

# Proficiency Level of Teachers and the Learning Outcomes of Students in Electrical Technology Subjects of Senior High School Curriculum

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**Abstract**— This study determined the proficiency level of teachers and the learning outcomes of students in electrical technology subjects in the Senior High School curriculum using descriptive-inferential designs. Data were gathered from twelve (12) teachers and 140 students through a researcher-made survey instrument and were analyzed through the use of frequency count and percent, mean, one-way analysis of variance, and Pearson moment correlation coefficient. Findings revealed that: the majority of the teachers are baccalaureate degree holders with MA units, PRC holders, worked in DepEd, and have attended seminars training sponsored by DepEd. While the students are most males, 18-19 years old, and have a grade between 91-95; the teachers are rated by themselves as much proficient in all variables. The learning outcomes of respondents are rated often in written examination and seldom in oral recitation, demonstration, and performance tasks, while the academic performance of the respondents in Electrical Technology subject is 91.94, described as very satisfactory. Premised on the findings of the study, it generally concluded that the proficiency of teachers has directly affected the academic performance and learning outcomes of the students.

**Keywords**— Teacher's Proficiency, Learning Outcomes, Electrical Technology, Senior High School Curriculum.

## I. INTRODUCTION

The Basic Education System has been renamed Enhanced Basic Education, or the K-12 program, by the (DepEd) Department of Education[1]. The K-12 program consists of one year of kindergarten, six years of elementary school, and six years of secondary education, which includes four years of junior high and two years of senior high. As a result, just a few technical instructors were hired. Technical instructors gained technical skills and competence from a variety of specializations, which are required for the K-12 curriculum to generate globally competitive persons[2]. As a result, questions have been raised about the instructors' ability to teach electrical technology courses and the learning outcomes of senior high school students in technical skills under the K to 12 curriculum implementations[1][3].

This study investigated if a teacher's proficiency affects students' learning outcomes in terms of information and skills acquired, in which the instructor gives a variety of learning opportunities and chooses to improve their teaching tactics and instructions to a high degree[4][5]. The majority of the students chose technical skills subjects over academic track subjects[6]. Most of them, in particular, take up electrical

technology, which is regarded to be the most prevalent and marketable expertise when looking for work[7][8].

The researcher also discovered that the majority of students had little understanding of their field of study, making it more difficult for them to complete assignments and activities, as well as their written and oral tests and other outputs. As a result, the researcher decided to conduct this study to see how instructors' skill in teaching electrical technology subjects in the Surigao Del Norte Division influences students' learning outcomes.

## II. RELATED LITERATURE

The information, skills, abilities, and attitudes that teachers must possess in order to promote learning processes and design are referred to as proficiency levels in teaching[9]. In addition, a combination of expert and didactical knowledge, practical teaching experience, learned and practiced skills, insights, and attitudes, particularly with regard to student engagement and the teacher's own position[10][6].

When utilized properly, learning outcomes can be a strong tool for course design, assisting in the selection of the most successful teaching and evaluation approaches[11]. In order to reap the greatest benefit, learning outcomes, teaching and learning practices, and evaluation systems should all be constructively aligned[12].

It is stated that the new K-12 program in the Philippines has increased the time students spend in school by two years[13]. These extra years enable students to develop the higher-level analytic skills needed in a more technologically focused future. While the process of developing curricula for the 11th and 12th grades is still ongoing, the early signs are promising. This brings the Philippines closer to the educational systems of developed countries[14].

Technical-Vocational-Livelihood can equip the students with job-ready skills in the future. This track also invests primarily in skills that can gain requisite COCs (Certificates of Competency) and NCs (National Certifications) which would be essential when looking for better career opportunities in agriculture, electronics, and trade. This is also important when applying abroad where the skills gained would prepare students to join the workforce[15][16].

The TVL program leads the students to different part-time jobs while completing their college degrees. It is the best course for them to know and observe different jobs in different

industries[17]. Focusing on discovery and developing students' skills is another goal of the TVL program. The TVL courses teach the students to have different combinations of skills to explore and acquire in 2 years[18].

Electrical technology is one of the programs offered by the Department of Education (DepEd) to both junior and senior high school curricula[19]. The said program is an instructional program that facilitates and prepares the students to apply technical skills and knowledge on building wiring installation – residential, commercial, and industrial application, operating, repairing, and testing machines and devices[20]. It also includes the practical application of the mathematical approach, circuit diagrams, blueprint reading, and other subjects that are essential for the employment approach in electrical occupations.

### III. CONCEPTUAL FRAMEWORK

Teachers play a critical role in determining whether or not their students learn successfully[21]. Every teacher's primary responsibility is to assess students' ability to learn new information and how far they can learn and comprehend more information[22]. These are a combination of expert and didactical knowledge, practical teaching experience, skills learned and practiced, insights and attitudes, particularly with regard to interaction with students and the teacher's own role.

