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TECHNICAL SKILLS AND THE ACADEMIC PERFORMANCE OF GRADE 9 TECHNOLOGY AND LIVELIHOOD EDUCATION STUDENTS: A BASIS FOR PLACEMENT PLAN

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Abstract: This study uncovered the technical skills academic performance of Grade 9 Technology and Livelihood Education students and used the data gathered as a basis in the development of a placement plan for prospective Grade 10 students. It also identified the students' profile and their interest in different Technical-Vocational and Academic strands. Two hundred forty Grade 9 students at Talavera National High School SY-2018-2019 in the third grading period were the respondents in this study. The 240 students were divided into four groups according to their specialization, specifically Agriculture, Cookery, SMAW, and ICT. Descriptive statistics such as mean, percentage, and standard deviation, as well as an inferential statistical method such as Pearson's *r* were used to analyze the gathered data. The result revealed that most of the respondents were male, 14 years old with an average grade of 85-89 during the first and second grading periods. In terms of interest in Tech-Voc and Academic strands, students with specialization in Agriculture showed the highest interest in GAS, students with specialization in Cookery showed the highest level of interest in HUMSS, Students with specialization in SMAW had the highest level of interest in GAS, and the highest level of interest was found in STEM with specialization in ICT. Overall, the students had a higher interest in Academic strands and were more likely to get into the Academic strand in Senior High School. The level of technical skills of all groups was very good. This was an indication that students in Grade 9 had adequate knowledge in their area of specialization. As regards the relationship between technical skills and interest of the respondents in different specializations, a negative correlation was found between technical skill and interest in agriculture of the respondents taking a specialization in Agriculture and Cookery. Nonetheless, for students taking ICT, there was a strong positive correlation found between technical skill and interest in HUMSS, and STEM. Additionally, a strong positive correlation was found between students taking Cookery, SMAW, and ICT technical skill and academic performance. This was proof that the respondents who had high academic performance also had high technical skills in Cookery, SMAW, and ICT. Thus, getting Tech-Voc strands should be given precedence as it is related positively to the students' academic performance. Thus, there is a need for teachers, particularly TLE and Tech-Voc teachers, to persuade the students to continue their specialization in Senior High School. This way, the students would be able to improve their technical skills and could be more successful academically and in their future endeavors.

Keywords: *technical skills, interest, academic performance, placement plan*

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I. INTRODUCTION

Technical know-how is the students' source of skills that can be acquired from a thorough studying and continuous application of gained knowledge. It also refers to talent and expertise which the person possesses in performing certain jobs or skills. These skills are now easily identified by the teachers and students. Technical skills are also known as hard skills that are considered practical rather than theoretical.

Technical skills can be gained through formal schooling. This notion has been proven true by a great number of people with remarkable achievements and established names in their chosen field of endeavor. Certain achievements are primarily dependent upon an individual's training, and most importantly, upon the kind of education, one has chosen and acquired, particularly in this era characterized by changes and technological innovations.

However, this fast-changing world is facing complex problems that include an increased rate of unemployment. According to the National Statistics Office survey in April 2018, about sixty percent (60%) or over one-half of the labor force in the country is unemployed. With this situation, government leaders are continuously seeking ways to improve the education system that they introduce newer schemes to improve knowledge and skill acquisition. They believe that the country's dream for progress and development depends largely upon manpower's education and performance by a set of accepted behaviors, values, practices, skills, and human associations. The academe has done its share in the improvement of the nation's manpower with the inclusion of vocational and values education subjects in the curriculum. Learning institutions now promote technical-vocational education and instill, as well as improve, the technical skills, attitudes, and acceptable work habits of students.

The government efforts and concern about vocational education programs in the country are evident in Republic Act No. 3377, otherwise known as the Vocational Act of 1927, and in Article XIV, Section 5, of the 1935 Philippine Constitution, also provides for the development of vocational efficiency.

Most recently, the offering of Technology and Livelihood Education (TLE) as one of the subjects offered in all the curriculum levels under the K to 12 programs is another proof that the government recognizes the importance of technical and vocational education in national development. TLE covers the basic skills and concepts of Home Economics, Entrepreneurship, Information and Communication Technology (ICT), and Agricultural Arts as well as Industrial Art, taken as a unified course. As one fundamental school subject, TLE is concerned with providing experiences in the various fields of work, and in the development of everyone's skill, knowledge, appreciation, and values formation necessary for effective daily living (Agdan, 2013).

