**East African Scholars Journal of Education, Humanities and Literature**

OPEN ACCESS

*Abbreviated Key Title: East African Scholars J Edu Humanit Lit*
ISSN: 2617-443X (Print) & ISSN: 2617-7250 (Online)
Published By East African Scholars Publisher, Kenya

Volume-5 | Issue-6 | Jun- 2022 | DOI: 10.36349/easjehl.2022.v05i06.002

**Original Research Article**

# Acquisition of Science Process Skills of Junior High School Students among Private Schools of Olongapo City

Joey O. Manes[1*], Adelia Calimlim[2], Elizabeth Nalupa-Farin[3]

[1]James L. Gordon Integrated School, R7JG+HVX, Foster St, Olongapo, Zambales, Philippines
[2]West Tapinac, Olongapo City, Philippines
[3]President Ramon Magsaysay State University, 8X9M+GXJ, Iba, Zambales, Philippines

**Article History**
**Received:** 13.05.2022
**Accepted:** 19.06.2022
**Published**: 23.06.2022

**Journal homepage:**
https://www.easpublisher.com

**Quick Response Code**

**Abstract:** Education is one of the institutions in the Philippines that has suffered because of the COVID-19 pandemic. As a result, school administrators, instructors, students, parents, and other stakeholders face new problems and concerns as a result of the paradigm shift. In the middle of the pandemic, the blended learning modality was adopted in the country in terms of educational means of learning. As a result, dealing with the "New Normal" presented difficulties for private schools. The study on The Science Process Skills Level of Acquisition in Junior High School Students Among Olongapo City Private Schools is especially important and beneficial to education. Cross-sectional descriptive survey research and simple Purposive quota sampling were utilized in the study. The respondents were enrolled in Grade nine junior high school that utilizes blended learning. Based on the result of the study the lowest Science Process skill competence is hypothesizing. The overall performance in Science (Biology) of grade nine pupils in the selected private secondary has a very poor association with amount of learning of science process skills. Teachers' difficulties in teaching science process skills in blended learning were described by a shortage of teaching materials. The study revealed that lack of emphasis on experimentation and the use of technology in the blended learning modality in terms of science particularly in the area of Biology.

**Keywords:** Science Process Skills, Blended Learning, Cross-Sectional Research Experimentation, Lack of teaching Materials, Utilization of technology.



## BACKGROUND OF THE STUDY

Prior to the SARS-CoV-2 virus, which causes Covid-19, and the enhanced community quarantine (ECQ), the Philippine Department of Education (DepEd) emphasized the importance of addressing issues and gaps in attaining quality basic education following the country's low ranking in the Programme for International Students Assessment (PISA). According to the 2018 PISA results, about 22% of Filipino students earned a Level 2 or above in science. These students can identify the correct explanation for well-known scientific occurrences and use that knowledge to evaluate if a conclusion is correct based on facts provided in basic situations. Almost no student was a very competent scientist, meaning he could perform at level 5 or 6. These students can use their knowledge of science and science independently to a broad variety of issues, even circumstances they are unfamiliar with (OECD, 2019). The Philippines was rated worst in reading performance by 79 OECD member and associate nations, and second last in both math and science (Ciriaco, 2019). In response to the current situation, DepEd led national efforts to improve basic quality of education by implementing "Sulong Edukalidad" in four key areas: K to 12 review and update; improve learning facilities; improve and retrain teachers and school leaders through a transformed career development program; and work of all stakeholders for (Deped, 2021).

But, now that the epidemic has arrived, what will happen to science education? Our students do not have a physical presence, and our school system is moving towards a new learning platform. Teachers will have to develop scientific instruction in a new area that addresses creative pedagogy. Critical ideas, including scientific process skills, which are crucial for science education, can sometimes be overlooked.

***Corresponding Author:** Joey O. Manes
James L. Gordon Integrated School, R7JG+HVX, Foster St, Olongapo, Zambales, Philippines

Science process skills are a group of talents that are used in scientific activities. Science students with good procedural skills are more interested in their study. If the learning stage is designed in such a manner, students will have chances to actively engage in learning (Safaah *et. al*., 2017).

Each of the scientific process abilities is a skill that may be used in a number of circumstances throughout our lives. They're about a lot more than simply "science" (Durnham, *et al*., 2017). According to Martin *et al*., (2016), mastering process skills and "doing" science is more important than just learning scientific facts, ideas, and theories.

In inquiry-based hands-on science learning, "doing" science involves putting the process into action. Science process skills are defined as a "collection of generally transferrable talents suited to many science fields and indicative of scientist conduct." Students apply these process skills to have a better understanding of how scientists explore and answer their own questions. Science Process Skills (SPS) are classified into two types: fundamental processes and integrated processes. The fundamental actions necessary in scientific inquiry are known as basic processes, and they are the core abilities that underpin all scientific inquiries.

The Integrated Science Processes Skills (ISPS) are a set of complicated activities that make up a real inquiry method and go beyond basic processes to offer problem-based scientific answers. Observing, classifying, communicating, measuring, predicting, and inferring are among the Basic Process Skills (BSPS), while identifying and controlling variables, formulating and testing hypotheses, interpreting data, operationally defining, experimenting, and model construction are among the Integrated Science Process Skills (ISPS) (Miller, 2009). Instilling desirable attitudes and values is one of the goals of training these skills (Pacia, 2014).

Today, it is critical to shape kids' attitudes, actions, and motivations because without these wider abilities and qualities, children will be unprepared for the problems they, and their world, will confront (Miller, 2017). Despite this, a lack of experimental activities in the classroom for scientific learning has led to many misconceptions among students, resulting in poor science learning outcomes (Widyaningsih, 2020).

