

## **Association Between Educators' Professional Competence and Teaching Effectiveness in Core Medical Sciences**

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### **Abstract**

The study aimed to determine the teachers' professional competencies and their proficiency in the core subjects. Sixty eight (68) teachers were chosen as respondents. This study made use of the descriptive-correlational research design. It also utilized percent, weighted mean, and Pearson product moment coefficient as statistical tools. Data disclosed that the proficiency level of teachers in English, Science and Mathematics is moderate. However, the teachers' proficiency level in written expression under the English subject is classified as low. The professional competency level of teachers is generally in the outstanding category. The study also found the following: (a) moderate and significant relationship between the teachers' position and two areas in Science (predicting and communicating); (b) moderate, negative and significant relationship between the teachers' level of professional competence in the area of innovation and their proficiency level in Science; (c) moderate, negative and significant relationship between the teachers' level of professional competence in the area of self-management and their proficiency level in Mathematics; (d) moderate, positive and significant relationship between the teachers' level of professional competence in the area of written communication and their proficiency level in Mathematics.

*Keywords: proficiency level, structure, written expression, professional competency*

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**(SGD) ADDAM TUVALLS ESTOSE**

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## **Chapter I**

### **The Problem and Its Scope**

#### **Introduction**

Teachers are important persons in the classroom because they teach and nurture the learners to become holistically developed (Stigler & Hiebert, 2009). Besides, teachers perform various roles that make them versatile individuals (Harrison & Killion, 2007; Early et al., 2007).

For the purpose of strengthening the quality of teaching, language proficiency levels of teachers should be set. Teachers who are highly skilled in language teach very well (Lucas, Villegas & Freedson-Gonzalez, 2008). For decades now, the Philippine education system has used English as a medium of instruction. This is why teachers and students find it easy to use the English language.

Hammond (2012) describes teaching quality as a driving force that empowers students to learn. Teaching quality is determined by teachers' knowledge (Baumert et al, 2010), skills (Darling-Hammond & Richardson, 2009) and disposition (Singh & Stoloff, 2008). There are also other factors that influence the context of instruction and even the way teachers handle the teaching job.

Teaching quality is also affected by time (Mumtaz cited in Somekh, 2008), class size (Bruhwiler & Blatchford, 2011), facilities and materials (Ndirangu & Udoto, 2011) used in the classroom. To really ensure effective teaching, policymakers need to look into these two areas: a) teacher's competence and b) conduciveness of the students' learning environment. Despite the fact that English has long been used as

the country's medium of instruction, teachers still need training relative to English instruction.

The Department of Education administers Test of English Proficiency for Teachers (TEPT)-Processing Skills Test in Science and Mathematics (PSTSM) through the National Education Testing and Research Center per DepEd Memorandum No. 75, s. 2015. This is given to elementary teachers with permanent positions in public schools nationwide and is meant to identify baseline information especially in utilizing the English language in teaching the major subjects.

It is also imperative to examine the process skills for assimilating Science and Mathematics. Teachers need to acquire the required level of Science process skills. Otherwise, they will have difficulty understanding the world and establishing necessary connections (Aydogdu, 2015). Similarly, Park, et al.(2013) averred that teachers ought to possess the Mathematics special content knowledge to clarify students' questions, to assist them in broader thinking, and to estimate through which topic that a student can reach particular Mathematical information. However, Miles (2010) lamentably noted that some studies found that teachers generally have insufficient Science process skills and that teachers rarely evaluate these skills by teaching. This is evident in the test results of the National Achievement Tests.

Scores of pupils in Grade 6 National Achievement Test (NAT) show that they lack mastery in Science, Mathematics and English skills as evidenced by very low Mean Percentage Scores (MPS) because their teachers also lack some competencies and the knowledge to develop these competencies. Likewise, Umay (2013) noted that many studies pointed out the incompetence of teachers in Mathematics and

that students' failure to attain desirable achievement in Mathematics is influenced by many factors including teachers' competence. Thus, to improve the proficiency and competencies of teachers, an in-service training has to be conducted. Teachers' competencies in the core subjects are very important because the foundation is at the elementary level.

It is in this context that the researcher has been prompted to look into the English proficiency, process level in teaching Science and Mathematics, and the professional competencies of teachers. In addition, the results of the Test of English Proficiency for Teachers (TEPT) and Process Skills Test in Science and Mathematics (PSTSM) impelled the researcher to conduct the study.

The fact that this study focused on teachers and no one has yet conducted a research on teachers' process skills in Science and Mathematics and English proficiency separates this study from other endeavors.

The results of this study will serve as a basis for the formulation of improved and enhanced in-service training or program to capacitate teachers with the needed skills in English, Science and Mathematics.

### **Theoretical Background of the Study**

This study is based on the Social Cognitive Learning Theory broadened by Albert Bandura and R. H. Walters. This theory highlight show individuals acquire behavior through imitating or modeling what they have observed from their environment. Bandura, as quoted by Allen (2007), proposes that "learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own action to inform them what to do" (p. 31). Moreover, Bandura

suggests that observing, imitating and modeling the behavior of others is a good thing as it provides awareness of how new behaviors are done, which will later be used as a guide for action. Furthermore, Bandura maintains that “observational learning occurs when a person watches the action of another person and the reinforcement that the person receives.”

To analyze and explain human behavior, the Social Cognitive Learning Theory looks into the mental, behavioral and environmental factors that influence the individual and the mutual interaction that continually transpires between these influences. It basically describes how people learn and retain certain patterns of behavior. Also, factors like people, behavior and environment continually influence each other and serve as bases for assessing changes in behavior (Bandura, 1997).

According to Parraga (1990), the environment and situation provide the basis for understanding behavior. Conversely, Pajares(2001) cited that the environment pertains to external factors that affect an individual's behavior. Also, the author stated that the environment is classified into two: social and physical. Social environment refers to the milieu made up of colleagues, family members and friends, while physical environment refers to the place and organizational climate.

Another concept of the Social Cognitive Theory is reciprocal determinism, which is known as the active interaction of the three factors—person, behavior and environment—in which the action or behavior is executed. Reciprocal determinism also considers various ways to behavioral change, which include personal change, skill change and environmental change.

Meanwhile, Robbins(2008) pointed out that building a mentoring program

that is based on Social Learning Theory's modeling concepts is effective. That is, the impact that the mentor makes on his students comes from more than just what he or she says in the class. Since mentors stand as role models, students tend to observe and emulate the behavior and traits of their mentors. In a way, through the learning obtained from their mentors, protégés learn to deliver or express the actions and attitudes desired by an organization.

In terms of developing training programmes, Ahmad, Gilkar, and Darzi (2008) suggested that "training should offer a model to grab the trainees' attention; provide motivational properties; help trainees to file away what he has learned for later use; provide opportunities to practice new behaviors; offer positive reward for accomplishment; and, if the training has taken place off the job, allow the trainee some opportunity to transfer what he has learned on the job" (p. 72).

Considering the discussions above, the researcher then believes that the Social Cognitive Learning Theory best fits this undertaking.

Figure 1 depicts the schematic diagram of the theoretical framework of the study.

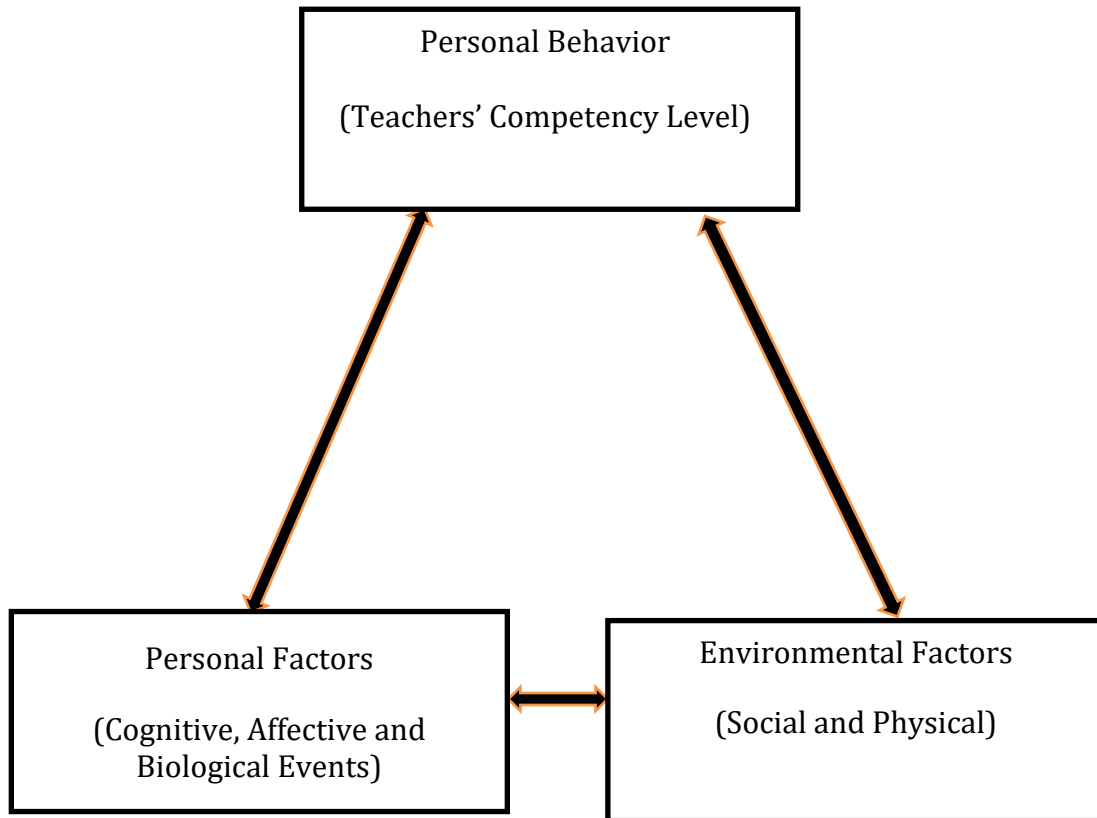
The framework of Social Cognitive Theory explains describes how people learn and retain certain patterns of behavior. The theory believes that people, behavior and environment continually influence each other and serve as bases for assessing changes in behavior. Bandura, as mentioned by Gilbert, Sawyer, and McNeill (2014), posits that Social Cognitive Theory can be applied in designing, instigating, and evaluating programs.

Environment, either physical or social, definitely influences a person's

behavior. Social environment refers to the milieu made up of colleagues, family members and friends, while physical environment pertains to the place, its size, atmosphere, temperature, or climate. To discern an individual's behavior, both the environment and situation are considered. The situation pertains to the intellectual representations of the environment that have an effect on a person's behavior. It also refers to a person's view or opinion of the time, environment, its activity and physical features.

To relate the theory to the current study, the teacher's behavior is perceived to be influenced by the interacting forces that are within his environment and of those that surround him. These forces are the personal and environmental factors that make up the life of an individual. On the other hand, the desire of the teachers for personal growth in terms of knowledge, skills and attitudes serve as the personal factors.

The environmental factor refers to the work environment itself which is the educational system and is made up of the following: a) the opportunities given to teachers; b) the trainings conducted to enhance teachers' competence; c) the experiences that the teachers were exposed to; and d) the supervisory assistance provided by superiors. The interaction of these factors will influence teachers' behavior and, as a result, will determine their work performance.



**Figure 1.** Theoretical Framework of the Study Based on Albert Bandura and R.H. Walter's Social Cognitive Learning Theory

## **Review of Related Literature and Studies**

**Professional competencies.** The term “competence” refers to a person’s knowledge, abilities, and attitudes as well as the motivational variables that determine his expertise in a specific field (Klieme, Hartig, & Rauch, 2008), while professional competence, according to Kane, Weinert and Epstein and Hundert, as cited in Kunter et al. (2013), is “the application of the concept to working life, particularly in highly complex and demanding professions, in which mastery of situations is especially dependent on the interplay of knowledge, skills, attitudes, and motivation.”