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According to Balhag (2013), Technology and Livelihood Education equips learners with knowledge and information, skills and processes, right work values, and life skills in the field of Home Economics, Industrial Arts, Agri-Fishery Arts, Information Communication Technology and Entrepreneurship). In addition, TLE aids in the development of work ethics, knowledge, skills, and values that are essential to economically productive endeavors. It also brings about students' awareness in engaging themselves in income-generating activities and other livelihood projects that eventually improve their lives and lessen their dependence on employment as the only source of income (Cabanig, 2013). In this sense, Javier (2021) in her study, necessitated teachers to be innovative in class towards achieving its vision-mission statement by integrating into the curriculum and instruction the use of digital teaching and learning tools.

Nevertheless, no matter how good the education or curricular program is, the unemployment rate will tend to increase if there is a mismatch between the level of skills developed and the skill requirement of the job in the industry. The fact that about sixty percent (60%) or over one-half of the labor force in the country is unemployed is a glaring problem that needs to be addressed. One way to address it is to ensure that the gap between the skills developed in the classroom and the required skill by the industry is at least minimized if not eradicated. This can initially be done if the junior and senior high school students would take their TLE subjects seriously. However, there were unofficial claims that students were not paying enough attention to their TLE subjects for several reasons that include lack of interest and required skill and ability to fully engage in related TLE specialization activities as they were just obliged to enroll the subject because there were no other choices. It was an issue of matching specialization courses with the student's skills and interest in the subject, and such gave birth to the idea of conducting this study.

The study intended to analyze and find the relationship between the technical skills and the level of interest of Grade 9 Technology and Livelihood Education (TLE) students in different strands in Senior High School, as well as the relationship between the technical skills and the academic performance of the said students. The result of this study can be used as a guide in the formulation of policy or in the development of a workable placement plan that ensures alignment of students' skills and interests and the strands they will pursue in Senior High School (SHS) and even in college.

Research Problem

This research determined the Technical Skills and the Academic Performance of Grade 9 TLE Students as a Basis for a Placement Plan. Specifically, it tried to find the answers to the following questions:

1. How may the academic performance of the respondents be described?

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2. How may the interest of the following group of respondents in Tech-Voc and Academic strands be described?
   2.1 Agriculture;
   2.2 Cookery;
   2.3 Shielded Metal Arc Welding; and
   2.4 Information and Communication Technology?
3. How may the technical skills of the following group of respondents be described?
   3.1 Agriculture.
   3.2 Cookery.
   3.3 Shielded Metal Arc Welding; and
   3.4 Information and Communication Technology?
4. Is there any relationship between the technical skills of each group and their interest in different Tech-Voc and Academic Strands?
5. Is there any relationship between the technical skills of each group and their academic performance?
6. What is the implication of the findings of the study to the placement of the students in Grade 9 specialization?

II. METHODOLOGY

This research used a descriptive correlational research design. This design was used to find the relationship between students' technical skills and the interest level, as well as the relationship between the technical skills and academic performance of selected Grade 9 TLE students. As defined by Ari Reid (2015), a correlational research design is a type of non-experimental research method, in which a researcher measures variables, understands and assesses the statistical relationship between them with no influence from any extraneous variable. Correlational research is used to explore the relationships or links between variables.

The study was conducted at Talavera National High School. The said school which is in Pag-Asa District, Talavera, Nueva Ecija was founded in 1945 through the efforts of the then Municipal Mayor, Leopoldo D. Diaz. Now it has more than 180 teachers and is a home for more than 5000 students from Grade 7 to Grade 10. Most of the graduates of Talavera National High School enroll in Talavera Senior High School where the researcher is currently teaching. Teaching in Talavera Senior High School, the researcher had observed that most of the students in the TVL track lacked the technical skills needed in the course. This was indeed very heartbreaking since the students from Talavera National High School have been taking specialization courses in TVL since Grade 9. It only means that junior high school graduates who already have a high level of technical skills did not enroll in the appropriate TVL strand or worst, did not enroll in TVL. Thus, the conduct of this study was pursued by the researcher.

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Respondents and Sampling Methods

This study focused on determining the students' technical skills which were limited only to Cookery, Agriculture, SMAW, and ICT, and the academic performance of Grade 9 TLE students. The respondents of this study were limited to 60 Grade 9 TLE students that were selected through stratified random sampling. Grades 7, 8, and 10 were not included in the study. The researcher selected skills that were acquired already by the Grade 9 students during the 1st semester of Academic Year 2018-2019 at Talavera National High School.

Data Collection Procedure

For the researcher to gather data needed for the study, he used a survey questionnaire. The survey questionnaire included the demographic profile of the respondents such as name, age, sex, students' average grade during the first and second grading periods, and their levels of interest in different strands namely: Agriculture, Cookery, SMAW, ICT, and Academic track. To determine the students' level of technical skills in the students' area of specialization, a survey questionnaire adapted from the Technical Education Skills Development Authority (TESDA) Training Regulation was used. The survey questionnaire consists of twenty-five (25) statements for every area of specialization. Data gathering devices such as documents and research analysis were also utilized to attain the objectives of the study.