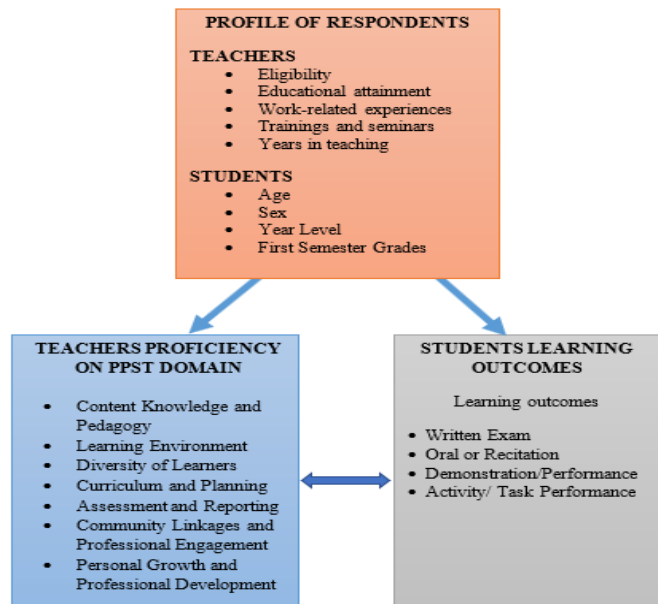


Fig. 1. Model of the Study

The above-mentioned key factors of teaching proficiency are very essential in molding students' ability to learn. In this way, it will develop students' capability to exercise their skills in order to use them in a practical way and sharpen their acquired knowledge, and apply it to the actual setting[23].

#### A. Objectives

The objectives of the study aimed to determine the proficiency level of teachers and the learning outcomes of

students in electrical technology subjects of the Senior High School Curriculum. It specifically determines the profile of the respondents as teacher respondents as to eligibility, educational attainment, work-related experience, training and seminars, and their years in teaching. It also determines the students-respondents in age, sex, and grades.

It is also determined in this study the level of proficiency do the teachers demonstrate in teaching Electrical Technology subject as assessed by themselves and their students in terms of content knowledge and pedagogy, learning environment, diversity of learners, curriculum and planning, assessment and reporting, community linkages and professional engagement and personal growth and professional development. Hence, the student-respondent is being measured also in the extent of learning outcomes as to their written examination, oral recitation, demonstration skill, and performance task.

Another factor also included in the objectives are the outcomes of academic performance of the student-respondents, whether is there a significant difference in the proficiency level of teachers and the learning outcomes of students when they are grouped according to their profile variables and does the level of teacher's proficiency significantly relate to the learning outcomes of students.

#### B. Significance of the Study

This study might help school administrators to provide teachers in pursuing personal and professional growth in finding out how the proficiency of the educators can affect the students learning outcomes. Students may encourage to become more diligent and actively participative in class. It may enhance their skills in their specialization.

#### C. Limitation of the Study

The limitation of the study gives a clearer understanding of the boundary of the study, which focuses to determine the teacher's proficiency level in teaching electrical technology and students learning outcomes under K to 12 programs. The respondents are grade 12 students and identified senior high school teachers teaching electrical technology subjects. It is conducted in different schools in Claver, Bacuag, Gigaquit, and Placer (ClaBaGiPla) cluster under Surigao del Norte Division that offers electrical technology courses in senior high.

### IV. METHODS

This study used the designs of both the descriptive and the inferential. The descriptive design was used to determine the proficiency level of teachers handling electrical technology subjects and to determine the extent of the learning outcomes of the students taking electrical technology in all Senior High Schools in the ClaBaGiPla cluster of DepEd Surigao del Norte Division. Inferential design, on the other hand, was also used to draw a summary in determining the significant variation in the level of the teachers' proficiency and the learning outcomes of the students when the factors were profiled. Moreover, the correlation method was used to determine the presence of a significant relationship between the teachers'

proficiency level in teaching electrical technology subjects and the students' learning outcomes.

A. Respondents

The respondents of the study are the identified teachers and students of the five different national high schools of ClaBaGiPla Cluster of Dep.Ed Surigao del Norte division which is delivering electrical technology courses in the senior high school curriculum under K to 12 programs. The sample size was determined by at least 50%+1 of the population but more sample size yields a better approximation of the population; thus, the researcher managed to take as many as 315 samples. Table 1 presents the population and sample distribution of the respondents.

TABLE 1. Distribution of Respondents

Schools	Teachers	Students	N	n	%
Bacuaq National Agro-Industrial School	3	25	55	27	49.09
Campo National High School	2	27	60	29	48.33
Claver National High School	3	35	80	38	47.50
Gigaquit National School of Home Industries	2	18	45	20	44.44
Placer National High School	2	35	75	37	49.33
<b>Total</b>	<b>12</b>	<b>140</b>	<b>315</b>	<b>151</b>	<b>47.94</b>

B. Research Instrument

A researcher-made survey questionnaire was utilized as the main gathering tool in obtaining the needed data in the study. The questionnaire is made up of four parts. Part 1 elicited information on the teaching proficiency of teachers as to eligibility, educational attainment, work-related experience, training and seminars, and years in teaching. Part 2 comprises the Philippine Professional Standards for Teachers (PPST) domains on which teachers' proficiency is based, these are content knowledge and pedagogy, learning environment, diversity of learners, curriculum and planning, assessment and reporting, and community linkages and professional engagement and personal growth and professional development. Part 3 includes the student's profile information as to age, sex, year level, and first semester grades. Part 4 includes the learning outcomes as to written exam, oral or recitation, demonstration/performance, and performance tasks.

TABLE 2. Scale, Level of Proficiency

Scale	Parameter	Verbal Interpretation	Qualitative Description
4	3.25-4.00	Always	Much Proficient
3	2.50-3.24	Often	Proficient
2	1.75-2.49	Seldom	Less Proficient
1	1.00-1.74	Never	Not Proficient

C. Data Analysis

Frequency Count and Percent. These were used to determine the proficiency level of the teachers handling electrical technology subjects. Mean and standard deviation. These were used to find out the student' learning outcomes. One-Way Analysis of Variance (ANOVA) and Scheffe's Test. These were used to find out the significant difference in the teaching proficiency level of teachers in electrical technology and students' learning outcomes when grouped by profile.