Several researchers claimed that professional competence can be effectively applied to instruction (Goodman et al., 2008; Oser, Achtenhagen, & Renold, 2006). In addition, the authors maintained that since professional competence has a multidimensional concept, one can incorporate some aspects of experimental investigation into the essential attributes that teachers must possess.

Sufficient evidence suggests that teacher success may be determined by fundamental aspects such as teachers’ philosophies, job-related motivation, and capacity for self-regulation in the profession (Kunter et al., 2013). Hence, Kautrich, as mentioned by Bwoi (2018), upholds that proficient teachers must be:

a) knowledgeable about the subject matter; b) skilled in interpersonal relations; c) equipped with the basic pedagogical skills; d) interested in the students; e) honest; f) reliable in terms of financial management; g) effective leaders; and h) armed with all the qualities that will boost the nobility of the teaching profession in the society.

**Self-management.** Self-management involves goal-setting and time-management, which are important skills a person must possess for him to get through life. Through self-management, an individual may develop concentration skills and motivation, thus enabling him to work harder and do away with procrastination. In a sense, effective self-management helps a person avoid stress. It also allows him or her to have more chances of engaging in fun school activities.

Self-regulation is considered a major skill in self-management. It involves overseeing and governing aspects of one's learning.

**Professional ethics.** Printchard, as cited in Bwoi (2018), described "ethic" as the philosophical concept that delineates "what is right or wrong, good or bad, fair or unfair, responsible or irresponsible, obligatory or permissible, praise worthy or blame worthy, guilt or shame" (p. 127). Specifically, identifying and sticking to what is good or positive is called ethic.

Basically, ethic is the code of conduct or behaviors related to the human virtues. In the teaching profession, ethic is hence described as the process of accomplishing good deeds or performances regularly applied in serving individuals and the society in general (Jimba, Ogundele & Daniel 2015, cited in Bwoi, 2018).

**Results focus.** According to Travis Bradberry, in his article published in Forbes.com, there is no definite answer as to what makes a better leader. However, he mentioned that based on the survey conducted by James Zenger over 60,000 employees, a great leader in the eyes of subordinates entails being both results-focused and people-focused. Results revealed that only 14% of the employees

regarded results-focused leaders as great, while only 12% appreciated people-focused leaders. However, it was found that 72% of the respondents preferred a balance of people-focused leadership and results-focused leadership for they believed it could yield better and more desirable results.

**Teamwork.** Nielsen (2008) found that teachers in general are perceived to be satisfied with their teamwork. However, he concluded that ordinary teamwork among teachers on a daily basis contributes to their work in terms of doing teaching but not developing teaching.

**Innovation.** Kuboni et al. (2014) stated that innovation is “the process of making changes to something established by introducing something new.” Based on this definition, it can be deduced that innovation is about creating something to cause change, which may be drastic or gradual, in the methods, services or products of an organization.

**Importance of innovation in teaching.** Daniel C. Edelson (n.d.), in his column entitled “Importance of Innovation in Teaching,” postulates that one sure way to improve education is to give people a clear picture of what learning really is. According to him, students can learn more effectively if a teacher engages his students in activities that would allow them to think, be curious and voice their own current understanding of a certain topic or phenomenon before presenting a new addition to their understanding.

**Verbal ability.** Good teaching is measured through verbal ability accompanied by subject knowledge (Andrew, Cobb, & Giampietro, 2005). Verbal ability simply refers to the skill in expressing thoughts into words both orally and in

written form. This aptitude entails not only strong vocabulary skills but also a knack in choosing the right words to convey ideas to distinct audiences. Moreover, Andrew et al. (2005) assert that verbal ability also includes the ability coherently explain and organize words. It is therefore expected of teachers to act as role models of proper speaking and writing so students can emulate and enhance their verbal skills. Crotty (2014) argued that although possessing excellent verbal skill strongly predicts success in all fields, it particular offers valuable benefits in the educational arena. This is because verbal ability essentially signifies competence.

**Computer/ICT skills.** The study of Tasir et. al (2012), which focused on Malaysian teachers, revealed that teacher's level of competency, confidence and satisfaction concerning ICT programmes are interrelated. The authors found that Malaysian teachers felt highly confident in using ICT without fear or unease and satisfied with the ICT programmes. As a result, the teachers' levels of competency and confidence also increased. It is, therefore, imperative to come up with strategies that do not only augment teachers' satisfaction but also surpass their expectations of the acquired learning. Additionally, Zuppa and Rezzano(2016) suggested that furnishing teachers with high-tech classrooms and facilities can further improve their performance.

According to Gilbert M. Forbes(2011) of DepEd Quezon, School officials and the general public see to it that teachers possess ideal characteristics since it is very important in the delivery of instruction. Teachers must love their job because if they love their job they love the children in their charge. In fact, some parents enroll their children to teachers who are caring to their students. Private schools on the other

hand, insure that they employ highly qualified and competent teachers to ensure that they are offering the best education for their students. To be at par with the private schools public schools are also trying hard to improve academic performance by improving the criteria in hiring new teachers.

Forbes (2011) stressed that teachers should possess the following major characteristics:

(1) *Decisiveness*. He/She acts immediately on needs and requests corresponding to the prescribed rules and regulations and accepted norms of conduct and behavior. In this regard, he/she is not causing delaying any endeavor.

(2) *Honesty and Integrity*. He/She shows reliability, sincerity, and truthfulness in all his/her actions. He/She commands an air of inspiration and respect.

(3) *Dedication and Commitment*. He/She has clear devotion to his/her duties and constantly makes room for improvement. He/She does the extra mile and performs beyond what is expected of him/her.

(4) *Initiative and Resourcefulness*. He/She starts action, projects and performs task even without being told and supervised. A teacher possesses a strong sensitivity to make everything spec and span.

(5) *Courtesy*. He/ She is polite and thoughtful to everyone at work.

(6) *Compassion*. A teacher shows real concern for his/her students, coworkers, clientele, and superiors. It is called Human Relations by the Performance Appraisal System for Teachers.

(7) *Diligence*. Teachers if possible must be well rounded so that they will not easily give up on the challenges they may encounter in the profession. Certain instances or

circumstances such as having special children enrolled in the class can be challenging, but if you have broad knowledge and experiences, then you will know how to handle the situation.

(8) *Wisdom*. Teachers must be full of wit as a result of full understanding of the teaching learning process. It is gained not only from continuing professional development but more importantly from daily experiences and dealings.

(9) *Stress Tolerance*. A teacher has stability in his/her performance even under pressure or opposition.

(10) *Fairness and Justice*. Teachers should comply with rules or laws and must have a just and unbiased attitude.

(11) *Frugality and Simplicity*. Humble, simple and prudent are great characteristics a teacher must have. As a teacher, he/she understands the essence of delayed gratification. Teachers must live within their means and so they will limit their spending to what she earns.

**Results-based performance management system.** Results Based Performance Management System is an organization-wide process to make sure that employees largely function towards realizing the Vision, Mission and Values (VMV) of the Department of Education. This method is aimed at achieving consistency and growth at work. The Results Based Performance Management System is on Human Resource and Organizational Development (HROD) intervention that guarantees the success of Human Resources Management and Development (HRMD) services of the Department of Education for it to effectively device a learner-centered, school-based management system as well as for the

K to 12 policies to augment the quality of education in public schools. Moreover, this all-inclusive assessments scheme tackles the mandate under Republic Act 9155 with the following primary purposes: a) to guarantee provision for teachers' professional growth; and b) to acknowledge the quality of teachers' undertakings over a period of time—such as maintaining high standard of work and excellent performance—through incentives, awards and promotion. It aims to furnish teachers with significant activities that can boost their professional competence. Lastly, it assures that students truly learn from highly proficient teachers.

The teacher performance is evaluated based on performance and results of pupil assessment. Aside from that Results Based Performance Management System (RPMS) is utilized as an appraisal tool which will be the basis for training needs and granting of benefits to teachers. This is to ensure that goods are delivered or that the learners have mastered the competencies expected. This in turn leads to achieving the Department of Education mission and vision which is the ultimate goal of Department of Education (DepEd BESRA TED-TWG, CB-PAST Revised Primer, 2010).

**Personal growth and professional development.** Wilson, et al., cited by Sualog (2015) in her study mentioned that the review of the research on teacher preparation conducted for the U.S. Department of Education reveals that empirical studies conform to a variety of accepted methodological approaches and a range of measures of teacher competency are used to ascertain what existing evidence says about the relationship. Teachers are assessed according to their attributes and performance. Furthermore, this strategy looks closely into a number of conditional

elements such as teaching experience, educational level, type of students, student population, subject area, etc .to identify conclusions across findings. Clearly, the teaching context is vital and may affect the impact of the teacher's characteristics.

Marsh and others (2009) express that letting students evaluate teachers' performance is one of the most controversial procedures of categorizing whether or not a teacher is effective or competent. While some teachers tend to question student ratings as a helpful or rational means of eliciting feedback about a teacher's performance, there are still many personnel who support the use of student rating indecision-making.

**English proficiency.** According to Hashemi (2011), setting standards or language proficiency targets to endorse quality instruction. Having standards or levels set for teachers will urge them to have a goal and unceasingly seek for professional development. Teachers are encouraged to work harder and improve their language proficiency further knowing by common sense that "teachers can't teach what they don't know."

The Department of Education (DepEd) is instituting measures to identify baseline data and information in the training requirements for teachers under K12 program. This is why Test of English Proficiency for Teachers (TEPT)- Processing Skills Test in Science and Mathematics (PSTSM) is administered to all public elementary teachers with permanent positions in public schools (DepEd Memo 12, Series of 2012).

As a result of the TEPT and PSTM, teachers' training enables them to focus on the essential elements of teaching in the major subject areas in the elementary level.

After detecting the training needs for teachers, school heads can recommend teachers to participate and attend to the identified trainings relative to English instruction. In effect, these teachers will gain improved knowledge and greatly contribute to sustaining and raising school performance. Test of English Proficiency for Teachers (TEPT) are measured based on the three sub-test domains:

(1) Reading Comprehension. This tests the capability to grasp, analyze, deduce and censure what has been heard or read. This also measures the ability to identify the ideologies or views stated by the author; to draw implications and conclusions; and to perceive and assess how the author expresses his ideas.

(2) Structure. This measures the aptitude to determine the parts of speech in the sentence, their uses, and how the sentence is structured.

(3) Written Expression. This test assesses a person's knack in writing using English (i.e. proper usage of verb tenses).

On the other hand, Process Skills Test in Science and Mathematics (PSTSM) measures the processing skills such as observing, classifying, inferring, predicting, measuring/quantifying, communicating, interpreting data, analyzing data, evaluating, experimenting, making conclusions, making models, and defining operationally (DepEd NETRC-RED, 2012).

**Science process skills.** Rauf, Rasul, Mansor, Othman, and Lyndon, N. (2013) believe that teachers bear a significant responsibility in imparting science process skills to students mainly by training them how to absorb scientific information. Also, Martin et al., as cited in Rauf, Rasul, Mansor, Othman, and Lyndon (2013), claimed that obtaining science process skills is like "learning how to learn"

in which students learn to think critically and utilize information creatively.

Students also learn how to make selective observations, consolidate and examine facts, rationally explain results, assess and interpret results, establish valid conclusions, and foresee future outcomes if changes occur.

According to Mutluand Temiz(2013),science process skills serve as the foundation for scientific thinking and research. They involve skills in identifying a problem, formulating a hypothesis about the problem, making valid predictions, identifying and defining variables, designing an experiment to validate the hypotheses, gathering facts, analyzing the data, and presenting accurate findings to support the data. Harlen cited by Aydogdu (2015) reports that it is necessary for students to acquire the desired level of Science process skills. Otherwise, students will have comprehension difficulty. For that reason, as mentioned by Miles (2010), teachers should develop the Science process skills of students as well as their content knowledge and questioning skills for these are major factors that lead to an efficient Science teaching inKto12 grades. In addition, Miles said that it is known that teachers should have the required knowledge, understanding and materials to teach Science process skills. Studies also revealed that teachers having developed Science process skills are more active in delivering these skills in the classroom; thus, they become effective in developing the skills of students. In conclusion, teachers need to be adequately equipped with Science process skills and to efficiently impart these skills to students (Miles,2010).

