the Technical Vocational Education (TVE) program. The study was also limited only to the TVE teachers and students of Davao del Sur School of Fisheries. It did not include other teachers and students in other subjects. Moreover, the study used the quantitative-descriptive-correlation method, thus, it did not include any personal experiences and opinions of the respondents. With these limitations, San [19] opines that the findings of the study could only be applicable to the respondents involved in the study.

## 2. MATERIALS AND METHODS

### 2.1 Research Instrument

This study used survey questionnaire to assess the Technical Vocational Education (TVE) program of Davao Del Sur School of Fisheries in terms of the library facilities and internet connectivity, Science laboratory facilities, TVE laboratory facilities and information and

communication technology. On the other hand, the academic performances of the students were based on the TVE marks of the teachers. The research instrument was submitted to panel of experts' validation. The instrument was revised based on the experts' comments and suggestions.

### 2.2 Research Design

This study utilized the descriptive-correlation design. Descriptive research design is a specific method which involves observing and describing the behavior of the participants [6]; it is done without making interference from the investigator [20]; it explores causes of the different frequencies of outcomes and events [21]. In this study, this method was appropriate because the TVE support and learning facilities provided by the school such as the library and internet connectivity; Science laboratory; TVE laboratory; computer and ICT were described according to the assessment of the students. It was made sure that data obtained were not manipulated by subjecting the data into the computation and interpretation of an expert statistician.

On the other hand, correlation is a statistical method employed to investigate relationships among two or more variables [22]; to learn complex non-linear transformations of two views of data [23]. In this study, the relationship of the two variables, the assessment of support and learning facilities and the students' performances, were determined. Determining the correlation or non-correlation of these variables would give the implementers of the TVE program bases which aspects of support and learning facilities to be improved and maintained.

The researcher used total enumeration sampling. Total enumeration sampling is used when an investigation needs to study an entire population with similar attributes, knowledge and skills [24]. This study involved the 322 students who were enrolled in the Technical Vocational Education (TVE) program. These students were chosen because they have common characteristics such similar level, age range, taught by similar teachers, and living in rural area.

To address the validity, reliability, and minimize the impact of Common Method Variance (CMV), the research made methodological and procedural measures as suggested by Podsakoff

et al. [25] and Fuller et al. [26]. Methodologically, the researcher obtained the dependent and independent variables from different sources. The data for the independent variable which measured the support learning facilities of the school were obtained from the students, while the data for the dependent variable which dealt with the students' academic performances were taken from the teachers. Procedurally, to eradicate psychological biases of the student-respondents, the researcher conducted at different time the evaluation of the learning facilities. Moreover, the letter of consent which stipulated the objectives of the study had contributed to the student-participants understanding of the purpose of the investigation; thus, influenced them to be objective in answering the survey questionnaire.

### 3. RESULTS AND DISCUSSION

#### 3.1 Profile of Technical Vocational Education (TVE) Students According to Courses

Three hundred Twenty-two students were enrolled in the TVE program. Majority of these students were in the food processing technology that comprised 39.45% which outnumbered the flagship course which was fish culture. Fish culture was second in rank with a population of 24.84%. The remaining number of students was enrolled in bread and pastry, carpentry and computer hardware servicing. It could be noted that more than 75% of the total population were specializing in the courses that were out of the specialization offered by the flagship courses in school of fisheries. The school of Fisheries specializes in technology related to the by-product of fish, so that many technologies can be offered and developed for the development of the fish industry.

Results showed that many students were inclined in food processing. This might be due to the fact that they had seen promising opportunities for food processing industry.

According to the report of Ward et al. [27], food processing is the country is becoming robust. It's output quadrupled in five years (2009-2013) and contributed to 50% to the country's total manufacturing output.