Pearson-r and t-Test. These were used to test the significant relationship between the proficiency level of teachers and students' learning outcomes.

V. RESULTS AND DISCUSSIONS

The answers to the problems of the study are presented, analyzed, and interpreted. The order of presentation follows the sequence of the subproblems presented.

A. Profile of Respondents

The table below shows the profile of teacher-respondents as to eligibility, educational attainment, work-related experiences, training and seminars, and years in teaching. The profiles of the student-respondents are also presented in this Table as to age, sex, grade level, and first semester grades.

Teachers

*Eligibility.* It can be seen that there 12 (52.17%) are PRC holders while 11 (47.83%) are NC holders. The majority of the teachers are PRC holders with NC holders.

*Educational Attainment.* It is shown that out of 12 respondents, 6 (50%) are baccalaureate with MA units earned; 3 (25%) have obtained a Master's degree; 2 (16.67%) are baccalaureate, while 1 (8.33%) has earned units in doctoral. The Table indicates that the majority of the teachers are having earned units in Masters.

TABLE 3. Profile of Respondents

	Profile	Count	Percentage	Mode	
Teachers	Eligibility	PRC	12	52.17	PRC
		CS / Sub Prof	0	0	
		NC Holder	11	47.83	
	Educational attainment	Baccalaureate	2	16.67	Baccalaureate with MA units
		Baccalaureate with MA units	6	50.00	
		Master's Degree Holder	3	25.00	MA units
		Master's with Doctorate Units	1	8.33	
		Doctorate Degree Holder	0	0	
	Work-related experiences	Work in DepEd	8	66.67	Work in DepEd
		Work in TESDA	4	33.33	
	Trainings and seminars	Dep.Ed Trainings & Seminars	12	54.55	DepEd Trainings & Seminars
		TESDA Trainings & Seminars	8	36.36	
Industrial Company Trainings		1	4.55	Trainings & Seminars	
Other Related Trainings		1	4.55		
Years in teaching	1 year and below	6	50.00	1 year and below	
	2-5 years	5	41.67		
	6 years and above	1	8.33		
	<b>Total</b>	<b>12</b>	<b>100</b>		
Students	Age	15 - 16	0	0	18-19
		17 - 18	16	11.43	
		18 - 19	114	81.43	
		20 up	10	7.14	
		<b>Total</b>	<b>140</b>	<b>100.00</b>	
	Sex	Male	126	90.00	Male
		Female	14	10.00	
		<b>Total</b>	<b>140</b>	<b>100.00</b>	
	First and Second Quarter Grades	96 - 100	10	7.14	91 - 95
		91 - 95	74	52.86	
		86 - 90	38	27.14	
		81 - 85	12	8.57	
76 - 80		6	4.29		
<b>Total</b>	<b>140</b>	<b>100.00</b>			

*Work-related experiences.* The Table shows that out of twelve (12) teacher-respondents, 8 (66.67) have been working in DepEd while 4 (33.33%) have been in TESDA prior to their employment in DepEd. This indicates that most of them have direct employment in DepEd.

*Training and Seminars.* It can be seen that there are 12 (54.55%) teachers who have attended the DepEd training and seminars; 8 (36.36%) have attended TESDA training and

seminars; 1 teacher has attended the Industrial Company training and other-related training. This implies that most of them have attended the seminars and training cited in the variable.

**Years in Teaching.** It can be seen that out of 12 teacher-respondents, 6 (50%) have been in DepEd for 1 year and below; 5 (41.67%) are in DepEd within 2-5 years, and 1 (8.33%) has been for 6 years and above. Most of them are employed in DepEd for 1 year and below.

**Students**

**Age.** It can be gleaned that out of 140 respondents, 114 (81.43%) are in the age bracket of 18-19; 16 (11.43%) are within 17-18 years old; 10 (7.14%) are 20 years old and up.

**Sex.** Seen in the Table are 126 (90%) males while 14 (10%) are females. The majority of them are males.

**First & Second Quarter Grades.** It can be seen that 74 (52.86%) are having a grade bracket of 91-95; 38 (27.14%) are having a grade between 86-90; 12 (8.57%) are having a grade of 81-85; 10 (7.14%) are having the grade of 96-100, and 6 (4.29%) are having a grade bracket of 76-80. The majority of them are having a grade between 91-and 95.

**B. Level of Proficiency of Teachers**

Table 4 presents the level of proficiency of teachers in Electrical Technology subject in terms of content knowledge and pedagogy, learning environment, diversity of learners, curriculum and planning, assessment and reporting, community linkages and professional engagement, and personal growth and professional development.

**Content Knowledge and Pedagogy**

It can be gleaned in Table 4 that all items under the content knowledge and pedagogy are rated *Much Proficient* as evidenced in the average mean of 3.75. This entails that the teachers are demonstrating in-depth knowledge of the subject they are currently teaching and allows interactions between them, students, the learning environment, and the learning tasks to make the teaching-learning process more meaningful to them. Specifically, item 3 “integrate the modern application of ICT in teaching-learning process” ranked first with a mean of 3.92 to imply that the teachers are making use of the modern technology in their classes. All the other items under the first indicators are also much proficient to mean that the teachers are manifesting the skills necessary for the 21<sup>st</sup>-century teachers.