**Mathematics process skills.** According to Umay (2013), Mathematics education is considered the chief component of basic education. Needless to say,

everyone basically needs to learn mathematics because it develops higher level behaviors. It also develops one's analyzing, communicating, reasoning, communicating, and generalizing skills as well as creative and independent thinking. The teacher is the person who is in continuous interaction with the students, implementing the education program, managing the teaching process, and assessing the student. The competencies of the teacher significantly affect these processes. Since Mathematics is a challenging subject, teachers' competence is very important so he or she can make the lessons enjoyable for the students despite the challenges. The more enjoyable the class is, the more learning is facilitated. Several studies indicate that teachers incompetence is the cause of students' failure in Mathematics. Ciftci (2010) states that many factors cause students to fail in Mathematics. The common factors include personal profiles of teachers, financial matters, and family problems. In the study carried out by Soylu (2009), teachers should possess Mathematics knowledge so that students will learn and correct some misconceptions they have about Mathematics (Park, et al., 2013).

Basic Mathematics education is introduced in primary school (Elmas, 2010). Teachers assume a huge responsibility in conveying Mathematics and assisting the student to understand it. Specifically, elementary school teachers should be competent in various areas including the teaching-learning environment, development, monitoring and evaluation, personal and professional development, relations with the society, arts and aesthetics, improvement of language skills, scientific and technological development, individual responsibilities and socializing, physical training, and security. In connection to this, Elmas (2010) listed down the

knowledge and skills a teacher must have in relation to the subject he/she handles. According to him, the teacher ought to be skilled in terms of analysis, giving justification to various circumstances, evaluating diverse outlooks and ideologies, researching, and in general, relating what he knows to students in a realistic fashion so that students get to make sense of the subject matter presented to them.

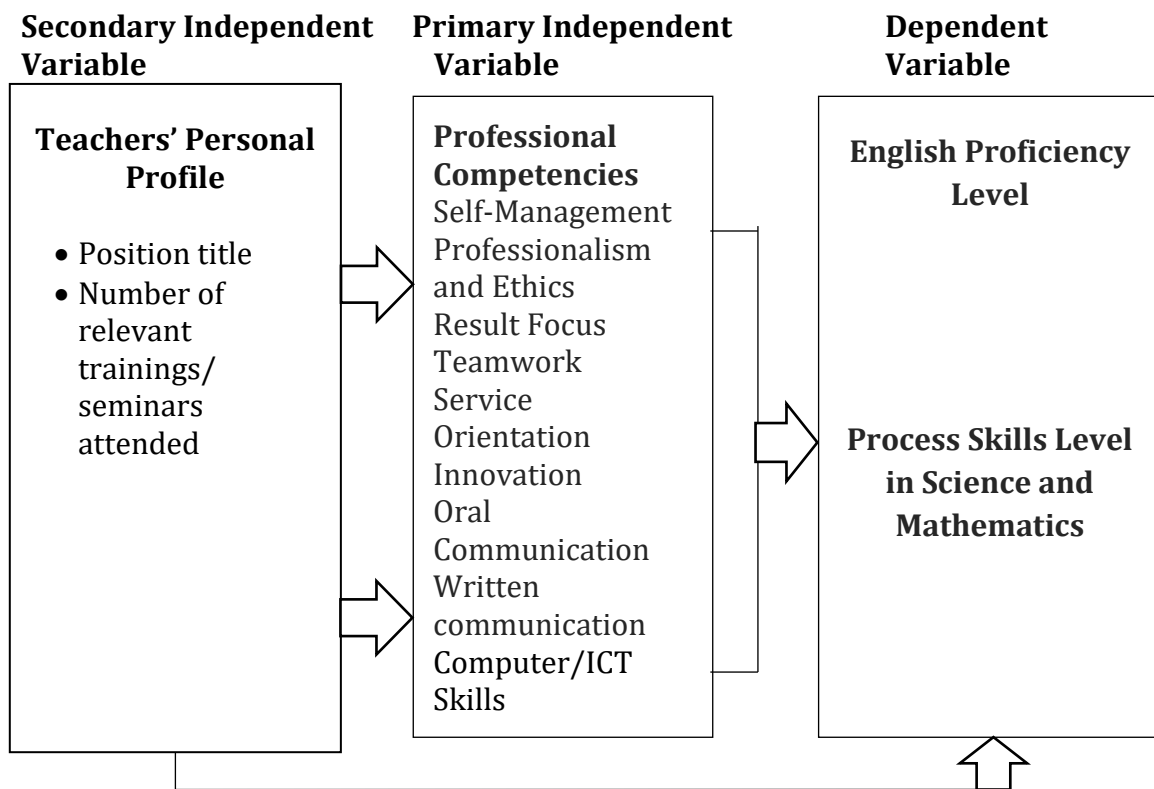
The study of Gulteke et al.(2013) among 72 elementary school teachers in Manisa, Turkey shows that most teachers know Math or its content. The problem, however, is that they do not have adequate skills and knowledge about how to put the Mathematics content into practice. Based on the study, teachers know the importance of teaching Mathematics topics and its implication to our lives but they lack the advanced expertise about the special content of Mathematics. Moreover, most teachers focus on making the students active during the class but they fail to utilize appropriate assessment tools to evaluate progress; however, only few make reference to the importance of treating students equally and knowing about the differences among students. They also teach the subject with English and Turkish or Turkicas their medium of instruction.

### **Conceptual Background of the Study**

To assess the professional competencies of teachers, their personal profiles in terms of position title, number of relevant trainings/ seminars attended were treated as secondary independent variables. The professional competencies; namely self-management, professionalism and ethics, result focus, teamwork, service orientation, innovation, oral communication, written communication, computer/ICT skills were treated as primary independent variables. The English proficiency level

and process skills level of teachers in Science and Mathematics were treated as dependent variables.

It was assumed in this study that the teachers' personal profile will influence the professional competencies of teachers. Likewise, the teachers' personal profile is hypothesized to influence their English proficiency level and process skills level in Science and Mathematics which eventually will also have an impact on the teachers' professional competencies. The conceptual framework is presented below for visual representation of the flow of the study.



**Figure 2. Diagram of the Conceptual Framework of the Study**

### **Statement of the Problem**

This study aimed to determine the Teachers' Professional Competencies and their Proficiency in the Core Subjects in Bayawan City Division.

Specifically, this study seeks to answer the following questions:

1. What is the proficiency level of and process skills level of teachers in the following core subjects:
  - 1.1 English;
  - 1.2 Science; and
  - 1.3 Mathematics?
  
2. What is the level the professional competencies of teachers' in the following areas:
  - 2.1 self-management;
  - 2.2 profession and ethics;
  - 2.3 result focus;
  - 2.4 teamwork;
  - 2.5 service orientation;
  - 2.6 innovation;
  - 2.7 oral communication;
  - 2.8 written communication; and
  - 2.9 computer/ICT skills?
  
3. Is there a significant relationship between following teachers' personal profile and their proficiency level in the core subjects:
  - 3.1 position title; and
  - 3.2 number of years in teaching?
  
4. Is there a significant relationship between the teachers' personal profile and their professional competencies?

5. Is there a significant relationship between the teachers' professional competencies and their proficiency level in the core subjects?

### **Statement of the Null Hypotheses**

Based on the problems presented, the following hypotheses will be tested:

**H<sub>01</sub>**. There is no significant relationship between the teachers' personal profile and their English proficiency level in the core subjects.

**H<sub>02</sub>**. There is no significant relationship between the teachers' personal profile and their professional competencies.

**H<sub>03</sub>**. There is no significant relationship between the teachers' professional competencies and their proficiency level in the core subjects

### **Significance of the Study**

Results of this study are significant to:

**National Education Testing and Research Center (NETRC)**. This study provides a research-based information to NETRC on the professional competencies of teachers in Bayawan City Division in teaching Science and Mathematics subjects using English as medium of instruction. The findings will be their guide to identify the needs of teachers to fully implement the K to 12 program of the Department in this regard.

**Department of Education (DepEd)**. They will be provided with research-based information on the English proficiency, process skills level in Science and Mathematics and professional competencies of permanent public school teachers. These are relevant materials that DepEd has to be aware of.

**DepEd-Bayawan City Division**. With this study, the Bayawan City Division

could readily identify baseline information on the training needs of teachers under K to12 program especially in the use of English language in teaching Science and Mathematics. Looking at the process skills is also imperative to the Division for the integration of Science and Mathematics.

**School administrators.** The findings could serve as a model for other school administrators with regard to the professional competencies and English proficiency of Science and Mathematics teachers, through which they could develop their medium-term plan as per results of the performance competencies and TEPT-PST. Hence, school administrators would be able to provide strong support for their teachers to avail of the kind of effective teaching-learning performance in Science and Mathematics subjects.

**English, Science and Mathematics teachers.** They will be guided in knowing the importance of the English proficiency, Process Skills in Science and Mathematics, and professional competencies for the improvement of their teaching-learning performance in Science and Mathematics using English as medium of instruction.

**Teacher applicants.** Results of this study could serve as an eye opener to teacher applicants. They will be informed of the need to become proficient in English and equip themselves with process skills in Science and Mathematics for them to be more capable in their teaching profession.

**Pupils.** Acquisition of Science and Mathematics process skills at desired level by the help of teachers who are proficient in English is very important to pupils for them to broaden their thinking, get better understanding of their surroundings and

enable them to solve everyday problems.

**Parents.** The findings of the study would certainly raise awareness to parents regarding the status of Science and Mathematics teachers in terms of their profile, professional competencies and proficiency in English. With this information, parents can eventually identify which aspect of their child's learning should be given support or assistance in order to further develop the children's learning ability.

**Future researchers.** Other researchers will be provided with information about teachers' professional competencies, English proficiency level, and processing skills in Science and Mathematics. The information collected in this research can serve as basis for similar studies in the future.

### **Research Methodology**

This section presents the discussion on the research methodology which includes the research design, locale of the study, subjects of the study, data gathering instruments, data gathering procedure, data analysis and ethical consideration.

**Research design.** This study employed the descriptive-correlational design. Descriptive design is intended to "provide a snapshot of the current state of affairs" (Stangor, 2016). It basically paints a total picture of what is happening. In this method, information is collected and not manipulated. It is also correlational since the variables will be correlated.

Focus Group Discussion (FGD) was used in this study to triangulate the quantitative results. Qualitative research gives complex textual description of people's experience in a certain research issue. According to Creswell (2014), it is

a means of making sense of the meaning that people or individuals ascribe to a particular problem. When used along with quantitative methods, qualitative research can help reinforce interpretations of quantitative data and provide a more complete understanding of a research problem.

### **Research Environment**

This study was conducted in Bayawan City Division which is composed of fifty-six (56) complete elementary schools.

Bayawan City is found in the southern part of Negros Oriental. It was officially categorized as a city on December 23, 2000 under R.A. 8983 through the backing of Congressman Herminio G. Teves of the 3rd Congressional District. The city's charter stipulates the formation of a temporary City Division which was formally opened by Sec. Edilberto de Jesus on the 25th of January.

Bayawan has three hundred eighty-three (383) elementary and fifty-six (56) high school teachers designated in fifty (50) elementary schools and (11) secondary schools. These schools are randomly scattered in the (28) twenty-eight barangays which make up the whole city division. From School Year 2002-2003 to 2003-2004, the educational scene of Bayawan had considerably transformed—a result of the vision of its mayor with the aid of stakeholders and in coordination with the Department of Education.

**Research respondents.** The subjects of the study were the Grades 5 and 6 teachers who teach English, Science and Mathematics from 30 randomly selected schools. They were chosen using cluster sampling technique. These teachers had taken the Teachers English Proficiency Test (TEPT) and Process Skills Test in

Science and Mathematics (PSTSM) for SY 2015-2016 to determine their English proficiency level, process skills level in Science and Mathematics, and their professional competencies.