#### 3.2 Profile of Technical Vocational Education (TVE) Program in Terms of Teachers'

##### 3.2.1 Qualifications

Table 2 presents the teachers qualifications. It showed that more than half of the teacher-respondents were graduates of AB/BS degrees (62.50). Moreover, 25% had some Masteral units while a few had obtained Masteral degrees. This result implies that all teacher-participants were qualified to teach since the minimum requirement for someone to teach in high school level was a baccalaureate degree as stipulated in RA 7836 better known as "the Philippine Teachers Professionalization Act of 1994. The Act specifies that someone who wishes to teach in secondary education, they are required to obtain a baccalaureate degree in education or an equivalent with a major or minor course or gained a degree in arts and/or sciences with 18 units earned for teaching [28]. Moreover, a license is needed for someone to be qualified to teach. However, Darling et al. [29] challenge this idea. They argue that a degree and license do not always guarantee competence but preparation and evaluation on aspiring teachers are critical for ensuring the necessary knowledge for 21<sup>st</sup> Century schools. On the other hand, Orale [30] compared USA, Japan and the Philippines' K-12 systems and concluded that availability of qualified teachers among these countries remains a great issue. It implies that specific academic institutions need to have their own hiring mechanism in the selection of who are qualified or not for the teaching job.

Among the 32 teacher-respondents in the TVE program, 18 or 56.25% of them had the qualification to teach in the program while the remaining 14 or 43.75% were teaching in the

**Table 1. Frequency distribution of Technical Vocational Education (TVE) students' according to courses**

	<b>Courses</b>	<b>Frequency</b>	<b>Percent</b>
1	Food Processing	127	39.45
2	Bread and Pastry	40	12.42
3	Fish Culture	80	24.84
4	Carpentry	40	12.42
5	Computer Hardware Servicing	35	10.87
	<b>Total</b>	<b>322</b>	<b>100</b>

**Table 2. Frequency distribution of Technical Vocational Education (TVE) teachers' according to qualifications**

	<b>Teachers' qualification</b>	<b>Frequency</b>	<b>Percent</b>
1	Masteral Degree	4	12.50
2	Masteral Units	8	25.00
3	AB/BSE graduates	20	62.50
	<b>Total</b>	<b>32</b>	<b>100</b>
1	Food Processing	6	33.33
2	Bread and Pastry	2	11.11
3	Fish Culture	6	33.33
4	Carpentry	2	11.11
5	Computer Hardware Servicing	2	11.11
	<b>Total</b>	<b>18</b>	<b>100</b>

subject related areas as teacher support and general education program teacher. However about 1/3 of the total faculty taught fish culture which was the flagship program of the TVE, while 2/3 was assigned to teach in other technical courses.

Qualifications of teachers are very essential in the teaching profession. The presence of qualified teachers in Davao del Sur School of Fisheries implies that the school administration adhered to the Department of Education's standard. However, in a study conducted by Musau and Abere [31] in Kenya, they found no significant difference between teachers' qualification and students' achievement. Their study further revealed that these teachers were trained individuals in their field and had finished in-service trainings. San and Galang [32] pointed out that for the teacher to deliver their desired outcomes to their students effectively, innovations of the current teaching strategies must be developed. On the other hand, San et al. [33] suggested that teachers need to suit their teaching approach to the students' level of cognition not the students cope with the teachers' desire. Hence, in teaching TVE program, Jabarullah and Hussain [34] developed the Problem-Based Learning (PBL) where students used hands-on and experiential approaches. This implies that TVE teachers may consider conducting needs analysis of their students' preferred strategies and approach in the delivery of the TVE lessons.

### **3.3 Respondents Responses on Library Facilities and Internet Connectivity**

Table 3 shows the data on the library facilities and internet connectivity. It obtained an over-all mean of 3.11 with verbal description of moderately adequate. It implies that the library

facilities and internet connectivity don't satisfy the needs of the students. Apparently, availability of books, text books, references, magazines, periodicals related to TVE course, internet connectivity, and availability of computers were rated as moderately adequate. It indicates that these aspects are not sufficient to the needs of the students. The only item rated as adequate was the capacity of the library to accommodate students. This implies that the library is big enough to billet visitors but not necessary suggests that they are satisfied. Thus, the administration may look into the needs for library holdings so that students would have the motivation to stay and learn in the library.

In relation to the above findings, [35,36] mention that accessible library resources significantly link to the development of students' confidence, independence and self-esteem. In the same vain, Omeluzor et al. [37] find in their study that library information obtained by the students had greatly impacted even beyond their students' lives. They claimed that the library resources helped them support their learning and promote habit formation. Hence, it can be deduced from these literatures that library resources must be enough so that students could sufficiently acquire knowledge relevant to their lessons.