Ethical Considerations

For the researcher to conduct the study among Grade 9 students of Talavera National High School, he first secured permission from the School Principal, after which he coordinated with the department head. For the selection of the respondents, the researcher asked the Grade 9 advisers for the students' master list. The master list served as the basis for the selection of the respondents. The respondents for the study were two hundred sixty-four respondents which were divided equally into four groups. Before the start of the survey, the researcher discussed to the respondents the content of the survey questionnaire. Its purpose was to gather respondents' personal information like name, age, sex, average grade during the first and second grading periods, and their level of interest to different strands in TVL specifically Agriculture, Cookery, SMAW, and ICT, and the Academic strands specifically ABM, HUMSS, GAS, and STEM. Afterward, the survey questionnaire was given to the respondents to get their level of technical skills on their specialization.

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Data Analysis

To facilitate the accuracy and reliability of interpretations of data, the following statistical tools were used: frequency, percentage, mean, standard deviation, and Pearson's r.

1. **Academic Performance** - it was described using frequency, percentage, mean and standard deviation. Frequency was used to determine the number of respondents who obtained an average grade of 75-79, 80-84, 85-89, and 90-94. On the other hand, the percentage was used to determine the ratio of the frequencies as a fraction of the whole. Also, the mean was used to determine the average academic performance of the respondents. Lastly, to measure the variation of the distribution of data, the standard deviation was calculated.

2. **Interest –** to describe the level of interest of the respondents in different strands, mean and standard deviation were used. Mean was used to determine the average level of interest of the respondents in different strands. Using the mean, the researcher was able to find out if the respondents have very low, low, moderate, high, or very high interest in different Tech-Voc and Academic strands. Standard deviation was also used to measure the variation of the distribution of data.

3. **Technical Skills** – was described using mean and standard deviation. Mean was used to determine the average or central tendency of the technical skills of the respondents from different specializations, specifically Agriculture, Cookery, SMAW, TVL. Using mean, the researcher was able to find out if the respondents have poor, needs improvement, satisfactory, very good, or excellent technical skills in their specialization. Standard deviation was also used to measure the variation of the distribution of data.

4. **Relationship between Technical skills and Interest -** Pearson's r was used to find out if there was a significant relationship between the technical skills and the respondents' interest. *Pearson's r* is the test statistics that measure the statistical relationship, or association, between two continuous variables. It is known as the best method of measuring the association between variables of interest because it is based on the method of covariance.

5. **Relationship between Technical Skills and Academic Performance -** Pearson's r was used to find out the strength of association between the respondents' technical skills and academic performance.

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III. RESULTS AND DISCUSSIONS

1. Academic Performance of the Respondents

Table 1 shows the frequency distribution and percentage of the academic performance of the respondents in terms of their average grades during the first and second quarters.

The table shows that 44 (18.3%) of the respondents got an average grade of 90-94 for the first and second grading periods, followed by 112 (46.7%) or most of the respondents who got 85-89, while 71 (29.6%) got 80-84, then 13 (5.4%) got 75-79.

Table 1: *Frequency Distribution and Percentage of the Average Grade of the Respondents*

Profile	Indicator	Frequency (*f*)	Percentage (%)
Average Grade in First and Second Grading Period	75-79	13	5.4
	80-84	71	29.6
	85-89	112	46.7
	90-94	44	18.3
	Mean	85.675	
	SD	3.726	

The mean average grade of the respondents was 85.675 which showed that the respondents have an average academic performance during the first and second grading periods. However, the standard deviation showed a value of 3.726 which means that the average grade of the students in first and second grading periods varies from each other.

2. Interest of the Respondents in Tech-Voc and Academic Strands

Table 2 shows the mean and standard deviation of the interest of the respondents under the specialization of Agriculture in different Tech-Voc and Academic strands. As shown on the table, the mean interest of the respondents in Agriculture was 2.35 (*moderate*) with a standard deviation of 0.840, 2.30 (*moderate*) with a standard deviation of 0.889 in Cookery, 2.22 (*low*) with a standard deviation of 1.106 in SMAW, 2.48 (*low*) with a standard deviation of 1.255 in ICT, 2.25 (*low*) with a standard deviation of 1.202 in ABM, 2.78 (*moderate*) with a standard deviation of 1.379 in HUMSS, 4.15 (*high*) with a standard deviation of 0.481 in GAS and 2.78 (*moderate*) with a standard deviation of 1.415 in STEM.