There were 56 elementary schools in Bayawan City Division but for purposes of this study, the researcher randomly selected the following 30 schools listed on the next page and the corresponding number of Grade 5 and 6 teachers. There were 68 teachers to be considered in this study.

<b>Schools</b>	<b>No. of Teachers</b>
1. Bayawan City East Central School	4
2. Banga Central School	2
3. Baisan Elementary School	2
4. Kalamtukan Elementary School	2
5. Villasol Elementary School	2
6. Manduaw Elementary School	2
7. Lapay Elementary School	2
8. Nangka Elementary School	4
9. Tayawan Elementary School	4
10. Minaba Elementary School	4
11. San Roque Elementary School	2
12. San Miguel Elementary School	2
13. Napo Elementary School	1
14. Gamao Elementary School	2
15. Cansumalig Elementary School	2

16. Bolirocon Elementary School	2
17. Pusi-on Elementary School	2
18. Dean Felix Gaudiel Memorial Elementary School	2
19. TelesforoGargantiel Memorial Elementary School	2
20. Bayawan City Science and Technology Education Center	2
21. Buli-Buli Elementary School	2
22. Villareal Elementary School	2
23. Dawis Elementary School	2
24. Magsulay Elementary School	2
25. Matunoy Elementary School	1
26. Kalumboyan Elementary School	4
27. Banaybanay Elementary School	2
28. Bugay Elementary School	2
29. Guisocon Elementary School	2
30. Holy Family elementary School	2
<b>Total</b>	<b>68</b>

**Research instruments.** This study utilized the questionnaire as instruments in gathering the data. The researcher constructed the questionnaire to gather information on the personal profile of teachers particularly on the position title and number of relevant trainings attended by teachers. Other instruments used in this study were the results of Teachers English Proficiency Test (TEPT) and Process Skills Test in Science and Mathematics (PSTSM) for School Year 2015-2016. The

rating of teachers in the Department of Education Results Based Management Performance System Teachers (RPMS) (Part II) was also utilized.

**Research procedure.** Upon the approval of the research proposal by the Examining Panel (or Advisory Committee), the researcher prepared a letter addressed to the Schools Division Superintendent asking permission to conduct a study on the “English Proficiency, Process Skills Level in Science and Mathematics and Professional Competencies of Teachers in the Bayawan City Division.

With the approved letter, the researcher sent another letter to the school heads/District Supervisors to allow her to administer the questionnaire in their respective schools.

Upon approval of the request, the questionnaire was personally distributed by the researcher to the respondents in the schools. The respondents were given instructions as to how they will answer the questions as well as ample time to complete the questionnaire. The completed questionnaires were retrieved personally by the researcher and was immediately checked to ensure completeness of the answers. To gather data on the result of the Teachers English Proficiency Test and Process Skills Test in Science and Mathematics (TEPT-PSTSM) rating of teachers, the researcher wrote a letter to the Education Program Specialist, School Management Monitoring and Evaluation Section asking permission to allow her to avail of photocopied test results. Once approved, the researcher identified the subjects of the study from the list of elementary school teachers in Bayawan City Division who took that same test and obtain their respective ratings. The data gathered were computed to get the teachers’ percentage ratings as basis for

determining their proficiency level.

### **Statistical Treatment of Data**

The following statistical tools were used by the researcher.

**Percent.** This was used to show how a part is related to a whole. It was used in presenting the distribution of the respondents in terms of their profile.

**Mean.** This was used in getting the centrality of the extent of teachers' performance.

**Pearson product- moment co-efficient of correlation.** This was used in identifying the relationships between the variables in ratio scale (i.e. English proficiency, process skills in Science and Mathematics).

**Chi-square.** This was used to identify the association between the variables that are in nominal scale.

The English proficiency level of the subjects of the study and their level of proficiency in process skills test in Science and Mathematics were analyzed using their mean percentage scores categorized into four and was described based on the Department of Education Test in English Proficiency and Process Skills Test in Science and Mathematics ( TEPT – PSTSM) test instrument, viz:

<b>Rating</b>	<b>Proficiency Level</b>
76-100	High
51-75	Moderate
26-50	Low
0-25	Very Low

The professional competence of the subjects as an entire group was assessed according to instructional competence, school, home, community linkages, personal and social growth, and professional characteristics which will be analyzed using their weighted mean. The researcher used the following rating scale adapted from the Department of Education Results-Based Performance Management System - Teacher Performance Index (TPI):

<b>Range</b>	<b>Adjectival Rating</b>
4.500- 5.000	Outstanding
3.500– 4.499	Very Satisfactory
2.500 – 3.499	Satisfactory
1.500 – 2.499	Unsatisfactory
Below 1.499	Poor

In specifying the degree of relationship between two variables in ratio scale the following descriptions were used. (Statistical Correlation, 2009):

	<b>Value of r</b>	<b>Strength of Relationship</b>
Between	± 0.50 to ± 1.00	± strong relationship
Between	± 0.30 to ± 0.49	± moderate relationship
Between	± 0.10 to ± 0.29	± weak relationship
Between	± 0.01 to ± 0.09	± very weak relationship

### **Operational Definition of Terms**

The following terms are defined for clearer understanding of the study.

**English proficiency.** As used in this study, the term refers to the ability of public elementary teachers to use an English language in teaching Mathematics and Science accurately and correctly through speaking, reading, listening, and writing.

**Instructional competence.** Operationally, it refers to the ability and/or competency of teachers to teach the child to perform better and learn more from Mathematics and Science using the English language.

**Number of years in teaching.** This referred to the teacher's length of service as teachers in the public school.

**Number of relevant trainings, seminars/attended.** As used in this , is is referred to how many times had a teacher attended trainings/ seminars related to his or her field of specialization or teaching assignments in the local, national, or international levels.

**Personal, social growth, and professional characteristics.** These refer to activities that improve awareness and identity; develop talents and potential; build human capital and facilitate employability; enhance the quality of life; and contribute to the realization of dreams and aspirations. In short, personal development includes the actions that an individual takes to accomplish his or her long-term goals.

**Professional competencies.** It refers to the capability and competency of teachers to perform action to successfully accomplish as specific teaching task.

**Science and Mathematics Process Skills.** This pertains to the skills in

observing, classifying, inferring, predicting, measuring/quantifying, communicating, interpreting data, evaluating, experimenting, making conclusions, making models, and defining operationally.

**Teachers English Proficiency Test and Process Skills Test in Science and Mathematics (TEPT-PSTSM).** It is a test administered to permanent public elementary school teachers to identify their training needs in preparation for the implementation of K to 12 program and the use of the English language in teaching Science and Mathematics subjects.

**Teachers.** In this study, these are the Grades 5 and Grade 6 elementary teachers of Bayawan City Division who serve as the subjects of the study.

## Chapter II

### Presentation, Analysis and Interpretation of Data

This chapter presents the data gathered with regard to the teachers' professional competencies and proficiency in the core subjects and how these variables are related to their personal profile. Furthermore, the analysis and interpretation of these data are also revealed. The findings will serve as basis for the formulation of in-service training and action plan to improve the teachers' work performance as well as the pupils' academic performance.

According to Stigler and Hiebert (2009), teachers are the important persons in the classroom because they teach and nurture learners holistically. It is on this light that the researcher has found interest in pursuing this study.

Table 1  
*Teachers' Proficiency Level in English (n = 68)*

Areas in English	Rating (%)	Verbal Description
Reading Comprehension	69.19	Moderate
Structure	53.14	Moderate
Written Expression	43.30	Low
Overall English Proficiency	55.21	Moderate
<b>Legend:</b>	<b>Scale</b>	<b>Verbal Description</b>
	76% - 100%	High
	51% - 75%	Moderate
	26% - 50%	Low
	0% - 25%	Very Low

Table 1 presents the teachers' proficiency level in English in terms of reading comprehension, structure and written expression. As reflected in the Table, the teachers are moderately proficient in the areas of reading comprehension (69.19%) and structure (53.14%), which means that the teachers are relatively able to comprehend and construct sentences in English.

Furthermore, data revealed that the teachers exhibit low proficiency in the area of written expression (43.30%), which implies that somehow they encounter difficulty in organizing and expressing their ideas through writing. This could be due to the fact that some of the teachers who are assigned to teach Science and Mathematics do not exactly specialize in these core subjects. Hence, they are least expected to perform highly in these subjects. Nevertheless, their proficiency level in English can still be improved through professional development strategies (i.e. in-service training) so that their abilities in handling the core subjects will be honed.

School heads can help boost the language proficiency of their teachers by first identifying their training needs, particularly in the integral components of teaching the core subjects in the elementary level. They may also urge teachers to participate in the identified trainings relative to English instruction and strive for higher levels of language proficiency for they cannot then teach what they do not know. As claimed by Hashemi (2011), teachers need to improve their knowledge and skills to increase and sustain school performance. Language proficiency levels provide an objective reference that helps determine what area of the teachers' proficiency can be gauged to support them in pursuing continuous professional development.

Table 2  
*Teachers' Proficiency Level in Science (n = 68)*

Areas in Science	Rating (%)	Verbal Description
Observing	84.06	High
Predicting	61.59	Moderate
Classifying	60.14	Moderate
Experimenting	58.55	Moderate
Inferring	55.80	Moderate
Evaluating	55.56	Moderate
Making Conclusions	53.62	Moderate
Communicating	52.29	Moderate
Making Models	50.72	Moderate
Interpreting Data	50.53	Moderate
Overall	58.29	Moderate

Legend:	Scale	Verbal Description
	76% - 100%	High
	51% - 75%	Moderate
	26% - 50%	Low
	0% - 25%	Very Low

Table 2 shows the teachers' process skills in Science which include the following: observing, predicting, classifying, experimenting, inferring, evaluating, making conclusions, communicating, making models, and interpreting data. As indicated above, teachers have a high rating in observing skills (84.06%). They acquire moderate rating in all other skills, to wit: predicting ( 61.59%); classifying, (60.14%); experimenting (58.55%); inferring (55.80%); evaluating (55.56%); making conclusions (53.62%); communicating (52.29%); making models (50.72%); and interpreting data (50.53%). The overall rating obtained by teachers is 58.29% described as moderate.

The moderate rating of the teachers in their Science process skills suggests that they need to be further trained so that they will have sufficient abilities to impart these skills to their students. Miles (2010) maintained that teachers need to enhance students' Science process skills, content knowledge and questioning skills

as these are major factors for an efficient Science teaching in primary and secondary schools(Kto12 grades). It has been known that possessing Science process skills or content knowledge is highly important for the resolution of a problem. It can therefore be assumed that Science process skills and content knowledge complement each other.

Table 3  
*Teachers' Proficiency Level in Mathematics*

Areas in Mathematics	Rating (%)	Verbal Description
Measuring/Quantifying	67.39	Moderate
Analyzing Data	56.52	Moderate
Defining Operationally	55.07	Moderate
Overall	59.66	Moderate

Legend:	Scale	Verbal Description
	76% - 100%	High
	51% - 75%	Moderate
	26% - 50%	Low
	0% - 25%	Very Low

The data in Table 3 revealed that teachers are moderately proficient in Mathematics as indicated by their overall rating of around 60%. Specifically, the teachers are moderately proficient in the following aspects: measuring/quantifying, (67.39%); analysing data(56.52%); and defining operationally(55.07%). These findings suggest that teachers still need to further develop their process skills in Mathematics considering that it is one of the core subjects in basic education.

According to Umay (2013), "Mathematics education constitutes one of the most important and even the most important constituent of basic education." Also, the qualities of teachers are significant bases for ensuring that students enjoy and comprehend Mathematics.

Table 4  
*Summary Table of Teachers' Proficiency Level in Core Subjects*

Core Subjects	Rating	Verbal Equivalent
English	55.21	Moderate
Science	58.29	Moderate
Mathematics	59.66	Moderate
Overall Proficiency	57.72	Moderate

Legend:	Scale	Verbal Description
	76% - 100%	High
	51% - 75%	Moderate
	26% - 50%	Low
	0% - 25%	Very Low

Table 4 presents the summary of teachers' proficiency level in core subjects. The above data indicate that teachers need more training to improve their English proficiency and process skills in teaching Science and Mathematics.