**Learning Environment**

A similar Table indicates the *proficiency* of teachers in making the learning environment more safe and secure for the teaching-learning process to be effective as seen in its average mean of 3.83. Specifically, item 2 “initiate management of classroom structure and activities obtained the highest mean of 4.00 to signify that the teachers see to it that everything in the classroom is organized before conducting activities. Item 4 “promote purposive learning for optimal participation” ranked second with a mean of 3.92, described as *Much Proficient* to accentuate that the teachers provide opportunities for the learners’ maximum participation. The rest of the items are labeled *Much Proficient* to mean that teachers are finding ways to make the environment conducive for learning.

TABLE 4. Level of Proficiency of Teachers in Electrical Technology

A. Content Knowledge and Pedagogy. As a teacher, I	Mean	Q D
1. update the content of the lesson every quarter.	3.83	MP
2. apply the research-based knowledge and principles of teaching and learning.	3.75	MP
3. integrate modern application of ICT in teaching and learning process.	3.92	MP
4. apply strategies which promote literacy and numeracy concepts.	3.83	MP
5. engage students in critical and creative thinking for skills development.	3.83	MP
6. use of Mother-tongue based, Filipino and English communications in teaching and learning process.	3.83	MP
<b>Average Mean</b>	3.75	
<b>B. Learning Environment. As a teacher, I</b>		MP
1. ensure the learners’ safety and security.	3.75	MP
2. provide fair learning environment to students.	3.83	MP
3. initiate management of classroom structure & activities.	4.00	MP
4. support students for full participation in each class discussion.	3.67	MP
5. promote purposive learning for optimal participation.	3.92	MP
6. enhance proper discipline to manage learner’s behavior.	3.81	MP
<b>Average Mean</b>	3.83	MP
<b>C. Diversity of Learners. As a teacher, I</b>		
1. consider learner’s gender, needs, strengths, interests and experiences.	4.00	MP
2. consider the learner’s linguistic, cultural, socio-economic and religious background.	3.83	MP
3. pay more attention to the learners with disabilities, giftedness and talents.	3.50	MP
4. consider learners in difficult circumstances like family, personal and social issues.	3.58	MP
5. accept learner’s personal attributes coming from indigenous group.	3.83	MP
<b>Average Mean</b>	3.75	MP
<b>D. Curriculum and Planning. As a teacher, I</b>		
1. plan and manage the teaching and learning process.	3.83	MP
2. provide learning outcomes aligned with learning competencies.	3.50	MP
3. provide learning programs and activities that are relevant and responsive.	3.58	MP
4. conduct peer-tutoring or professional collaboration to enrich teaching practice.	3.83	MP
5. use of positive and informative online resources to teaching and learning process.	4.00	MP
<b>Average Mean</b>	3.71	MP
<b>E. Assessment and Reporting. As a teacher, I</b>		
1. design, organize and utilize of assessment strategies.	3.83	MP
2. evaluate and monitor the learner’s progress & achievements.	4.00	MP
3. provide positive and constructive feedback to improve learning.	3.67	MP
4. attain on the learner’s needs, progress and achievement to key stakeholders.	3.75	MP
5. use of assessment data to enhance teaching and learning practices and programs.	3.83	MP
<b>Average Mean</b>	3.82	MP
<b>F. Community Linkages &amp; Professional Engagement. As a teacher, I</b>		
1. establish learning environment responsive to community context.	4.00	MP
2. engage the learner’s parents and the wider school community to an educative process.	3.83	MP
3. apply consistently professional ethics as to be a role model to the learners.	3.50	MP
4. abide and apply school policies and procedures.	3.58	MP
<b>Average Mean</b>	3.73	MP
<b>G. Personal Growth and Professional Development. As a teacher, I</b>		
1. stand and adopt the philosophy of teaching.	3.92	MP
2. sustain professional act in teaching to be treated with greater dignity.	3.83	MP
3. promote professional relationship and links with colleagues to help improve each teaching practice.	3.58	MP
4. reflect on a series events that is professionally significant to integrate new skills and knowledge to improve teaching performance.	3.92	MP
5. pursue the goals for professional growth.	3.92	MP
<b>Average Mean</b>	3.83	MP

**Legend**  
 4 3.25 – 4.00 Always Much Proficient (MP)  
 3 2.50 – 3.74 Often Proficient (P)  
 2 1.75 – 2.49 Seldom Less Proficient (LP)  
 1 1.00 – 1.74 Never Not Proficient (NP)

**Diversity of Learners**

The teachers are considered *much proficient* in terms of how they treat their students as individual learners. They are close to their students in intellectual as well as psychological

ways, and they are empowered to use their judgment to make classroom decisions. They are also adjustable to the curriculum, methods, and pacing to meet the needs of the students as evidenced in the average mean of 3.75. An individual item like “consider learner’s gender, needs, strengths, interests, and experiences” has been given emphasis by the teachers with the mean of 4.00. Item 5 “accept learner’s personal attributes coming from indigenous people” ranked second with a mean of 3.83.

*Curriculum and Planning*

The teachers are rated *much proficient* in teaching the electrical technology subject as seen in the average mean of 3.71. This means that teachers before conducting their classes, everything necessary for the class is planned and prepared. This further means that the teachers “use the positive and informative online resources to teaching and learning process” (M=4.00, Much Proficient); “plan and manage the teaching and learning process” (M=3.83, Much Proficient), and “Conduct peer-tutoring or professional collaboration to enrich teaching practice” (M=3.83, Much Proficient). These further indicate that teachers are doing better jobs building respectful and engaging activities for their students.