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This showed that the respondents under the specialization of Agriculture had a high interest in GAS and were more likely to pursue GAS in Senior High School. On the other hand, the respondents had the lowest interest and would perhaps not get SMAW in Senior High School.

As expected, the respondents' interest would not be in SMAW, ICT, and ABM in as much that they were pursuing agriculture. However, it is interesting to note that the respondents taking a specialization in agriculture were only moderately interested in the subject they were specialized in, which implies that they like cookery, HUMSS, and STEM. They may not be enjoying the tasks associated with the said specialization areas the way they would tend to enjoy activities associated with GAS. As interest in any activity is believed to influence the academic one experiences in doing the activity, it could happen that the motivation of the respondents in pursuing activities in their agriculture lesson. May tend to be not as intense as their motivation in performing tasks in GAS.

Furthermore, the result implies that as GAS pertains to General Academic Strand, the respondents may have not yet decided on what specific course to pursue or that they may tend to just go with the flow or just get any course and enroll in any track most popular or most practical in their senior years. Whatever it would be, they will most likely enjoy the activities related to it.

Table 2: *Interest of the respondents under Agriculture*

Strand	Mean	Standard Deviation	Verbal Interpretation
Tech-Voc Strands			
Agriculture	2.35	0.840	Moderate
Cookery	2.30	0.889	Moderate
SMAW	2.22	1.106	Low
ICT	2.48	1.255	Low
Academic Strands			
ABM	2.25	1.202	Low
HUMSS	2.78	1.379	Moderate
GAS	4.15	0.481	High
STEM	2.78	1.415	Moderate

Table 3 shows the mean and standard deviation of the interest of the respondents under the specialization of Cookery in different Tech-Voc and Academic strands. As shown on the table, the mean interest of the respondents in Agriculture was 1.82 (*low*) with a standard deviation of 0.792, 2.65 (*moderate*) with a standard deviation of 1.071 in Cookery, 1.88 (*low*) with a standard deviation of 0.940 in SMAW, 1.78 (*very low*) with a standard deviation of 0.783 in ICT, 3.05

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(*moderate*) with a standard deviation of 0.928 in ABM, 4.53 (*very high*) with a standard deviation of 0.536 in HUMSS, 2.22 (*low*) with a standard deviation of 0.993 in GAS and 2.48 (*low*) with a standard deviation of 1.127 in STEM.

This revealed that the respondents under the specialization of Cookery had very high interest and were most likely to get HUMSS in Senior High School. Nevertheless, the respondents had very low interest and would most likely not get ICT in Senior High School.

Table 3: *Interest of the respondents under Cookery*

Strand	Mean	Standard Deviation	Verbal Interpretation
Tech-Voc Strands			
Agriculture	1.82	0.792	Low
Cookery	2.65	1.071	Moderate
SMAW	1.88	0.940	Low
ICT	1.78	0.783	Very Low
Academic Strands			
ABM	3.05	0.928	Moderate
HUMSS	4.53	0.536	Very High
GAS	2.22	0.993	Low
STEM	2.48	1.127	Low

Table 4 shows the mean and standard deviation of the interest of the respondents under the specialization of SMAW in different Tech-Voc and Academic strands. As shown on the table, the mean interest of the respondents in Agriculture was 1.52 (*very low*) with a standard deviation of 0.676, 1.48 (*very low*) with a standard deviation of 0.596 in Cookery, 2.00 (*low*) with a standard deviation of 0.803 in SMAW, 1.72 (*very low*) with a standard deviation of 0.613 in ICT, 2.03 (*low*) with a standard deviation of 1.057 in ABM, 2.22 (*low*) with a standard deviation of 1.091 in HUMSS, 3.33 (*moderate*) with a standard deviation of 1.174 in GAS and 2.32 (*low*) with a standard deviation of 1.142 in STEM.

This illustrated that the respondents under the specialization of SMAW had moderate interest and were more likely to get GAS in Senior High School. However, the respondents had the lowest interest and would possibly not get Cookery in Senior High School.

Table 4: *Interest of the respondents under SMAW*

Strand	Mean	Standard Deviation	Verbal Interpretation

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Tech-Voc Strands			
Agriculture	1.52	0.676	Very Low
Cookery	1.48	0.596	Very Low
SMAW	2.00	0.803	Low
ICT	1.72	0.613	Very Low
Academic Strands			
ABM	2.03	1.057	Low
HUMSS	2.22	1.091	Low
GAS	3.33	1.174	Moderate
3STEM	2.32	1.142	Low

Table 5 shows the mean and standard deviation of the interest of the respondents under the specialization of ICT in different Tech-Voc and Academic strands. As shown on the table, the mean interest of the respondents in Agriculture was 1.40 (*very low*) with a standard deviation of 0.558, 2.00 (*low*) with a standard deviation of 1.042 in Cookery, 1.55 (*very low*) with a standard deviation of 0.675 in SMAW, 2.57 (*low*) with a standard deviation of 1.184 in ICT, 3.48 (*high*) with a standard deviation of 0.965 in ABM, 3.18 (*moderate*) with a standard deviation of 1.017 in HUMSS, 3.05 (*moderate*) with a standard deviation of 0.946 in GAS and 3.52 (*high*) with a standard deviation of 1.066 in STEM.