School heads are responsible for ensuring that teachers' needs for professional progress are met. This supports the recommendation of DepEd NETRC-RED (2012) that 'school heads should identify teachers' training needs then recommend teacher participation and attendance to the identified trainings relative to English instruction.' Accordingly, the teachers' improved knowledge shall become a major factor in sustaining and increasing school performance.

In addition, teachers' improved Science process skills help them to effectively train pupils in applying these skills to their daily lives. As professed by Harlen cited by Aydogdu (2015), "acquisition of Science process skills at desired level is very important for students, and those students, who could not sufficiently acquire these skills, cannot comprehend the world and cannot establish necessary connections."

Conversely, to effectively teach Mathematics, teachers need to improve their teaching methods or strategies to facilitate better understanding of mathematical

concepts. Ciftci (2010) maintained that aside from personal and family factors, teachers and teaching programs determine students' failure or success in attaining desirable achievement in Mathematics. The study of Soyly (2009) also hypothesized that teachers ought to acquire Mathematics special content knowledge for them to effectively address students' questions, assist them in broader thinking, and assess how a student can absorb Mathematical information.

Table 5

*Level of Teachers' Professional Competencies*

Areas of Professional Competencies	Rating	Verbal Description
Profession and Ethics	4.723	Outstanding
Teamwork	4.722	Outstanding
Self-Management	4.701	Outstanding
Oral Communication	4.621	Outstanding
Written Communication	4.610	Outstanding
Service Orientation	4.572	Outstanding
Computer/ICT Skills	4.540	Outstanding
Result Focus	4.521	Outstanding
Innovation	4.490	Very Satisfactory
Overall	4.621	Outstanding

Legend:	Scale	Verbal Description
	4.500 – 5.000	Outstanding
	3.500 – 4.499	Very Satisfactory
	2.500 – 3.499	Satisfactory
	1.500 – 2.499	Fair
	1.000 – 1.499	Poor

Table 5 contains data signifying that teachers are competent in the following areas in which they were rated as outstanding: profession and ethics (4.723), teamwork (4.722), self-management (4.701), oral communication (4.621), written communication (4.610), service orientation (4.572), computer/ICT skills (4.540), and result focus (4.521). It was also revealed that the teachers obtained a very satisfactory rating in the area of innovation.

The findings indicate that the teachers are highly competent in their profession as evidenced by their overall numerical rating of 4.62, which means that the teachers' professional competencies are generally outstanding.

Teachers' professional competencies may depend on their exposure to their profession, social environment and other factors that could influence their knowledge and skills. This is affirmed by Wilkins (2013) stating, "Teachers' competencies and proficiency have been found to be influenced by different variables such as their beliefs, knowledge, context, attitudes and previous knowledge and skills." Panda and Mohanty (2013) added that there are many factors that affect teachers' overall performance and these factors include aptitude, subject matter, teaching methodology, personal characteristics, the classroom environment, general mental ability, personality, and relations with students. The authors believe that, to produce quality teachers, one has to understand the factors associated with it.

Table 6 on the next page shows the relationship between teachers' position title and proficiency level in the core subjects. Results revealed that the teachers' position title and their level of English proficiency in terms of English structure and written expression are significantly related as indicated by their p-values of 0.026 and 0.040, respectively, which are less than 0.05 percent level of significance. These figures allow rejection of the null hypothesis. However, the degree of relationship is weak.

Table 6  
*Relationship between Teachers' Position Title and Proficiency Level in Core Subjects*

Variables	Comp. $r_s$	p-values	Decision	Remark	Degree of Relationship
<b>Areas in English</b>					
Structure	0.268	0.026	Reject $H_{01}$	Significant	Weak
Written Expression	0.248	0.040	Reject $H_{01}$	Significant	Weak
Reading Comprehension	0.015	0.902	Do Not Reject $H_{01}$	Not Significant	
Overall	0.221	0.068	Do Not Reject $H_{01}$	Not Significant	
<b>Areas in Science</b>					
Predicting	0.329	0.000	Reject $H_{01}$	Significant	Moderate
Communicating	0.304	0.011	Reject $H_{01}$	Significant	Moderate
Observing	-0.221	0.068	Do Not Reject $H_{01}$	Not Significant	
Evaluating	0.149	0.221	Do Not Reject $H_{01}$	Not Significant	
Inferring	0.138	0.257	Do Not Reject $H_{01}$	Not Significant	
Making Models	-0.082	0.505	Do Not Reject $H_{01}$	Not Significant	
Experimenting	-0.080	0.512	Do Not Reject $H_{01}$	Not Significant	
Classifying	-0.076	0.536	Do Not Reject $H_{01}$	Not Significant	
Making Conclusions	0.074	0.545	Do Not Reject $H_{01}$	Not Significant	
Interpreting Data	0.059	0.631	Do Not Reject $H_{01}$	Not Significant	
Overall	0.204	0.093	Do Not Reject $H_{01}$	Not Significant	
<b>Areas in Mathematics</b>					
Measuring/Quantifying	0.029	0.810	Do Not Reject $H_{01}$	Not Significant	
Analyzing Data	-0.063	0.608	Do Not Reject $H_{01}$	Not Significant	
Defining Operationally	0.058	0.636	Do Not Reject $H_{01}$	Not Significant	
Overall	0.026	0.426	Do Not Reject $H_{01}$	Not Significant	

Level of Significance = 0.05;

Legend:	Value of r	Strength of Relationship (Statistical Correlation, 2009)
Between	$\pm 0.50$ to $\pm 1.00$	$\pm$ strong relationship
Between	$\pm 0.30$ to $\pm 0.49$	$\pm$ moderate relationship
Between	$\pm 0.10$ to $\pm 0.29$	$\pm$ weak relationship
Between	$\pm 0.01$ to $\pm 0.09$	$\pm$ very weak relationship

Meanwhile, the teachers' position title was found to have no significant relationship with their English proficiency in terms of reading comprehension as evidenced by the p-value of 0.902, which is greater than 0.05 level of significance; hence, the null hypothesis is not rejected.

The data further revealed that predicting and communicating process skills have a significant relationship with the present position title of the teachers as exhibited by their p-values of 0.000 and 0.011, respectively. These values are less than the level of significance (0.05), thus rejecting the null hypothesis. Also, the

degree of relationship is moderate. This suggests that teachers with higher position are more likely to possess higher proficiency in predicting and communicating results/outcomes in an experiment/activity in Science.

Moreover, the findings indicate that the present position title of teachers is not significantly related to the other science process skills of the teachers as shown by the p-values that are greater than the level of significance (0.05). This implies a non-rejection of the null hypothesis.

The above data suggest that the teachers' position title influences their proficiency in English structure and written expression, although the influence appears to be not so strong. If these teachers having the present position title are given training related to English structure and writing, their English vocabulary, grammar and fluency will surely be enhanced. As a result, the teachers can communicate better and teach Science and Mathematics more comprehensively that their pupils can easily understand the concepts conveyed to them.

Teachers with higher positions are expected to be more proficient in using English as a medium of instruction. They can easily absorb and discern concepts in experiments, predict possible results and communicate them to their pupils. In return for having such teachers, the pupils can easily acquire knowledge and skills, learn concepts, and articulate their understanding of the world.

Harlen cited by Aydogdu (2015) averred that acquisition of Science process skills at desired level is very important for students, and those students, who could not sufficiently acquire these skills, cannot comprehend the world and cannot establish necessary connections. For that reason, Miles (2010) suggested that

teachers should develop their students' Science process skills, content knowledge and questioning skills for they are highly important for the resolution of a problem. It is known that teachers should have the required knowledge, understanding and materials to teach Science process skills. However, Miles (2010) mentioned that some studies found that Science process skills of teachers were generally not sufficient and that teachers rarely evaluate these skills by teaching.

Studies further revealed that teachers having developed Science process skills are more active in teaching these skills in their classrooms, making them very effective in the skill development of students. To conclude, teachers should have sufficient Science process skills so they can inculcate these skills to students efficiently.

It can also be gleaned from the data above that there is no significant relationship that exists between the teachers' position titles and their Mathematics process skills in terms of measuring/quantifying (p-value = 0.810), analysing data (p-value = 0.608), and defining operationally (p-value = 0.636). The overall p-value is 0.426, which does not warrant a rejection of the null hypothesis. The foregoing data suggest that regardless of their position title, teachers perform more or less the same in measuring/quantifying, analysing the data and defining operationally.

Umay (2013) disclosed that for teachers to be more effective they must develop advanced level behaviors and acquisitions such as analyzing, reasoning, communicating, generalizing. They also need to be more creative and observe independent thinking.

Teachers are the ones who are in constant interaction with the students. Their task covers implementing the education program, managing the teaching process and assessing the students. Correspondingly, the qualifications and competency of the teacher substantially influence these processes. The teachers' qualities play a crucial role in ensuring that students enjoy and comprehend Mathematics and creating an efficient and pleasurable teaching-learning process.

Table 7  
*Relationship between Teachers' Number of Years in Teaching and Proficiency Level in Core Subjects*

Variables	Computed r	p-values	Decision	Remark	Degree of Relationship
<b>English</b>					
Structure	0.292	0.015	Reject H <sub>0</sub>	Significant	Weak
Written Expression	0.203	0.095	Do Not Reject H <sub>01</sub>	Not Significant	
Reading Comprehension	-0.022	0.856	Do Not Reject H <sub>01</sub>	Not Significant	
Overall	0.224	0.065	Do Not Reject H <sub>01</sub>	Not Significant	
<b>Areas in Science</b>					
Observing	0.256	0.034	Reject H <sub>01</sub>	Significant	Weak
Predicting	0.251	0.037	Reject H <sub>01</sub>	Significant	
Experimenting	-0.195	0.109	Do Not Reject H <sub>01</sub>	Not Significant	Weak
Communicating	0.168	0.167	Do Not Reject H <sub>01</sub>	Not Significant	
Inferring	-0.103	0.400	Do Not Reject H <sub>01</sub>	Not Significant	
Classifying	-0.078	0.524	Do Not Reject H <sub>01</sub>	Not Significant	
Making Conclusions	0.047	0.703	Do Not Reject H <sub>01</sub>	Not Significant	
Making Models	0.046	0.709	Do Not Reject H <sub>01</sub>	Not Significant	
Interpreting Data	-0.023	0.849	Do Not Reject H <sub>01</sub>	Not Significant	
Evaluating	-0.011	0.927	Do Not Reject H <sub>01</sub>	Not Significant	
Overall	0.009	0.941	Do Not Reject H <sub>01</sub>	Not Significant	
<b>Areas in Mathematics</b>					
Measuring/Quantifying	-0.163	0.181	Do Not Reject H <sub>01</sub>	Not Significant	Weak
Analyzing Data	-0.169	0.166	Do Not Reject H <sub>01</sub>	Not Significant	
Defining Operationally	-0.073	0.553	Do Not Reject H <sub>01</sub>	Not Significant	
Overall	-0.079	0.520	Do Not Reject H <sub>01</sub>	Not Significant	

Level of significance = 0.05

Legend:

**Value of r**  
 Between ± 0.50 to ± 1.00  
 Between ± 0.30 to ± 0.49  
 Between ± 0.10 to ± 0.29  
 Between ± 0.01 to ± 0.09

**Strength of Relationship** (Statistical Correlation, 2009)

± strong relationship  
 ± moderate relationship  
 ± weak relationship  
 ± very weak relationship

Table 7 shows the relationship between teachers' number of years in teaching and their proficiency level in core subjects. The data revealed that the teachers' number of years in teaching and their proficiency level in English (Structure) are significantly related ( $p < 0.05$ ) although the degree of relationship is considered weak. The same degree of relationship exists between their length of service and their proficiency level in Science (observing and predicting). These connote that teachers' number of years in teaching is a weak determinant of their level of proficiency in (a) analyzing/applying structures in English, and (b) observing and predicting skills in Science. Meanwhile, the data concerning the other variables are enough evidence to show that a relationship exists.