McCabe and Kennedy [38] suggest that for the academic institution to cope with the timely challenges of library holdings, librarian has to look into its needs and develop tailor-made best practices to improve the collection and development processes, services dissemination, and the utilization of the library. Thus, appropriate planning, fore thinking, a detailed analysis of user base, objectives of the affiliating institution and its future strategies should be taken into consideration. Moreover, Jange [39] says that library is the fulcrum of support for the

entire range of academic activities on an educational campus. In today's high-tech learning environment, the library as a learning resource is taking up increasingly more academic space and time in the life of the learners.

What makes the library insufficient? This question bothers many academic institutions. The researchers had found several factors: lack of training and inadequate personnel [40]; technical and non-technical capabilities [41]; attitude of the library staff towards the clients [42]; inadequacy of library resources due to lack of funding and non-inclusion of information technology skills [43].

### 3.4 Respondents Responses on Science Laboratory Facilities

Table 4 shows the rating of the respondents on the Science laboratory facilities of the school. It showed an over-all mean of 3.14 described as moderately adequate. It suggests that although the school administration had provided Science equipment, apparatus, chemicals, workbooks and pop sheets for experiments and other scientific activities, and made the laboratory spacious, still those were not seen enough by the respondents. This result implies that despite the effort of the school administration, providing necessary equipment remained a challenge. This may be associated with the cost, labor, and maintenance. Ideally, Science laboratories provide students with sound scientific and technological knowledge [44]. It is a venue to appropriately use to acquire theoretical scientific knowledge into action [45,46]. Thus, the lack of adequacy of materials and equipment of this laboratory, students could not apply what they learned from the classroom. Knowledge would only be in the brain and not into action. However,

in a study conducted by Hırça [47] he proposed that teachers can innovative low cost materials instead of laboratory equipment.

### 3.5 Respondents Responses on TVE Laboratory Facilities

Table 5 shows the respondents' responses on TVE laboratory facilities. It obtained an over-all mean of 4.43 described as very adequate. In particular, all items were rated very adequate by the respondents. It implies that the school administration had provided TVE laboratory materials, teaching guides sufficiently. Likewise, the administration made TVE laboratory spacious to accommodate competency-base skills.

Contrary to the results of library and internet connectivity and Science laboratory, student found TVE laboratory facilities more sufficient. This implies that the school administration prioritized this laboratory compared to the two. With the sufficient equipment, students can perform genuine tasks before they are exposed to real-life environments [48]. For example in food processing laboratory, Çağındı and Ötleş [49] mentioned that analytical techniques are conducted such as sampling, testing, and tracking the products. On the other hand, in fish culture laboratory could be used as feeding trials [50]; maintenance of fish species [51]; observation and experimentation [52,53].

### 3.6 Respondents' Over-all Ratings on TVE Support Learning Facilities

Generally at average, the support learning facilities had obtained an over-all mean of adequate. However, it can be noted that both the library facilities and Science laboratory facilities gained only moderately adequate rating. It implies that that these two aspect of need to be

**Table 3. Summary of respondents' responses on library facilities and internet connectivity**

Item/s	Mean	Description
1 The school library has enough space to accommodate at least 20% of the entire population students' needs and for research activities.	3.68	Adequate
2 The school library has enough books, textbooks and general references in your field of TVE courses.	2.65	Moderately Adequate
3 The school library has enough magazines, journals and periodicals to support reading materials in your field in TVE course.	2.68	Moderately Adequate
4 The school library has an internet connectivity needed to access the new and recent information and communication technology.	3.33	Moderately Adequate
5 There are at least 10 computers in the library to be used by the students in accessing information and for research activities.	3.25	Moderately Adequate
Over-all Mean	3.11	Moderately Adequate

**Table 4. Summary of respondents' responses on science laboratory facilities**

Item/s	Mean	Description
1 The school has enough science laboratory facilities to support science activities and experimentation such as equipment, apparatus and chemicals.	3.00	Moderately Adequate
2 There is enough laboratory space to be used by the students to conduct science laboratory activities.	3.16	Moderately Adequate
3 There enough teaching laboratory guides in the conduct of science activities such work books and pop sheets.	3.28	Moderately Adequate
Over-all Mean	3.14	Moderately adequate