*Assessment and Reporting*

It can be seen in the same Table that the teachers are demonstrating *Much Proficiency* in assessment and reporting as gleaned in the average mean of 3.82. This means that the teachers see to it that the performances of the students are well assessed consistently to the learning objectives set by them. To be specific, the teachers “evaluate and monitor the learner’s progress and achievement to key stakeholders” (M=4.00, MP); “design, organize and utilize assessment strategies” (M=3.83, MP). Asking students to demonstrate their understanding of the subject matter is critical to the learning process; it is essential to evaluate whether the educational goals and standards of the lessons are being met.

*Community Linkages and Professional Engagement*

The teachers are also rated *Much Proficient* in the community linkages and professional development as seen in the average mean of 3.73. This goes to say that they have established the linkage to stakeholders as they form part of the success of the entire operation of the school. Specifically, the teachers show proficiency in terms of “establishing a learning environment responsive to community context” (M=4.00, MP); “engaging in learners’ parents and the wider school community to an educative process” (M=3.83, MP). Consistent community involvement and engagement at all levels of the school have been shown time and time again to have significant short and long-term benefits.

*Personal Growth and Professional Development*

The Table reveals that the teachers are rated *Much Proficient* in personal growth and professional development as confirmed in its average mean of 3.83. This entails that they are positively engaged in activities that can provide growth and development to both personal and professional aspects. This means that they “stand and adopt the philosophy of teaching” (M=3.92, MP); “reflect on a series of events that is professionally significant to integrate new skills and

knowledge to improve teaching performance” (M=3.92, MP), and “pursue the goals for professional growth” (M=3.92, MP).

*C. Summary of Teacher’s Proficiency in Electrical Technology*

TABLE 5. Summary of Teacher’s Proficiency in Electrical Technology

Proficiencies	Mean	Rank	QD
Content Knowledge and Pedagogy	3.82	2	Much Proficient
Learning Environment	3.83	1	Much Proficient
Diversity of Learners	3.75	5	Much Proficient
Curriculum and Planning	3.74	6	Much Proficient
Assessment and Reporting	3.81	3	Much Proficient
Community Linkages & Professional Engagement	3.73	7	Much Proficient
Personal Growth and Professional Development	3.80	4	Much Proficient

It can be seen in the summary Table that teachers in Electrical Technology subjects are much more proficient in the learning environment (M=3.83) as the first rank; content knowledge and pedagogy (M=3.82) as the second rank; assessment and reporting (M=3.81) as the third rank. As can be gleaned further, all indicators are rated much proficient to signify that the teachers demonstrate the necessary knowledge and skills in their electrical technology subject.

*D. Level of Proficiency of Teachers in Electrical Technology as assessed by their students*

*Content Knowledge and Pedagogy*

The students assessed their teachers in content knowledge and pedagogy as *Proficient* as indicated in its average mean of 3.13. This entails that the teachers are demonstrating knowledge and teaching skills in imparting the lessons in their respective classes. Specifically, item 1 “updates the content of his/her lesson every quarter” obtained the highest mean of 3.23, described as Much Proficient. This is followed by item 6 “uses the mother-tongue based, Filipino and English communications in teaching and learning process” with the mean of 3.15. All other items in the indicator is rated Proficient to signify that their teachers are averagely performing their tasks conscientiously. Reflecting these findings, King and Newman (2015) state, “Since teachers have the most direct, sustained contact with students and considerable control over what is taught and the climate for learning, improving teachers’ knowledge, skills and dispositions through professional development is a critical step in improving student achievement.”

*Learning Environment*

The teachers are rated *Much Proficient* in the learning environment as shown in the average mean of 3.49. This means that their teachers are making their learning environment beneficial and contributing to their maximum learning experience.

Individual items such as “promotes purposive learning for optimal participation” obtained the highest mean of 3.92, Much Proficient. Item 6 “enhances proper discipline to manage our own behavior” ranked second with a mean of 3.81, described as Much Proficient, and “ensures our safety and security” ranked third with a mean of 3.75.

TABLE 6. Level of Proficiency of Teachers in Electrical Technology as assessed by their students