Table 8  
*Relationship between Teachers' Profile and Professional Competencies*

Areas of Professional Competencies	Comp. $r_s$	p-values	Decision	Remark
<b>Teachers' Position Title and...</b>				
Self-Management	0.055	0.656	Do Not Reject $H_{o2}$	Not Significant
Profession and Ethics	-0.046	0.706	Do Not Reject $H_{o2}$	Not Significant
Result Focus	-0.033	0.788	Do Not Reject $H_{o2}$	Not Significant
Teamwork	-0.045	0.713	Do Not Reject $H_{o2}$	Not Significant
Service Orientation	-0.050	0.684	Do Not Reject $H_{o2}$	Not Significant
Innovation	0.051	0.676	Do Not Reject $H_{o2}$	Not Significant
Oral Communication	-0.020	0.870	Do Not Reject $H_{o2}$	Not Significant
Written Communication	-0.223	0.065	Do Not Reject $H_{o2}$	Not Significant
Computer/ICT Skills	-0.039	0.752	Do Not Reject $H_{o2}$	Not Significant
Overall	0.014	0.912	Do Not Reject $H_{o2}$	Not Significant
<b>Teachers' Number of Years in Teaching and...</b>				
Self-Management	-0.015	0.903	Do Not Reject $H_{o2}$	Not Significant
Profession and Ethics	0.058	0.633	Do Not Reject $H_{o2}$	Not Significant
Result Focus	0.161	0.187	Do Not Reject $H_{o2}$	Not Significant
Teamwork	0.070	0.569	Do Not Reject $H_{o2}$	Not Significant
Service Orientation	0.083	0.496	Do Not Reject $H_{o2}$	Not Significant
Innovation	0.178	0.143	Do Not Reject $H_{o2}$	Not Significant
Oral Communication	0.067	0.595	Do Not Reject $H_{o2}$	Not Significant
Written Communication	0.070	0.567	Do Not Reject $H_{o2}$	Not Significant
Computer/ICT Skills	0.106	0.385	Do Not Reject $H_{o2}$	Not Significant
Overall	0.040	0.746	Do Not Reject $H_{o2}$	Not Significant

Level of significance = 0.05

Table 8 presents the relationship between teachers' profile in terms of

position title and teachers' number of years in teaching and professional competencies. As shown, the teachers' position title and their number of years in teaching have no significant relationship with the professional competencies as revealed by their respective p-values which are greater than 0.05 level of significance.

The data above suggest that the teachers' profile in terms of position titles does not influence their professional competencies and that regardless of their position titles, the teachers possess such professional competencies. These reflect the findings of Rice (2003) that "a certain teacher attribute may have a positive impact in some context, but may be negative in other circumstances. For instance, a Math teacher with a Master's Degree may be effective when teaching in high school but may not be as productive if he or she is teaching in elementary." Conversely, Gilbert M. Forbes (2011) of DepEd Quezon asserts that school officials must make sure that teachers acquire ideal characteristics and competencies, which are very important in the successful delivery of instruction. In addition, he claimed that teachers must have the passion for their job; if they love what they are doing, they will also love the students under their care.

Table 9  
*Relationship between Teachers' Level of Professional Competencies and Their Proficiency Level in English*

Areas of Professional Competencies	Computed $r_s$	p-values	Decision	Remark
Self-Management	0.004	0.975	Do Not Reject $H_{o3}$	Not Significant
Profession and Ethics	-0.180	0.139	Do Not Reject $H_{o3}$	Not Significant
Result Focus	-0.226	0.062	Do Not Reject $H_{o3}$	Not Significant
Teamwork	-0.093	0.449	Do Not Reject $H_{o3}$	Not Significant
Service Orientation	-0.012	0.919	Do Not Reject $H_{o3}$	Not Significant
Innovation	-0.221	0.068	Do Not Reject $H_{o3}$	Not Significant
Oral Communication	-0.234	0.053	Do Not Reject $H_{o3}$	Not Significant
Written Communication	-0.226	0.061	Do Not Reject $H_{o3}$	Not Significant
Computer/ICT Skills	-0.204	0.092	Do Not Reject $H_{o3}$	Not Significant
Overall	-0.157	0.199	Do Not Reject $H_{o3}$	Not Significant

Level of significance = 0.05

Table 9 presents the relationship between teachers' level of professional competencies and their proficiency level in English. The data signify that all paired variables have p-values greater than 0.05 level of significance. These findings do not allow a rejection of the null hypothesis ( $H_{o3}$ ), which means that the data are not sufficient to establish a relationship between the teachers' level of professional competencies and their proficiency level in English. This also suggests that teachers' professional competencies do not influence their English proficiency. Moreover, it means that regardless of their professional competencies, teachers could reach such level of English proficiency. As argued by Gilbert M. Forbes, no matter, teachers remain as the heart of education.

As revealed in Table 10 on the next page, a significant relationship subsists between the teachers' professional competence in the area of innovation and their overall proficiency level in Science. The degree of relationship is described as moderate. The figure above further shows that the computed r value (-0.307) has a negative sign, which means that teachers, even those with low professional competence in the area of innovation, have higher level of proficiency in Science.

Table 10  
*Relationship between Teachers' Level of Professional Competencies and Their Proficiency Level in Science*

Areas of Professional Competencies	Comp. $r_s$	p-values	Decision	Remark	Degree of Relationship
Innovation	-0.307	0.010	Reject $H_{03}$	Significant	Moderate
Result Focus	-0.290	0.016	Reject $H_{03}$	Significant	Weak
Teamwork	0.205	0.092	Do Not Reject $H_{03}$	Not Significant	
Service Orientation	-0.170	0.161	Do Not Reject $H_{03}$	Not Significant	
Written Comm.	-0.151	0.216	Do Not Reject $H_{03}$	Not Significant	
Self-Management	-0.045	0.712	Do Not Reject $H_{03}$	Not Significant	
Profession and Ethics	0.038	0.757	Do Not Reject $H_{03}$	Not Significant	
Oral Communication	-0.023	0.853	Do Not Reject $H_{03}$	Not Significant	
Computer/ICT Skills	-0.018	0.886	Do Not Reject $H_{03}$	Not Significant	
Overall	-0.174	0.192	Do Not Reject $H_{03}$	Not Significant	

Level of significance = 0.05

Legend:	Value of r	Strength of Relationship (Statistical Correlation, 2009)
Between	$\pm 0.50$ to $\pm 1.00$	$\pm$ strong relationship
Between	$\pm 0.30$ to $\pm 0.49$	$\pm$ moderate relationship
Between	$\pm 0.10$ to $\pm 0.29$	$\pm$ weak relationship
Between	$\pm 0.01$ to $\pm 0.09$	$\pm$ very weak relationship

It was also found that there is a significant relationship between teachers' professional competence in the area of result focus and their overall proficiency level in Science. However, the degree of relationship is considered weak. Besides that, the computed r value has a negative sign (-0.290), which connotes that teachers, even those with lower professional competence in the area of result focus, have a bit higher level of proficiency in Science. Nevertheless, the researcher would like to emphasize that this relationship is a bit weak.

Overall, the aforementioned data imply that even teachers who have lower professional competency still possess a bit higher proficiency level in Science. As what Forbes (2011) supposed, if teachers will only show initiative and resourcefulness, they can still perform their tasks well even if they have low professional competency. Moreover, teachers in general are diligent; they do not easily give up on challenges they may encounter in the profession.

Table 11  
*Relationship between Teachers' Level of Professional Competencies and Their Proficiency Level in Mathematics*

Areas of Professional Competencies	Comp.r <sub>s</sub>	p-values	Decision	Remark	Degree of Relationship
Self-Management	-0.328	0.006	Reject H <sub>03</sub>	Significant	Moderate
Written Comm.	0.316	0.008	Reject H <sub>03</sub>	Significant	Moderate
Result Focus	-0.259	0.031	Reject H <sub>03</sub>	Significant	Weak
Innovation	-0.257	0.033	Reject H <sub>03</sub>	Significant	Weak
Service Orientation	-0.144	0.239	Do Not Reject H <sub>03</sub>	Not Significant	
Computer/ICT Skills	-0.115	0.345	Do Not Reject H <sub>03</sub>	Not Significant	
Teamwork	0.054	0.661	Do Not Reject H <sub>03</sub>	Not Significant	
Oral Communication	-0.020	0.873	Do Not Reject H <sub>03</sub>	Not Significant	
Profession and Ethics	-0.016	0.895	Do Not Reject H <sub>03</sub>	Not Significant	
Overall	-0.192	0.114	Do Not Reject H <sub>03</sub>	Not Significant	

Level of significance = 0.05

<b>Legend:</b>	<b>Value of r</b>	<b>Strength of Relationship</b> (Statistical Correlation, 2009)
	Between ± 0.50 to ± 1.00	± strong relationship
	Between ± 0.30 to ± 0.49	± moderate relationship
	Between ± 0.10 to ± 0.29	± weak relationship
	Between ± 0.01 to ± 0.09	± very weak relationship

Table 11 shows the significant relationship existing between the teachers' level of professional competencies (self-management and written communication) and their overall level of proficiency in Mathematics. The degree of the relationship is moderate. The data also revealed that in the area of self-management, the computed r<sub>s</sub> has a negative sign (-0.328), which means that teachers with lower competence in this area have higher proficiency level in Mathematics. In the area of written communication, the computed value of r<sub>s</sub> has a positive sign (0.316), which signifies that teachers with higher professional competence in the area of written communication are likely to obtain higher level of proficiency in Mathematics. The data also revealed that there is a significant relationship between the teachers' professional competence (result focus and innovation) and their overall proficiency level in Mathematics (p<0.05). However, the degrees of relationship are considered weak and inversely proportional (-0.259 and -0.257, respectively).

Table 12  
*Relationship between Teachers' Level of Professional Competencies and Their Overall Proficiency Level in Core Subjects*

Areas of Professional Competencies	Overall Proficiency	p-values	Decision	Remark	Degree of Relationship
Result Focus	-0.347	0.003	Reject H <sub>03</sub>	Significant	Moderate
Innovation	-0.354	0.003	Reject H <sub>03</sub>	Significant	Moderate
Self-Management	-0.268	0.026	Reject H <sub>03</sub>	Significant	Weak
Service Orientation	-0.152	0.124	Do Not Reject H <sub>03</sub>	Not Significant	
Computer/ICT Skills	-0.151	0.215	Do Not Reject H <sub>03</sub>	Not Significant	
Oral Communication	-0.106	0.388	Do Not Reject H <sub>03</sub>	Not Significant	
Written Communication	0.100	0.413	Do Not Reject H <sub>03</sub>	Not Significant	
Profession and Ethics	-0.073	0.550	Do Not Reject H <sub>03</sub>	Not Significant	
Teamwork	0.072	0.557	Do Not Reject H <sub>03</sub>	Not Significant	
Overall Prof. Competencies	-0.230	0.057	Do Not Reject H <sub>03</sub>	Not Significant	

Legend:	Value of r	Strength of Relationship (Statistical Correlation, 2009)
Between	± 0.50 to ± 1.00	± strong relationship
Between	± 0.30 to ± 0.49	± moderate relationship
Between	± 0.10 to ± 0.29	± weak relationship
Between	± 0.01 to ± 0.09	± very weak relationship

As can be gleaned from the data, the teachers' level of professional competencies (result focus, innovation and self-management) is significantly related to their overall level of proficiency in core subjects. The degree of relationship is moderate in the areas of result focus ( $r_s = -0.347$ ) and innovation ( $r_s = -0.354$ ), while it is weak in the area of self-management ( $r_s = -0.268$ ). The data also revealed that the values of  $r_s$  have negative signs. This means that teachers with lower competence on these areas have higher overall proficiency level in core subjects.