**Table 5. Summary of respondent's responses on TVE laboratory facilities**

Item/s	Mean	Description
1 There enough TVE laboratory materials to support my course such as laboratory tools and equipment.	4.16	Very Adequate
2 There is enough space for each student to hold laboratory activities to test competency skills.	4.73	Very Adequate
3 There is enough time for us to do the TVE laboratory activities.	4.81	Very Adequate
4 There are teaching guides for the TVE laboratory activities such as modules and workbooks.	4.05	Very Adequate
Over-all Mean	4.43	Very Adequate

strengthened and improved. Beukes-Amiss and Chiware [54] aver that maintenance and improvement of school's support learning facilities is essential in providing high-quality education programs. They further mention that investing in strong preventative maintenance programs, school facilities can continue to serve students for long periods of time.

Modernization of school facilities has faced a number of new challenges in recent years with the advent of the personal computer. As new technologies are increasingly integrated into programs of instruction, the ability to adequately finance the acquisition of this equipment and to have the infrastructure in each school to support this technology is also important.

### **3.7 Respondents Responses on the Assessment of the Used of Information and Communication Technology (ICT)**

ICT has become an integral and accepted part of everyday life for many people. It is increasing important in people's lives and it is expected that this trend will continue, to the extent that ICT literacy will become a functional requirement for people's work, social, and personal lives.

As shown in Table 7, the respondents' ratings on the use of the information and communication technology obtain a high of 4.46 described as very effective. The respondents believed that the use of power point made them learn more; that internet connectivity allowed them to explore and engage, provided them academic resources, encouraged them to explore on relevant information for their research papers. This implies that information and communication technology is vital to their academic needs. In relation to the library facilities, administration could reflect on this finding. The library should be sufficiently provided with ICT equipment and resources so that students would have one-stop academic exploration.

It was also noteworthy to mention, although it was rated the least, ICT was also relevant to teachers. Gray and Souter [55] aver that ICT teachers are positive and motivated to make their lessons. Similarly, Cox et al. [56] point out that ICT enable the teachers to make lessons more interesting, easier, more fun for their students, more diverse, more motivating and more enjoyable. According to Fowowe [57], ICT also improves teachers' presentation skills and knowledge of ICT equipment which increases students' motivation.

### 3.8 Distribution of the Academic Performance of the Respondents

Table 8 shows the frequency distribution of the academic performance of the Technical Vocational Education students. Data revealed that based on the General Weighted Average, the students hurdled all the courses in the TVE program. It could be noted that the mean academic performance of the students falls in average level with a grade of 87.75% which means that one out of three students (1/3) obtained an average grade in their field of specialization or 33.33% of the total respondents whose general weighted grade belongs to the average level. Majority of the respondents or 73.33% belonged to the average and above average level while 26.26% belonged to the below average.

The mean grade of 87.751% suggests that the TVE students had high possibility of passing the Technical Education and Skills Development Authority (TESDA) examination NC 11 level. It further implies that TVE students had obtained knowledge and skills in their course. According to TESDA [58], its certification ensured that an individual can deliver productive, quality and globally competitive labor.

### 3.9 Test of Significant Relationship between the Students' Academic Performance and the Technical Vocational Education Program Facilities

As shown in Table 9, when the academic performances were paired with the library facilities and internet connectivity, it resulted to an r-value of 0.7831. This coefficient means that the degree of relationship was strong. Similarly, a computed r-value came out when academic performance was matched with the science laboratory facilities and technical, vocational education laboratory facilities program. These values indicate that the relationship were also strong.

Comparing the three correlation coefficients with the common critical value of 0.19; all of them were significant. This means that the null hypothesis was rejected. Suffice it to say, that the academic performance of the students was significantly related to the support learning facilities and the used of information and communication technology in learning. Likewise, the strong relation for the variables in the technical vocational educational program defined by the support learning facilities affect the learning outcome of the students. This implies that Technical Vocational Education (TVE) program facilities directly affect students' learning outcomes. This corroborated with the findings of Ayonmike and Okeke [59] who found that school administrators have great role in enhancing TVE program's outcomes through adequate provision on human and material resources and infrastructural facilities.