	Mean	QD
<b>A. Content Knowledge and Pedagogy. My teacher,</b>		
1. updates the content of his/her lesson every quarter.	3.23	P
2. applies the research-based knowledge and principles of teaching and learning in the class.	3.75	MP
3. integrates modern application of ICT in teaching and learning process.	2.92	P
4. applies strategies which promote literacy and numeracy concepts.	2.83	P
5. allows us to engage in critical and creative thinking for skills development	2.92	P
6. uses the Mother-tongue based, Filipino and English communications in teaching and learning process.	3.15	P
<b>Average Mean</b>	3.13	P
<b>B. Learning Environment. My teacher,</b>		
1. ensures our safety and security.	3.75	MP
2. provides fair learning environment to other students.	3.15	P
3. initiates management of classroom structure and activities.	2.63	P
4. supports us for full participation in each class discussion.	3.67	MP
5. promotes purposive learning for optimal participation.	3.92	MP
6. enhances proper discipline to manage our own behavior.	3.81	MP
<b>Average Mean</b>	3.49	MP
<b>C. Diversity of Learners. My teacher,</b>		
1. considers our gender, needs, strengths, interests and experiences.	3.83	MP
2. considers our linguistic, cultural, socio-economic and religious background.	3.75	MP
3. pays more attention to the other students with disabilities, giftedness and talents.	3.92	MP
4. considers us in difficult circumstances like family, personal and social issues.	3.83	MP
5. accepts other student's personal attributes coming from indigenous group.	2.95	P
<b>Average Mean</b>	3.66	MP
<b>D. Curriculum and Planning. My teacher,</b>		
1. plans and manages the teaching and learning process.	2.46	LP
2. provides learning outcomes aligned w/ learning competencies.	3.25	MP
3. provides learning programs and activities that are relevant and responsive.	3.13	P
4. conducts peer-tutoring or professional collaboration to enrich teaching practice.	2.95	P
5. uses the positive and informative online resources to teaching and learning process.	3.27	MP
<b>Average Mean</b>	3.17	P
<b>E. Assessment and Reporting. My teacher,</b>		
1. designs, organizes and utilizes of assessment strategies.	3.15	P
2. evaluates and monitors our progress and achievements.	3.25	MP
3. provides positive and constructive feedback to improve learning.	2.92	P
4. attains our needs, progress and achievement to key stakeholders.	3.23	P
5. uses of assessment data to enhance teaching and learning practices and programs.	3.13	P
<b>Average Mean</b>	3.14	P
<b>F. Community Linkages and Professional Engagement. My teacher,</b>		
1. establishes learning environment responsive to community context.	3.22	P
2. engages our parents and the wider school community to an educative process.	2.26	LP
3. applies consistently professional ethics as to be a role model to us.	2.95	P
4. abides and applies school policies and procedures.	3.23	P
<b>Average Mean</b>	2.92	P
<b>G. Personal Growth and Professional Development. My teacher,</b>		
1. stands and adopts the philosophy of teaching.	3.21	P
2. sustains professional act in teaching to be treated with greater dignity.	3.01	P
3. promotes professional relationship and links with colleagues to help improve each teaching practice.	2.83	P
4. reflects on a series events that is professionally significant to integrate new skills and knowledge to improve teaching performance.	2.92	P
5. pursues the goals for professional growth.	3.21	P
<b>Average Mean</b>	3.07	P

**Diversity of Learners**

It can be viewed in the Table that the students rated their teachers under the diversity of learners to be *much proficient* as indicated in its average mean of 3.66. This means that the teachers are adaptable and adjustable to the varied personalities of their students. This denotes further that their teachers “pay more attention to students with disabilities, giftedness, and talents” (M=3.92, Much Proficient); “considers our gender, needs, strengths, interests and experiences” (M=3.83, Much Proficient), and “considers us in difficult

circumstances like family, personal and social issues” (M=3.92, Much Proficient).

**Curriculum and Planning**

The students assessed their teachers to be *proficient* in curriculum and planning as seen in the average mean of 3.17. This implies that their teachers have enough planning skills necessary for the optimization of their student’s learning in the class. It further indicates that their teachers “use the positive and informative online resources to teaching and learning process” (M=3.27); “provide learning outcomes aligned with learning competencies” (M=3.25), and “provide learning programs and activities that are relevant and responsive” (M=3.13). This denotes that their teachers see to it that before their classes are conducted, everything necessary for the teaching-learning process is organized and well-planned.

**Assessment and Reporting**

The teachers are rated *proficient* in assessment and reporting as seen in the average mean of 3.14. This means that assessment is conducted by their teachers for it is a key component of learning and it helps students learn. When students are able to see how they are doing in a class, they are able to determine whether or not they understand the course material. Assessment can also help motivate students. If students know they are doing poorly, they may begin to work harder. To be specific “evaluates and monitors our progress and achievements” (M=3.25); “attains our needs, progress and achievement to key stakeholders” (M=3.23), and “designs, organizes and utilizes assessment strategies” (M=3.15). This denotes that conducts an assessment to determine whether or not the course's learning objectives have been met.

**Community Linkages and Professional Engagement**

The teachers under the community linkages and professional engagement are rated by their students as *proficient* as illustrated in the average mean of 3.21. This implies that their teachers have established linkage in the community and engaged in professional undertakings in their schools. Specifically, item 4 “abides and applies school policies and procedures” ranked first with its mean of 3.23. Item 1 “establishes learning environment responsive to community context” ranked second with its mean of 3.22. The findings reveal that the teachers engage in professional undertakings to stimulate their thinking and link with the community to seek support from them whenever there are activities in the school that require assistance from the community.

**Personal Growth and Professional Development**

The teachers are rated by their students as *proficient* in personal growth and professional development as seen in the average mean of 3.07. This goes to say that their teachers are doing their best of making them grow personally and develop professionally. This contention is supported by the individual items such as “stands and adopts the philosophy of teaching” (M=3.21); “pursues the goals for professional growth” (M=3.21), and “sustains professional act in teaching to be treated with greater dignity” (M=3.01).

The finding is a corollary to the idea of Harry (2018) who believes that personal growth and professional development is

a critical components that all teachers must embrace in order to maximize their potential.

*E. Summary Table for Teacher’s Proficiency in Electrical Technology as assessed by their students*

It is shown in the summary Table that the teachers as assessed by their students are evaluated as Much Proficient in the diversity of learners (M=3.66) and learning environment (M=3.48) with ranks of first and second, respectively. Other indicators are rated as proficient to denote that the students have a strong belief that their teachers are performing better in their classes since being proficient in teaching means having the degree of competence, skills, or expertise in their field of work, especially in the teaching profession.