On the other hand, the following variables—service orientation, computer/ICT skills, oral communication, written communication, profession and ethics, and teamwork—have computed p-values that are greater than the level of significance (0.05). This connotes that the null hypothesis will not be rejected. Further, it means that the data on these variables are not sufficient to indicate such relationships.

## **Chapter III**

### **Summary of Findings, Conclusions and Recommendations**

This chapter comprises the restatement of the problem, summary of findings, conclusions and recommendations.

#### **Restatement of the Problem**

This study aimed to determine the teachers' professional competencies and proficiency level in the core subjects. It was conducted in Bayawan City Division for SY 2017-2018.

Specifically, this study sought to answer the following questions:

1. What is the proficiency level and process skills level of teachers in the following core subjects:
  - 1.1 English;
  - 1.2 Science; and
  - 1.3 Mathematics?
- 2 To what level are the professional competencies of teachers in the following areas:
  - 2.1 self-management;
  - 2.2 profession and ethics;
  - 2.3 result focus;
  - 2.4 teamwork;
  - 2.5 service orientation;
  - 2.6 innovation;

- 2.7 oral communication;
  - 2.8 written communication; and
  - 2.9 computer/ ICT skills?
- 3 Is there a significant relationship between teachers' proficiency level in the core subjects and their personal profile in terms of:
- 3.1 position title; and
  - 3.2 number of years in teaching?
- 4 Is there a significant relationship between the teachers' personal profile and their professional competencies?
- 5 Is there a significant relationship between the teachers' professional competencies and their proficiency level in the core subjects?

### **Restatement of the Null Hypotheses**

Based on the problems presented, the following hypotheses were tested:

- H<sub>01</sub>**. There is no significant relationship between the teachers' personal profile and their English proficiency level in the core subjects.
- H<sub>02</sub>**. There is no significant relationship between the teachers' personal profile and their professional competencies.
- H<sub>03</sub>**. There is no significant relationship between the teachers' professional competencies and their proficiency level in the core subjects

## **Summary of Findings**

The following findings were based on the data gathered for this study.

### **1. Proficiency Level of Teachers**

#### **English**

The data revealed that the proficiency level of teachers is moderate in the areas of reading comprehension (69.19%) and structure (53.14%), while it is low in written expression (43.30%).

#### **Science**

The data showed that the proficiency level of teachers is high in the area of observing (84.06%) and moderate in the following areas: predicting (61.59%), classifying (60.14%), experimenting (58.55%), inferring (55.80%), evaluating (55.56%), making conclusions (53.62%), communicating (52.29%) making models (50.72%), and interpreting (50.53%).

#### **Mathematics**

Based on the results, the proficiency level of teachers is moderate in the following areas of Mathematics: measuring/quantifying (67.39%), analyzing data (56.52%) and defining operationally (55.07%).

### **2. Professional Competencies of Teachers**

The data revealed that the professional competency of the teachers is very satisfactory in terms of innovation (4.410) and outstanding in the following aspects: profession and ethics (4.723), teamwork (4.722), self-management (4.701), oral communication (4.621), written communication (4.610), service orientation (4.572), computer/ICT skills (4.540), and result focus (4.521).

### **3. Relationship between Teachers' Profile and Proficiency Level;**

#### **Teachers' Position Title and Their Proficiency Level**

The data disclosed that the computed p-values in the following areas in English when correlated with the teachers' position are less than the level of significance (0.05): structure ( $p = 0.026$ ,  $r_s = 0.268$ ) and written expression ( $p = 0.040$ ,  $r_s = 0.248$ ). Thus, the null hypothesis was rejected.

Moreover, the computed p-values in the following areas in Science when correlated with the teachers' position are less than the level of significance (0.05): predicting ( $p = 0.000$ ,  $r_s = 0.329$ ) and communicating ( $p = 0.011$ ,  $r_s = 0.304$ ). Hence, the null hypothesis was rejected.

It was also revealed that the computed p-values in all areas in Mathematics when correlated with the teachers' position are greater than the level of significance (0.05). Therefore, the null hypothesis was not rejected.

#### **Teachers' Number of Years and Their Proficiency Level**

Results showed that the computed p-value ( $p = 0.015$ ,  $r_s = 0.292$ ) when correlated with the teachers' number of years in teaching and their proficiency level in the area of structure in English is less than the level of significance (0.05). The null hypothesis was thus rejected.

Also, the computed p-values in the following areas in Science when correlated with the teachers' number of years in teaching are less than the level of significance (0.05): observing ( $p = 0.034$ ,  $r_s = 0.256$ ); and predicting ( $p = 0.037$ ,  $r_s = 0.251$ ). Hence, the null hypothesis was rejected.

Moreover, the data revealed that the computed p-values in all areas in Mathematics when correlated with the teachers' number of years in teaching are greater than the level of significance (0.05). Therefore, the null hypothesis was not rejected.

#### **4. Relationship between Teachers' Personal Profile and Their Professional Competencies**

Results revealed that the computed p-values in all areas being paired are greater than the level of significance (0.05), thus rejecting the null hypothesis.

#### **5. Relationship between the Teachers' Professional Competencies and Their Proficiency Level in Core Subjects**

Based on the data gathered, the computed p-values in all areas of teachers' professional competencies when correlated with the teachers' proficiency level in English are greater than the level of significance (0.05), therefore rejecting the null hypothesis.

The data further revealed that the computed p-values in the following areas of teachers' professional competencies when correlated with the teachers' proficiency level in Science are less than the level of significance (0.05): innovation ( $p = 0.010$ ,  $r_s = -0.307$ ) and result focus ( $p = 0.016$ ,  $r_s = -0.290$ ). Hence, the null hypothesis was rejected.

Moreover, the computed p-values in in the following areas of teachers' professional competencies when correlated with the teachers' proficiency level in Mathematics are less than the level of significance (0.05): self-management ( $p = 0.006$ ,  $r_s = -0.328$ ); written communication ( $p = 0.008$ ,  $r_s = 0.316$ ); result focus

( $p = 0.031$ ,  $r_s = -0.259$ ); and innovation ( $p = 0.033$ ,  $r_s = -0.257$ ). This resulted in the rejection of the null hypothesis.

Overall, the data revealed that the computed p-values in the following areas of teachers' professional competencies when correlated with the overall teachers' proficiency level are less than the level of significance (0.05): result focus ( $p = 0.003$ ,  $r_s = -0.347$ ); innovation ( $p = 0.003$ ,  $r_s = -0.354$ ); and self-management ( $p = 0.026$ ,  $r_s = -0.268$ ). Thus, the null hypothesis was rejected.

### **Conclusions**

1. The proficiency level of teachers in English, Science and Mathematics is moderate. However, in the area of written expression under the English subject, the teachers' proficiency level is classified as low.
2. The professional competency level of teachers is generally in the outstanding category.
3. There is a:
  - 3.1 weak and significant relationship between the teachers' position and the following areas in English: structure and written expression.
  - 3.2 moderate and significant relationship between the teachers' position and the following areas in Science: predicting and communicating.
  - 3.3 weak and significant relationship between the teachers' number of years in teaching and their proficiency level in English structure.
  - 3.4 weak and significant relationship between the teachers' number of years in teaching and the following areas in Science: observing and predicting.

4. No significant relationship exists between the teachers' profile and their professional competencies.
5. There is a:
  - 5.1 moderate, negative and significant relationship between the teachers' level of professional competence in the area of innovation and their proficiency level in Science; and
  - 5.2 weak, negative and significant relationship between the teachers' level of professional competence in the area of result focus and their proficiency level in Science.
  - 5.3 moderate, negative and significant relationship between the teachers' level of professional competence in the area of self-management and their proficiency level in Mathematics.
  - 5.4 moderate, positive and significant relationship between the teachers' level of professional competence in the area of written communication and their proficiency level in Mathematics.
  - 5.4 weak, negative and significant relationship between the teachers' level of professional competence in the areas of result focus and innovation and their proficiency level in Mathematics.

### **Recommendations**

Based on the findings and conclusions, the following recommendations are made:

1. A seminar-workshop is suggested to be conducted by the Department of Education for the following purposes:

- 1.1 To improve and enhance the teachers' proficiency level in English, Science and Mathematics, specifically in the area of written expression;
- 1.2 To improve the professional competence of teachers considering today's trend.
2. Teachers are urged to upgrade their professional qualification through continuous professional development (CPD) in order to obtain higher position as it is a determinant of their proficiency level in Science in the areas of predicting and communicating.
3. Teachers are encouraged to utilize their knowledge in Science in making instructional innovations to be used in the class.
4. Teachers who are mathematically inclined are also encouraged to improve their professional competence in the area of self-management by clearly setting their goals and directions, needs and development.
5. Teachers are advised to attend in-service trainings to improve their professional competence in the area of written communication as it predicts their proficiency level in Mathematics.
6. Finally, an action plan is hereby appended for the implementation of programs intended to enhance students' Science and Mathematics process skills and their English proficiency level

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## **APPENDICES**

**Appendix A**

**Questionnaire**

**Personal Profile of Teachers**

This questionnaire aims to determine the personal profile of teachers which will be used to relate to the following variables: English proficiency and process skills level in Science and Mathematics and professional competencies of teachers in Bayawan City School Year 2017-2018. Kindly answer the following questions honestly. Rest assured that information you share is confidential. Thank you very much for your time and cooperation.

**Position Title:**

\_\_\_\_\_ Teacher 1

\_\_\_\_\_ Master Teacher 1

\_\_\_\_\_ Teacher 2

\_\_\_\_\_ Master Teacher 2

\_\_\_\_\_ Teacher 3

\_\_\_\_\_ Master Teacher 3

**Number of Years in Teaching:** \_\_\_\_\_ years

**Number of relevant trainings attended for the last 3 years:**

\_\_\_\_\_ trainings related to English instruction

\_\_\_\_\_ trainings related to Science instruction

\_\_\_\_\_ trainings related to Mathematics instruction

**Appendix B**  
**Professional Competencies of Teachers (Part 1)**

Self-Mgt	Prof & Ethics	Result Focus	Teamwork	Service Orientation	Innovation	Oral Comm	Written Comm	Computer ICT Skills
5	5	4.6	4.4	4.8	4.8	4.6	4.6	4.6
5	5	4	5	4.2	4.4	4.6	5	4.6
4.8	4.6	4.2	5	4.2	4.2	4.4	4.6	4.8
4.8	5	4.2	5	4.2	4.4	4.6	4.4	4.8
4	4	4	4	4	4	4.2	4	3.8
4	4.8	4	5	4	4.2	4.6	4.8	4.2
4	4.8	4	5	4	4.2	4.6	4.8	4.2
5	5	5	5	4	4	5	5	5
4.6	4.8	4.8	5	4	4	4.6	4.4	4.6
5	4.8	4.8	5	4.6	4	4.8	4.4	4.6
5	4.8	4.6	4.6	4.8	4.8	4.6	4.4	4.6
4.6	4.8	4.6	4.8	4.8	4.6	4.8	4.6	4.8
4.6	4.8	4	4.4	4.4	4	4.2	5	4.2
5	4.8	4.8	4.8	4.6	4.8	4.6	4.8	4.6
5	5	4.4	5	5		5	5	4.2
4.2	5	4	4.6	4.4	4.4	4.4	4.8	4.8
5	5	5	4	5	5	4	5	4
4.6	4.6	4.6	4.6	4.8	4.4	4.4	4.4	4.6
4.6	5	4.6	4.8	4.8	4.4	4.6	4.6	4.6
4.4	5	4	5	4.4	4	4	5	4.6
4.8	4.6	4.4	4.6	4.2	4	4.6	4.4	4.4
4.8	4.6	4.6	4.6	4.4	4	4.6	4.4	4.4
4.6	4.6	3	4.8	4.6	3	4.4	3	4.6
4.8	4.6	4.6	4.8	4.6	4.8	4.6	4.8	4.6
4.6	4.6	4.6	4.6	4.6	4.8	4.6	4.8	4.4
5	4.4	4	4.4	4.3	4.6	4	4	2.8
4.6	4.6	4.4	4.4	4.6	4.6	4	4.6	4.4
4	4	4	3.8	3.2	4	3.6	2.8	2
4.6	4.6	4.8	4.6	4.8	4.8	4.6	4.6	4.6
4.6	4.4	4.4	4.4	4	4	3.8	4.2	4.8
4.6	4.6	4.8	4.6	4.6	4.8	4.6	4.2	4.6
5	5	5	5	5	4	5	5	5
4.2	4.2	4.6	4.8	4.8	5	4.6	4.8	4.8
5	4.8	4.8	4.8	5	5	5	4.6	4.8
5	5	5	4.8	4.6	4.8	4.6	4.8	4.8
5	5	4.8	4.8	4.8	4.8	4.8	4.8	4.6