### 3.10 Test of Significant Relationship between the Students' Academic Performance and the ICT

As shown in Table 10 the use of information and communication technology and internet connectivity for students' learning indicates a positive correlation. When the students' academic performance is correlated with the use of information and communication technology a computed r-value of 0.8037 was derived. The computed value, however, expresses a strong relationship between the paired variables. Likewise, the strong relation for the variables in the technical vocational educational program defined by the use of information and communication technology affect the learning outcome of the students. This implies that the provision of information and communications technology (ICT) to schools and its use for educational purposes can increase students' achievement in at least two ways. First, the availability of ICT in the classroom shifts the level of educational inputs and could thus affect students' learning outcomes. Second, exposure to ICT may increase the cognitive abilities of students, allowing them to learn faster.

**Table 6. Summary of respondents ratings on TVE support learning facilities**

	<b>Support learning facilities</b>	<b>Mean</b>	<b>Description</b>
1	Library Facilities	3.11	Moderately Adequate
2	Science Laboratory Facilities	3.14	Moderately Adequate
3	TVE Laboratory Facilities	4.43	Very Adequate
	Overall mean	3.56	Adequate



**Table 7. Summary of respondents responses on the assessment of the used of Information and Communication Technology (ICT)**

Item/s	Mean	Description
1 The teacher uses power point as a good visual tool for teaching and learning process.	4.25	Very Effective
2 The internet connectivity can provide good facilities in exploring learning.	4.35	Very Effective
3 The internet connectivity provides powerful resources in gaining academic knowledge.	4.52	Very Effective
4 In using the internet connectivity, students can enhance their learning outcome.	4.57	Very Effective
5 The use of internet connectivity encourages learners to conduct research and to take an active part in learning.	4.62	Very Effective
Over-all Mean	4.46	Very Effective

**Table 8. Frequency distribution of the academic performance of the respondents**

Grade Interval	Description	Frequency	Percent
95-100	Superior	0	0.00
90-94	Above Average	24	40.00
85-89	Average	20	33.33
80-84	Below Average	16	26.67
75-79	Fair	0	0.00
Total		60	100.00
Mean		87.75	

**Table 9. Test of significant relationship between the students' academic performance and the technical vocational education programs facilities**

Indicators	r-value	Degree of relation	Interpretation
Library Facilities/Internet connectivity	0.7831	Strong	*
Science Laboratory Facilities	0.6708	Strong	*
T V E Laboratory Facilities	0.7016	Strong	*

*cv = 0.19 (2-tailed)n = 110 \* = significant at .05 alpha*

**Table 10. Test of significant relationship between the students' academic performance and Information Communication Technology (ICT)**

Indicators	R	Degree of relation	Interpretation
Used of ICT in Learning	0.8307	Strong	*

*cv = 0.19 (2-tailed)n = 110 \* = significant at .05 alpha*

Computer-aided instruction may be more relevant in a context in which teacher quality is poor, which is the case in most developing countries. Previous studies have shown that programs that provide computer-aided instruction can positively influence students' test scores.

#### 4. CONCLUSION

With the foregoing findings, the school administration needs to strengthen and maintain its support to the learning facilities and information and communication technology so that it can produce more competent TVE students. Library and internet connectivity and Science laboratories may not be neglected

because of their significant role in the development not only of students' technical but also psychological skills. The results implicate that school administrators may consider the school's physical capacity so that number of students' enrollment can be determined; that school librarians may be sent to book fair for material acquisition; that with the support of the school's administration, TVE teachers may be encouraged to develop instructional materials for TVE course; that the school Human Resource Office (HRO) may look into teachers' Personal Development Plan (PDP) to determine each teacher's professional development strategies; that science laboratory teachers may innovate techniques to deliver laboratory activities in the

absence of some equipment; that school administrators may benchmark from other TVE institutions to identify and determine the needs of the school. Likewise, the school may look for industry partners so that actual application of students' theoretical knowledge may be put into action. Moreover, tracer study may also be conducted to find the competitiveness and employability of those TVE graduates.

## DISCLAIMER

In addressing the research ethics, the researcher strictly held the protocols in handling the secondary data. The students' identities were not included on the survey questionnaire. Likewise. The students were assured that the information obtained from the questionnaires would solely be used for research purposes.

## CONSENT

Consent letters were attached to the questionnaire for the students to know the objectives of the study.

## COMPETING INTERESTS

Author has declared that no competing interests exist.

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