This depicted that the respondents under the specialization of ICT had the highest interest and were more possible to get STEM in Senior High School. Nonetheless, the respondents had the lowest interest and would certainly not get Agriculture in Senior High School.

Table 5: *Interest of the respondents under ICT*

Strand	**Mean**	**Standard Deviation**	**Verbal Interpretation**
Tech-Voc Strands			
Agriculture	1.40	0.558	Very Low
Cookery	2.00	1.042	Low
SMAW	1.55	0.675	Very Low
ICT	2.57	1.184	Low
Academic Strands			
ABM	3.48	0.965	High
HUMSS	3.18	1.017	Moderate
GAS	3.05	0.946	Moderate
STEM	3.52	1.066	High

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Overall, it could be depicted that the students in different specializations had a higher interest in Academic strands as compared to Tech-Voc strands. Thus, teachers must encourage the Grade 9 students to have a higher interest in Tech-Voc strands.

The result came to be the same with what Azubuiker (2012) stated in his study that Vocational/Technical education seemed to be of less priority for the students. The reason for this probably was due to people's perception that it does not require specialized kinds of training. The students have the feeling that even if one was at home he or she can acquire the necessary skills like cooking, farming, masonry, etc. without formal training. Students are unaware of the importance of the vocational subjects which could help male and female students receive information and can work solutions to everyday problems. Also, it can enable students to acquire skills and abilities essential for independent life met up with personal and family needs more especially in these economic difficulties.

This data was also the same as the result of the study conducted by Edward, et.al., (2002) where they found out that females are more likely to continue with formal education and apply to both higher and further education instead of continuing with Technical-Vocational Education. This was despite the student's prior training in the public vocational school.

3. Technical Skills of the Respondents under Agriculture, Cookery, SMAW, and ICT

Table 6 shows the average of the Technical Skills of the respondents in Agriculture, Cookery, SMAW, and ICT. As shown on the table the mean skill of the respondents under Agriculture was 3.62 (*very good*) with a standard deviation of 0.409, 3.73 (*very good*) with a standard deviation of 0.387 in Cookery, 3.57 (*very good*) with a standard deviation of 0.417 in SMAW and 3.77 (*very good*) with a standard deviation of 0.321 in ICT.

The data revealed that the respondents under ICT had the highest technical skill level, while the respondents under SMAW showed the lowest technical skill level. Nevertheless, all groups showed very good technical skills. Thus, the respondents had adequate knowledge of the different skills needed for their specialization.

Table 6: *Average Technical Skills of the respondents in different Specialization*

Specialization	Mean	Standard Deviation	Verbal Interpretation
Agriculture	3.62	0.407	Very Good
Cookery	3.73	0.387	Very Good
SMAW	3.57	0.417	Very Good
ICT	3.77	0.321	Very Good

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Therefore, just like in the study conducted by Facun (2011), it can be concluded that the instruction delivery of Talavera National High School in Agriculture, Cookery, SMAW, and ICT was strong. However, as indicated in the study of Valera (2015), although the respondents attained a "very good" technical skill, still there should be room for improvement for the students to reach an excellent level of technical skill. Thus, his recommendation that instructional materials, tools, and equipment should be given special attention and highest priority so that students would become familiar with them should be followed. This way the students will be able to gain knowledge and skills if they are exposed to different tools and equipment in T.L.E. He also added that administrators should send teachers for training and seminars or even conduct the same within the campus to upgrade teachers with the new technologies or trends and issues related to their field of specialization. This necessitated teachers to be innovative in class towards achieving its vision-mission statement by integrating into the curriculum and instruction the use of digital teaching and learning tools according to Javier (2021).

4. Relationship between the Technical Skills and Interest of the Respondents in different Specialization

Table 7 shows the Pearson Correlation between the Technical Skills and the Interest of the respondents in different Strands under Agriculture. As shown in the table Technical Skill and Agriculture had an *r*-value of -0.262 with a *p*-value of 0.043. Technical Skill and Cookery had an *r*-value of 0.033 with a *p*-value of 0.805. Technical Skill and SMAW had an *r*-value of -0.072 with a *p*-value of 0.584. Technical Skill and ICT had an *r*-value of -0.151 with a *p*-value of 0.251. Technical Skill and ABM had an *r*-value of -0.209 with a *p*-value of 0.108. Technical Skill and HUMSS had an *r*-value of 0.140 with a *p*-value of 0.286. Technical Skill and GAS had an *r*-value of 0.157 with a *p*-value of 0.232. Lastly, Technical Skill and STEM had an *r*-value of -0.026 with a *p*-value of 0.844.