**Professional Competencies of Teachers (Part 2)**

Self-Mgt	Prof & Ethics	Result Focus	Teamwork	Service Orientation	Innovation	Oral Comm	Written Comm	Computer ICT Skills
4.6	4.8	5	5	5	5	5	4.8	5
4.6	5	5	5	5	4.8	4.8	4.6	4.6
3.8	4.2	3.2	4.2	4	3.4	3.6	5	3.6
5	4.8	3.8	4.8	4.4	3	5	4.6	4.8
4	5	5	5	4	5	5	5	4
4.8	4.8	4.8	4.8	5	5	5	4.8	5
4.8	5	5	5	5	4.8	4.8	4.8	5
4.6	4.6	4.8	4.8	4.8	4.6	4.8	4.6	4.8
4.8	4.8	4.6	4.6	4.6	4.6	4.8	4.8	5
4.8	4.6	4.6	4.8	4.6	4.4	4.4	4.8	4.2
5	5	5	5	4.8	4.8	4.8	5	5
5	5	5	5	5	4.8	4.8	4.8	5
4.8	5	5	5	5	4.8	5	5	5
4.8	4.8	4.8	4.8	4.6	5	5	4.8	5
4.8	4.8	4.8	5	5	5	5	5	4.8
5	5	5	5	4.8	4.8	4.8	4.8	4.6
5	4	4	4	4	4	5	5	4
4.6	4.6	4.4	4.4	4.2	4.6	4.6	4.6	4.6
4.8	4.8	4.8	5	4.8	4.8	4.8	4.6	4.6
4.4	4.6	4.4	4.4	4	4	4	4.6	4.4
4.8	4.8	4.8	5	5	4.8	4.8	4.8	4.8
5	5	4	5	5	4	5	4	4
4.8	4.8	4.8	5	5	4.8	4.8	4.8	5
4.6	4.6	4.6	4.6	4.6	4.8	4.8	4.8	4.8
4.2	4	4	4.2	4	4.2	4	4	4
5	5	4.8	4.8	5	5	5	4.8	4.6
3.8	4.2	3	4.6	4.4	3	4.6	3	4.6
5	5	5	5	5	4.8	4.8	4.8	4.8
5	5	5	5	4.8	5	4.8	4.8	4.8
5	5	4.8	4.8	4.6	5	4.8	4.8	4.8
5	5	4.8	4.8	4.6	4.8	4.8	5	5
4.8	4.6	4.8	5	5	5	5	4.8	4.8
4.8	4.6	4.8	4.8	4.8	4.8	4.8	4.6	4.6

**Appendix C  
Science Proficiency of Teachers (Part 1)**

Observing	Classifying	Inferring	Predicting	Communicating	Interpreting Data	Evaluating	Experimenting	Making Conclusions	Making Models
50	50	50	50	0	40	50	40	0	100
100	100	100	100	100	60	33	80	100	100
50	100	50	50	67	60	67	40	50	100
100	100	50	100	100	60	67	20	100	100
50	0	50	50	100	40	67	60	100	0
100	50	50	100	100	60	67	60	100	0
100	100	100	100	67	60	83	60	100	0
50	50	50	100	33	40	83	80	100	0
100	50	100	50	0	20	67	100	100	0
50	100	50	100	75	67	67	60	50	100
100	50	50	100	67	40	67	60	0	100
50	50	100	100	67	60	50	40	50	100
100	100	100	100	67	60	67	80	100	0
100	50	50	50	67	80	50	40	50	0
50	0	50	100	100	40	50	60	100	0
50	0	50	50	67	60	67	60	100	0
100	50	50	50	0	60	67	40	50	0
50	50	0	0	67	60	33	80	50	0
50	100	50	50	67	80	67	100	50	0
100	100	50	50	67	60	67	100	50	0
100	100	50	100	33	20	67	80	50	100
100	100	50	100	33	60	50	40	50	100
100	50	100	100	67	40	67	60	0	0
50	0	50	0	67	80	50	80	100	100
100	50	0	50	100	20	50	100	50	0
100	100	50	100	0	40	67	40	0	0
50	50	50	50	33	60	50	40	0	100
100	50	50	100	67	40	67	60	0	100
100	50	50	0	33	20	50	40	0	100
50	0	50	50	100	40	67	60	100	0
100	0	50	50	33	40	50	60	0	100
100	50	50	50	33	40	67	40	100	0
100	100	100	50	100	80	33	80	0	100
50	50	0	50	67	40	67	20	100	100
100	50	50	50	33	80	83	60	100	100
50	50	100	0	0	60	50	60	50	100
50	50	50	50	67	40	33	60	100	0

**Science Proficiency of Teachers (Part 2)**

Observing	Classifying	Inferring	Predicting	Communicating	Interpreting Data	Evaluating	Experimenting	Making Conclusions	Making Models
100	100	100	100	67	60	33	60	50	100
100	50	50	50	33	40	17	20	50	0
100	100	50	100	0	60	67	60	50	100
50	50	0	0	33	20	83	60	0	0
100	50	0	0	33	60	83	100	0	100
50	100	50	50	67	20	17	60	0	100
100	0	50	100	0	80	33	60	0	100
100	100	50	50	100	20	17	40	50	100
100	50	50	50	33	40	67	80	50	0
100	50	0	50	33	60	50	80	50	100
50	50	100	100	100	40	67	60	100	0
100	50	0	0	0	40	50	40	50	100
100	50	50	50	0	60	50	80	0	100
100	100	100	100	67	40	67	80	100	0
50	50	50	50	67	60	17	60	50	0
100	50	100	50	33	40	50	40	50	0
100	50	50	50	33	20	33	60	50	100
100	50	100	0	33	60	50	60	0	100
100	50	100	100	67	40	67	60	0	100
50	50	50	50	67	80	33	40	100	0
100	50	50	50	33	80	83	60	100	100
100	50	50	50	33	40	50	80	50	0
100	100	100	100	67	40	67	80	50	0
50	100	50	50	100	80	67	80	50	0
100	100	100	100	33	40	67	60	50	0
100	100	100	50	67	60	67	40	100	100
100	50	100	100	33	20	50	20	0	100
100	50	50	100	33	60	67	20	50	100
100	50	0	50	0	40	33	60	0	100
100	100	0	0	67	80	33	40	50	0
100	0	0	50	67	80	67	40	100	0
100	50	50	50	67	20	33	20	100	0

**Appendix C  
Mathematics Proficiency of Teachers (Part 1)**

Measuring/quantifying	Analyzing Data	Defining Operationally
25	40	0
100	60	100
50	60	0
75	60	0
50	60	100
75	60	100
75	80	100
75	80	100
25	80	0
50	40	0
75	60	0
75	40	100
100	80	100
75	60	100
75	60	100
75	60	100
75	40	0
75	40	0
75	60	100
100	80	100
50	40	0
75	40	0
75	60	0
75	20	0
75	40	100
50	20	0
100	80	100
75	60	0
25	40	0
75	60	100
75	60	100
75	80	100
100	60	0
50	60	0
75	60	0
50	40	0

**Mathematics Proficiency of Teachers (Part 2)**

Measuring/quantifying	Analyzing Data	Defining Operationally
50	60	100
75	40	100
50	80	100
75	60	0
75	60	100
50	20	100
50	20	100
100	60	0
50	40	100
75	100	100
50	40	100
75	60	0
50	80	100
75	40	0
75	80	100
25	40	100
75	80	100
50	60	0
50	20	0
100	80	100
75	40	100
75	80	100
75	60	100
75	60	100
75	40	100
75	100	0
100	80	100
25	60	0
25	60	0
75	40	0
50	60	0
75	60	100
75	20	0

**Appendix D**  
**English Proficiency of Teachers (Part 1)**

<b>Structure</b>	<b>Written Expression</b>	<b>Reading Comprehension</b>
53.33	60.00	68.00
53.33	44.00	60.00
53.33	64.00	66.00
60.00	56.00	70.00
73.33	96.00	74.00
60.00	32.00	76.00
53.33	40.00	80.00
46.67	28.00	58.00
53.33	12.00	26.00
73.33	52.00	72.00
53.33	44.00	78.00
53.33	36.00	60.00
66.67	64.00	86.00
46.67	20.00	60.00
53.33	56.00	72.00
33.33	12.00	72.00
60.00	52.00	84.00
60.00	16.00	62.00
40.00	32.00	54.00
46.67	44.00	58.00
60.00	36.00	70.00
86.67	68.00	86.00
60.00	56.00	76.00
66.67	72.00	52.00
40.00	36.00	72.00
60.00	32.00	68.00
40.00	32.00	56.00
66.67	60.00	86.00
26.67	24.00	86.00
60.00	72.00	76.00
40.00	36.00	50.00
46.67	28.00	72.00
20.00	16.00	74.00
60.00	24.00	70.00
73.33	40.00	64.00
46.67	40.00	56.00
46.67	32.00	56.00

**English Proficiency of Teachers (Part 2)**

<b>Structure</b>	<b>Written Expression</b>	<b>Reading Comprehension</b>
40.00	48.00	62.00
53.33	44.00	66.00
40.00	28.00	70.00
40.00	20.00	64.00
40.00	32.00	64.00
33.33	32.00	70.00
53.33	28.00	78.00
46.67	32.00	66.00
46.67	36.00	76.00
86.67	60.00	86.00
66.67	64.00	80.00
40.00	36.00	74.00
26.67	28.00	72.00
60.00	52.00	86.00
33.33	36.00	68.00
20.00	44.00	60.00
33.33	44.00	68.00
60.00	56.00	68.00
73.33	52.00	68.00
46.67	48.00	74.00
53.33	56.00	74.00
80.00	56.00	80.00
53.33	52.00	74.00
80.00	80.00	78.00
60.00	64.00	78.00
80.00	68.00	72.00
86.67	36.00	60.00
40.00	36.00	60.00
46.67	16.00	60.00
46.67	44.00	66.00
46.67	44.00	88.00
60.00	52.00	58.00

## **Curriculum Vitae**

### **Personal Information**

Name: **ADDAM TUVALLS-ESTOSE**

Date of Birth: March 1, 1960

Place of Birth: Bayawan City

Gender: Female

Civil Status: Married

Spouse: Efren Flores Estose

Children: Grace Marie T. Estose  
Angeli Niña Grace T. Estose

### **Educational Background:**

Graduate School: Doctor of Education  
Administration and Supervision  
Foundation University  
Dumaguete City  
March 2018

Master of Arts in Education  
Administration and Supervision  
University of the Visayas  
Cebu City  
March 2012

**Tertiary:** Bachelor in Elementary Education  
Foundation University  
1991

Bachelor of Arts-Sociology  
Silliman University  
Dumaguete City  
1982

**Secondary Education:** Saint Augustine Academy  
Bayawan City  
March 1977

**Elementary Education** Villareal Elementary School  
Villareal, Bayawan City  
1977  
Second Honors

**Examination Passed:** Philippine Board Examination for Teachers  
Career Service Examination-Professional  
Principal's Qualifying Examination

**Professional Experiences:**

Public Schools District Supervisor Bayawan City Division  
2016 to Present

Principal I Bayawan City Division  
2006 to 2016

Teacher II	Villareal Elementary School 2003 to 2006
Teacher I	Omod Elementary School 1992 to 2006
Clerk	OISCA-International Bago City 1983 to 1985