TABLE 7. Summary Table Teacher’s Proficiency in Electrical Technology as assessed by their students

Proficiencies	Mean	Rank	QD
Content Knowledge and Pedagogy	3.13	4	Proficient
Learning Environment	3.49	2	Much Proficient
Diversity of Learners	3.66	1	Much Proficient
Curriculum and Planning	3.01	6	Proficient
Assessment and Reporting	3.14	3	Proficient
Community Linkages & Professional Engagement	2.92	7	Proficient
Personal Growth & Professional Development	3.04	5	Proficient

**Legend:**  
 3.25-4.00 Always Much Proficient (MP)  
 2.50-3.24 Often Proficient (P)  
 1.75-2.49 Seldom Less Proficient (LP)  
 1.00-1.74 Never Not Proficient (NP)

*F. Learning Outcomes of the Respondents*

*Written Examination*

It can be seen that the students are often in need of assistance from their teachers in the written examinations as evidenced in the average mean of 2.20. This means that all activities related to written examinations such as summative and formative examinations, activity tasks, and worksheets require a certain level of intervention from their teachers in order that their performance would somehow be improved.

*Oral Recitation*

The Table reveals that the students seldom need assistance from their teachers during oral recitation as reflected in its average mean of 2.20. It can be seen further that all the items therein are rated seldom to entail that the students are displaying the necessary skills in identifying electrical devices, identifying the specific usage of each tool, correct measurement, types of wire and its sizes, and electrical symbols.

*Demonstration*

As shown in the same table, the students are found to be skillful in demonstration since they seldom need assistance from their teachers as indicated in the average mean of 2.32. However, they often need assistance in demonstrating the proper way of cutting wires with a mean of 2.62.

*Performance Task*

A similar Table indicates that the students seldom need assistance or help from their teachers during performance tasks as seen in the average mean of 2.30. This goes to say that have demonstrated their skills in electrical technology especially when actual performance is conducted to them. The

finding in the performance task is consistent with the finding in demonstration and oral recitation to signify that the students have developed and demonstrated the skills they need in electrical technology subject.

TABLE 8. Learning Outcomes of the Respondents

Written Examination. As a student, I need assistance/help from my teacher to have	Mean	QD
1 better scores in final examination	2.61	Often
2 better scores in midterm examination	2.52	Often
3 better scores in quizzes	2.61	Often
4 better scores in activity task	2.49	Seldom
5 better scores in worksheet	2.26	Seldom
<i>Average mean</i>	<i>2.50</i>	<i>Often</i>
Oral Recitation. As a student, I need assistance/help from my teacher to		
1 identify electrical devices	2.14	Seldom
2 identify specific usage of each tool	2.19	Seldom
3 identify correct measurement	2.14	Seldom
4 identify types of wire and its sizes	2.31	Seldom
5 identify electrical symbols	2.19	Seldom
<i>Average mean</i>	<i>2.20</i>	<i>Seldom</i>
Demonstration. As a student, I need assistance/help from my teacher to		
1 demonstrate proper way of cutting wires	2.62	Often
2 demonstrate proper technique EMT pipe bending	2.25	Seldom
3 demonstrate proper heating and bending of PVC pipe	2.41	Seldom
4 demonstrate proper way of splicing a wire	2.05	Seldom
5 demonstrate exact positioning of electrical devices and its proper measurements	2.26	Seldom
<i>Average mean</i>	<i>2.32</i>	<i>Seldom</i>
Performance Task. As a student, I need assistance/help from my teacher to		
1 perform accurate wiring connections	2.30	Seldom
2 install panel boards correctly	2.38	Seldom
3 set up receptacle and switches properly	2.11	Seldom
4 mount proper piping and raceways connections	2.46	Seldom
5 interpret electrical layout plan correctly	2.26	Seldom
<i>Average mean</i>	<i>2.30</i>	<i>Seldom</i>

*F. Academic Performance*

It can be gleaned from Table 9 below that the academic performance of the students has a mean of 91.94, described as very satisfactory. This entails that the students in the first two quarters in Electrical Technology subject performed very satisfactorily as measured in terms of their written examination, oral recitation, demonstration, and performance tasks.

TABLE 9. Academic Performance of the Students

Academic Performance	Mean	Standard Deviation	Qualitative Description
First and Second Quarters	91.94	3.34	Very Satisfactory

**Legend:**  
 96 - 100 Excellent  
 91 - 95 Very satisfactory  
 86 - 90 Good  
 81 - 85 Satisfactory  
 75 - 80 Poor  
 74 and below Failed

*G. Significant Difference*

Table 10 presents the difference in the proficiency of teachers and the learning outcomes of students when they are grouped according to their profile variables.

It can be seen in the Table that the proficiency and learning outcomes show no significant difference in terms of eligibility of the teacher respondents, where the p-value obtained are greater than the 0.05 level of significance. This means that their perception of the proficiency and learning outcomes of the students has no difference since all teacher- respondents are holders of PRC eligibility and at the same time, NC II holders.