It can be seen that the *p*-value for Technical Skill and Interest in Agriculture was lower than the significance level of 0.05. This means that the respondents under Agriculture who had shown high technical skills have a lower interest in Agriculture. However, no significant relationship was found in Technical Skills and students under the specialization of Agriculture's interest in Cookery, SMAW, ICT, ABM, HUMSS, GAS, and STEM.

Therefore, teachers in Junior High School teaching Agriculture must give extra effort in making the subject more interesting to the students. This can be done by giving them more varied hands-on activities. They can also seek partnerships with nearby Universities and Colleges so the students will be able to know the trends in Agriculture in higher education. This way, the learners will be more engrossed with the subject.

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Table 7: *Relationship between the Technical Skills and Interest of the Respondents under Agriculture*

		INTEREST							
		Agriculture	**Cookery**	**SMAW**	**ICT**	**ABM**	**HUMSS**	**GAS**	**STEM**
Technical Skill	*r*-value	-0.262*	0.033	-0.072	-0.151	-0.209	0.140	0.157	-0.026
	p-value	0.043	0.805	0.584	0.251	0.108	0.286	0.232	0.844

***** Correlation is significant at 0.05 level

Table 8 shows the Pearson Correlation between the Technical Skills and the Interest of the respondents in different strands under Cookery. As shown in the table Technical Skill and Agriculture had an *r*-value of -0.347 with a *p*-value of 0.007. Technical Skill and Cookery had an *r*-value of 0.029 with a *p*-value of 0.824. Technical Skill and SMAW had an *r*-value of -0.073 with a *p*-value of 0.582. Technical Skill and ICT had an *r*-value of 0.037 with a *p*-value of 0.777. Technical Skill and ABM had an *r*-value of -0.024 with a *p*-value of 0.854. Technical Skill and HUMSS had an *r*-value of 0.091 with a *p*-value of 0.488. Technical Skill and GAS had an *r*-value of 0.022 with a *p*-value of 0.869. Lastly, Technical Skill and STEM had an *r*-value of 0.080 with a *p*-value of 0.542

The table depicts that the *p*-value of Technical Skills and interest in Agriculture was lower than 0.01 level of significance. Thus, there was a high negative correlation between Technical Skills and Interest in Agriculture. This means that students with specialization in Cookery who had high technical skills have low interest in Agriculture. Meanwhile, no significant relationship was found between the Technical Skills of students under Cookery and Interest in Cookery, SMAW, ICT, ABM, HUMSS, GAS, and STEM.

Table 8: *Relationship between the Technical Skills and Interest of the Respondents under Cookery*

		INTEREST							
		Agriculture	**Cookery**	**SMAW**	**ICT**	**ABM**	**HUMSS**	**GAS**	**STEM**
Technical Skill	*r*-value	-0.347**	0.029	-0.073	0.037	-0.024	0.091	0.022	0.080
	p-value	0.007	0.824	0.582	0.777	0.854	0.488	0.869	0.542

***** Correlation is significant at 0.05 level

****** Correlation is significant at 0.01 level

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Table 9 shows the Pearson Correlation between the Technical Skills and the Interest of the respondents in different Strands under SMAW. As shown in the table Technical Skill and Agriculture had an *r*-value of 0.065 with a *p*-value of 0.620. Technical Skill and Cookery had an *r*-value of -0.049 with a *p*-value of 0.707. Technical Skill and SMAW had an *r*-value of -0.172 with a *p*-value of 0.188. Technical Skill and ICT had an *r*-value of 0.090 with a *p*-value of 0.494. Technical Skill and ABM had an *r*-value of 0.077 with a *p*-value of 0.557. Technical Skill and HUMSS had an *r*-value of -0.005 with a *p*-value of 0.968. Technical Skill and GAS had an *r*-value of -0.140 with a *p*-value of 0.287. Lastly, Technical Skill and STEM had an *r*-value of 0.227 with a *p*-value of 0.081.

This shows that there was no significant relationship between the Technical Skills of students under SMAW and Interest in Agriculture, Cookery, SMAW, ICT, ABM, HUMSS, GAS, and STEM.

Table 9: *Relationship between the Technical Skills and Interest of the Respondents under SMAW*

		INTEREST							
		Agriculture	**Cookery**	**SMAW**	**ICT**	**ABM**	**HUMSS**	**GAS**	**STEM**
Technical Skill	*r*-value	0.065	-0.049	-0.172	0.090	0.077	-0.005	-0.140	0.227
	p-value	0.620	0.707	0.188	0.494	0.557	0.968	0.287	0.081

Table 10 shows the Pearson Correlation between the Technical Skills and the Interest of the respondents in different Strands under ICT. As shown in the table Technical Skill and Agriculture had an *r*-value of -0.130 with a *p*-value of 0.321. Technical Skill and Cookery had an *r*-value of -0.039 with a *p*-value of 0.770. Technical Skill and SMAW had an *r*-value of -0.039 with a *p*-value of 0.765. Technical Skill and ICT had an *r*-value of -0.121 with a *p*-value of 0.356. Technical Skill and ABM had an *r*-value of 0.269 with a *p*-value of 0.038. Technical Skill and HUMSS had an *r*-value of -0.433 with a *p*-value of 0.001. Technical Skill and GAS had an *r*-value of 0.203 with a *p*-value of 0.119. Lastly, Technical Skill and STEM had an *r*-value of 0.336 with a *p*-value of 0.009.

As shown in table 10, Technical Skill and ABM had a positive correlation, as well as HUMSS and STEM which showed a high positive correlation. This means that the students with specialization in ICT who had high Technical Skills also had a high interest in ABM, HUMSS, and STEM. However, no significant relationship was found between the Technical Skills of students under ICT and Interest in Agriculture, Cookery, SMAW, ICT, and GAS.

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Although such data showed a good side because the students in ICT aimed to seek higher education, it was at some point a great loss for the Tech-Voc department because they would lose the opportunity to develop better the already skilled students.

Table 10: *Relationship between the Technical Skills and Interest of the Respondents under ICT*

		INTEREST							
		Agriculture	**Cookery**	**SMAW**	**ICT**	**ABM**	**HUMSS**	**GAS**	**STEM**
Technical Skill	*r*-value	-0.130	-0.039	-0.039	-0.121	0.269*	0.433**	0.203	0.336**
	p-value	0.321	0.770	0.765	0.356	0.038	0.001	0.119	0.009

***** Correlation is significant at 0.05 level

****** Correlation is significant at 0.01 level

Just like in the study of Pajares (2018), these data showed that there is a mismatch with the technical skill and interest level of the respondents. The students' technical level was already very good. However, instead of getting Tech-Voc strands in Senior High School, they were to pursue Academic Strands. This is also the same with the study of Edward, et.al., (2002), where he found out that students in Technical Vocational Schools were more likely to continue with formal education.

Overall, the data gave a negative impression especially to Tech-Voc Department in Senior High School because instead of shaping the students who already had high technical skills to become better, the teachers in Senior High School needed to start from scratch. This fact was actually what had already been happening in Senior High School Tech-Voc Department which had resulted in monotony in the class discussion. Instead of going to a higher level of discussion, teachers in Senior High School had to go back and teach the basics. Sadly, it is a lose-lose situation for both the learners and the teachers.

5. Relationship between the Technical Skills and Academic Performance of the Respondents in different Specialization

Table 10 shows the Pearson Correlation between the Technical Skills and the Academic Performance of the respondents in a different specialization. As shown in the table, the correlation between the Technical Skill and Average Grade of the students under Agriculture obtained an *r*-value of 0.191 with a *p*-value of 0.144. The correlation between the Technical Skill and Average Grade of the students under Cookery had an *r*-value of 0.556 with a *p*-value of 0.000. The correlation between the Technical Skill and Average Grade of the students under SMAW showed an *r*-value of 0.533 with a *p*-value of 0.000. Lastly, the correlation between the Technical Skill and Average Grade of the students under ICT showed an *r*-value of 0.392 with a *p*-value of 0.002.

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Table 11: *Relationship between the Technical Skills and Academic Performance of the Respondents*

		Average Grade	
Technical Skill	**Agriculture**	*r*-value	0.191
		p-value	0.144
	Cookery	*r*-value	0.556**
		p-value	0.000
	SMAW	*r*-value	0.533**
		p-value	0.000
	ICT	*r*-value	0.392**
		p-value	0.002

****** Correlation is significant at 0.01 level

As can be depicted in the table, the *p*-value between the Technical Skills and Average Grade of the students under Cookery, SMAW, and ICT were all lower than the significance level of 0.001. Thus, there was a highly significant correlation between the Technical Skills and Average Grade of the students under Cookery, SMAW, and ICT. This means that the higher the Technical Skills of the students under Cookery, SMAW, and ICT the higher was their academic performance. Therefore, the academic performance and technical skills of students under Cookery, SMAW, and ICT are related to each other.