TABLE 10. Differences in the Proficiency of Teachers and the Learning Outcomes of Students when grouped to profile variables

Profile	Variables	F-value	p-value	Interpretation
Eligibility	Content Knowledge & Pedagogy	2.540	.083	Not significant
	Learning Environment	0.593	.554	Not significant
	Diversity of Learners	0.050	.951	Not significant
	Curriculum and Planning	0.532	.588	Not significant
	Assessment and Reporting	2.406	.053	Not significant
	Community Linkages and Professional Engagement	0.184	.946	Not significant
	Personal Growth and Professional Development	0.665	.617	Not significant
	Written Examination	0.867	.486	Not significant
	Oral recitation	2.062	.089	Not significant
	Demonstration	0.986	.417	Not significant
Educational attainment	Task Performance	0.184	.946	Not significant
	Content Knowledge and Pedagogy	2.248	.136	Not significant
	Learning Environment	10.978	.000	Significant
	Diversity of Learners	12.238	.000	Significant
	Curriculum and Planning	2.430	.068	Not significant
	Assessment and Reporting	1.127	.346	Not significant
	Community Linkages and Professional Engagement	1.032	.393	Not significant
	Personal Growth and Professional Development	0.717	.582	Not significant
	Written Examination	0.476	.754	Not significant
	Oral recitation	0.747	.561	Not significant
Work-related experiences	Demonstration	0.229	.921	Not significant
	Task Performance	0.808	.458	Not significant
	Content Knowledge & Pedagogy	0.945	.403	Not significant
	Learning Environment	0.773	.545	Not significant
	Diversity of Learners	0.876	.480	Not significant
	Curriculum and Planning	0.599	.664	Not significant
	Assessment and Reporting	0.545	.703	Not significant
	Community Linkages and Professional Engagement	0.515	.725	Not significant
	Personal Growth and Professional Development	0.374	.827	Not significant
	Written Examination	6.119	.003	Significant
Trainings and seminars	Oral recitation	3.897	.019	Significant
	Demonstration	2.683	.004	Significant
	Task Performance	5.546	.007	Significant
	Content Knowledge & Pedagogy	1.746	.143	Not significant
	Learning Environment	2.017	.096	Not significant
	Diversity of Learners	2.540	.083	Not significant
	Curriculum and Planning	0.593	.554	Not significant
	Assessment and Reporting	0.050	.951	Not significant
	Community Linkages and Professional Engagement	0.532	.588	Not significant
	Personal Growth and Professional Development	0.132	.876	Not significant
Years in teaching	Written Examination	0.056	.945	Not significant
	Oral recitation	0.231	.794	Not significant
	Demonstration	0.315	.730	Not significant
	Task Performance	0.192	.826	Not significant
	Content Knowledge and Pedagogy	1.643	.197	Not significant
	Learning Environment	2.897	.059	Not significant
	Diversity of Learners	3.851	.024	significant
	Curriculum and Planning	7.188	.008	significant
	Assessment and Reporting	2.728	.069	Not significant
	Community Linkages and Professional Engagement	5.002	.027	significant
Years in teaching	Personal Growth and Professional Development	10.583	.000	significant
	Written Examination	10.711	.000	significant
	Oral recitation	5.002	.027	significant
	Demonstration	8.108	.002	significant
	Task Performance	12.328	.000	significant

TABLE 11. Relationship between Proficiency of Teachers and Learning Outcomes of Students

Proficiency level	Learning outcomes	t-value	p-value	Interpretation
Content Knowledge and Pedagogy	Written Examination	0.546	0.000	Significant
	Oral recitation	0.606	0.000	Significant
	Demonstration	0.719	0.000	Significant
	Task Performance	0.533	0.000	Significant
Learning Environment	Written Examination	0.334	0.000	Significant
	Oral recitation	0.802	0.000	Significant
	Demonstration	0.460	0.000	Significant
	Task Performance	0.331	0.000	Significant
Diversity of Learners	Written Examination	0.112	0.126	Not Significant
	Oral recitation	0.119	0.116	Not Significant
	Demonstration	0.466	0.000	Significant
	Task Performance	0.031	0.714	Not Significant
Curriculum and Planning	Written Examination	0.047	0.580	Not Significant
	Oral recitation	0.131	0.124	Not Significant
	Demonstration	0.056	0.514	Not Significant
	Task Performance	0.041	0.630	Not Significant
Assessment and Reporting	Written Examination	0.056	0.483	Not Significant
	Oral recitation	0.100	0.130	Not Significant
	Demonstration	0.042	0.522	Not Significant
	Task Performance	0.031	0.637	Not Significant
Community Linkages and Professional Engagement	Written Examination	0.045	0.488	Not Significant
	Oral recitation	0.015	0.862	Not Significant
	Demonstration	0.159	0.061	Not Significant
	Task Performance	0.021	0.630	Not Significant
Personal Growth and Professional Development	Written Examination	0.036	0.613	Not Significant
	Oral recitation	0.140	0.130	Not Significant
	Demonstration	0.022	0.782	Not Significant
	Task Performance	0.051	0.510	Not Significant

On the other hand, the educational attainment of the respondent shows a significant difference in the Learning Environment and Diversity of Learners, for the p-value obtained is less than 0.05 level of significance. This means that the respondents have different perceptions since some of them attain higher degrees and observe.

H. Significant Relationship

The table shows the relationship between the proficiency level and the learning outcomes of the students. It can be seen in the table that content knowledge and pedagogy, learning environment were associated with the learning outcomes of the students where the p-value is less than 0.05 level of significance.

VI. CONCLUSIONS

Premised on the findings of the study, this study generally concluded that the proficiency of teachers has directly affected the academic performance and learning outcomes of the students. The teacher-respondents are qualified to teach the subject and the students are at the normal pace of education and perform well in their class. The teachers demonstrate the necessary proficiency in teaching the subject.

The students display the necessary skills and perform very well in their electrical technology subject. The students performed very satisfactorily in their previous two quarters.

The profile of the respondents affects significantly selected variables in the proficiency of teachers and the learning outcomes of the students. The learning outcomes of the students depend largely on the proficiency of teachers in content knowledge and pedagogy and a conducive learning environment.

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