This was also discussed by Saenz (2015) in his study about the correlation between academic achievement and the technology performance skills of 8th-grade students. He found out that academic achievement in all tested areas was a better predictor of technology skills. Thus, given the different studies which supported the data gathered, we could state that students with high academic performance could have high technical skills.

Thus, it can be recommended for students with high academic performance to get Tech-Voc strand in Senior High School. This would improve the level of Tech-Voc education if this would be put into practice.

6. Implication of the findings of the study in the placement of the students in Grade 9 specialization

Given the points discussed above, it could be seen that the Grade 9 students under the specialization of Agriculture, Cookery, SMAW, and ICT had a higher interest in Academic strands as compared to Tech-Voc strands. It could also be depicted that the students who had high Technical Skill in Agriculture had a lower interest in getting Agriculture as their strand in Senior

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High School, this was also the same with the students who had high Technical Skill in Cookery. In addition to that, students who had high Technical Skills in ICT had a high interest in getting ABM, HUMSS, and STEM as their strand in Senior High School.

It was also found out that the students who had high technical skills have higher academic performance. This means that the students who had high technical skills in their specialization were most likely to get the Academic track in Senior High School.

Given this fact, we could state that the respondents under the specialization of Agriculture, Cookery, SMAW, and ICT were in the right placement since the data revealed that the technical skills of the students were very good. However, since the student's interest was higher in Academic strands, the placement of the students would be of a great predicament in Senior High School.

Thus, the Department of Education had to exert extra effort in making the Tech-Voc strands amiable for the students. This could be by emphasizing on the student's vocational skills. This could also be given a solution by giving the Tech-Voc Department more attention. It can be taken on the study of Rubio (2013) that school facility in terms of classrooms was significantly correlated to the student's academic performance in TLE, therefore, there was a need to improve the conditions of TLE classrooms to increase students' academic performance in the said subject. Administrators should also send teachers for training and seminars or even conduct the same within the campus to upgrade teachers with the new technologies or trends and issues related to their field of specialization as discussed by Valera (2015).

Additionally, there was a need for teachers, especially TLE and Tech-Voc teachers, to persuade the students in continuing their specialization in Senior High School, especially those students who already had shown high technical skills. This would also imply concerns in restructuring course methodologies providing real-world problem-solving cases as mentioned by Javier (2021), furthering their technical skills This way, the students would be able to improve their technical skills and could be more successful in their future endeavors as discussed in the study of Garduque (2012) and Trait and Factor Theory of Parsons (1908).

IV. CONCLUSIONS AND RECOMMENDATIONS

The following conclusions were drawn based on the findings of this study.

1. Most of the respondents had an average grade of 85-89 in the first and second grading periods.
2. In terms of the level of interest of the respondents with specialization in Agriculture, Cookery, SMAW, and ICT, it showed that they had a higher interest in getting Academic track in Senior High School as compared to Tech-Voc track.

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3. Concerning to the technical skill of the respondents, all groups showed very good technical skill in their specialization.
4. There was a significant negative relationship between the technical skills and interest of the respondents with specialization in Agriculture and Cookery in Agriculture. Therefore, students with high technical skills in Agriculture and Cookery had low interest in getting Agriculture in Senior High School. A Positive relationship, on the other hand, was found between the technical skills of the respondents with specialization in ICT and their level of interest in ABM, HUMSS, and STEM. Thus, the respondents who had high technical skills in ICT also had high interest in ABM, HUMSS, and STEM.
5. There was a strong positive correlation between the technical skill and academic performance of the respondents with specialization in Cookery, SMAW, and ICT. Thus, the respondents who had a high technical skill in Cookery, SMAW, and ICT also had high academic performance.

Based on the findings and conclusions, the following recommendations are hereby offered.

1. A follow-up study that would correlate respondents' profile to the Technical skill, as well as the level of interest, should be made.
2. Teachers must encourage students to have more interest in Tech-Voc strands by giving the students more exciting activities in Agriculture, Cookery, SMAW, and ICT.
3. Teachers must give more hands-on activities to the students to further increase their technical skills in their specialization. Additional Tech-Voc laboratory and equipment must also be considered.
4. Students who have high technical skills, especially the students with specialization in Agriculture, must be encouraged to continue their specialization in Senior High School and even in higher education.
5. TLE teachers must give extra effort in molding the technical skill of the students with low academic performance.
6. Tech-Voc teachers can also give symposiums, workshops, and free training to students in Junior High School to encourage the students, especially those who already have high technical skills to continue their specialization in Senior High School.
7. Other researchers could replicate the study using Grade 10 students. The study could also be replicated using a larger set of respondents over a longer period to attain more definite results.

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