The results of the 2018 Program for International Student Assessment (PISA) demonstrate this pattern. Now, as a science teacher, how can we construct our new classroom amid this crisis while still integrating science process skills into online distance learning? We're all aware that the purpose we teach science is to help students develop scientific attitudes, knowledge, and abilities. This research will concentrate on the implementation demographic profile of the respondents such as age, sex, educational attainment of parents and household income. It is also anchored only on the six Science process Skills such as observing, measuring, classifying, inferencing, communicating and hypothesizing and problems encountered by teachers in the implementation of blended learning in terms of integrating science process skills. The research covered the grade nine students on selected private junior high school and teacher-respondents coming from the selected private schools implementing blended learning modality teaching from grade nine biology subject only.

Science process abilities are also linked to student achievement as students. Its purpose is to address issues and come up with effective answers (Darmaji *et al*., 2020). According to the study of Hirca (2013) the study of Fundamental process skills will serve as the foundation for the development of integrated skills. Observing, categorizing, predicting, measuring, inferring, and communicating are all basic science process abilities.

In the study of Dakabesi & Louise (2019) Defined both of these science process abilities will influence students' ability to tackle environmental challenges realistically. A significant amount of work is required to develop excellent process skills and critical thinking.

**Significance of the Study**

A study on The Science Process Skills Level of Acquisition in Junior High School Students Among Private Schools of Olongapo City, is particularly valuable and beneficial to educational planners, school administrators, teachers, students, and future researchers.

**The Educational Planners**

Findings of this study will provide the educational planners the baseline data needed for better planning and decision-making for improving the implementation of the blended learning modality among private junior high school teachers of Olongapo City and Zambales by using the data that will be generated in this study, they can formulate programs and other activities that would help identify and improve the implementation of the blended learning in private junior high schools which could lead to the better work performance of the teachers and better acquisition of science process skills of the students.

**The School Administrators**

Through these data, they would have a better view and understanding of teachers in the implementation of blended learning in teaching science process skills in private schools as reflected in their daily performance in the class or in the school.

**The Teachers**

The result of this study could help the private junior high school teachers of Olongapo City and Zambales to become aware of their implementation of

the science process skills in terms of blended learning modality and challenges that attach into it. Further, this research will be the source of strengthening online platforms, research and development and program creation and health integration in on-line classes.

**The students**

The result of this study could help the students of the private junior high school in identifying the areas of the Science process skills that needs further improvement or development amidst the utilization of the blended learning modality.

**The Future Researchers**

The result of this study will be significant to the researchers in adapting to the new normal of instruction in the teaching-learning process and be able to come up with a Learning Action Cell (LAC) training for all teachers of the school specifically on blended learning modality implementing science process skills.

**Statement of the Problem**

This study aims to determine the level of acquisition of science process skills in junior high school students among private schools of Olongapo City. It further aimed to answer the following specific questions:

1. How can the profile of the private grade nine junior high school respondents be assessed in terms of the following:
   1.1. Age;
   1.2. Sex;
   1.3. Educational Attainment of Parents;
   a. Mother
   b. Father
   1.4. Household Income

2. What is the level of acquisition of science process skills of the grade nine junior high school students on blended learning be described?
   2.1 Observing
   2.2 Measuring
   2.3 Classifying
   2.4 Inferencing
   2.5 Communicating
   2.6 Hypothesizing

3. What is the level of Performance of the Grade 9 Junior Highschool Students in Science Subject (Biology Topic)?
4. What is the level of problems encountered by the teachers in the Implemetation of Blended learning in terms of Integrating Science Process Skills? In terms of the following:
   4.1 Lack of Teaching Materials for Experiments
   4.2 Experimentation is not well emphasized
   4.3 The Utilization of Technology

5. Is there a significant difference between the profile of the respondents and the Level of Acquisition of the Science Process Skills of the grade 9 Junior High School students?
6. Is there a significant relationship between the Level of Acquisition of Science Process Skills and the Test Performance of the Grade 9 Junior High school Students?
7. What intervention plan can be developed to enhance the level of acquisition of science process skills among grade 9 junior high school student of private schools in Olongapo City?

**Scope and Delimitation**

This study was delimited to the implementation of the secondary private school teachers of the Division Olongapo City, Schools Division of Olongapo City during the school year 2020-2021. Further delimitation included the following namely,

1. Demographic profile of the respondents such as age, sex, educational attainment of mother, educational attainment of father and household income.
2. The study is anchored only on the six Science process Skills such as observing, measuring, classifying, inferencing, communicating and hypothesizing and
3. Problems encountered by teachers in the implementation of blended learning in terms of integrating science process skills.

The study covered the grade nine students on selected private junior high school and teacher-respondents coming from the selected private schools implementing blended learning modality teaching from grade nine science subject only.

## METHODOLOGY

The study had utilized the cross sectional survey research with survey questionnaire as the main instrument in gathering the required data. The present study determined the level of acquisition of science process skills and the performance of private junior high school students in Olongapo City, Zambales, for school year 2020-2021. The study used purposive quota sampling technique. There are 150 Grade 9 students from 3 different private schools in Olongapo City, Zambales, Philippines had participated in the study. The instruments has three (3) parts; (a) level of acquisition, (b) academic achievement on basic and integrated science process skills, and (c) level of most encountered problem in teaching science process kills in biology.

## RESULTS AND DISCUSSION

**Profile of the Respondents**

The grade (9) nine students from private secondary school were described in terms of age, sex, educational attainment of mother, educational attainment of father and household income. Table 2 presents the frequency and percentage distribution of the grade (9) students in terms of the profile variables.

**Age**

Majority of the respondents were in the age of 15 with frequency of 61 respondents and percentage distribution of (58.10 %) and the least are in the age of more than 16 years of age with frequency of (5) and percentage distribution of (4.76 %). The result implied that majority of respondents enrolled in grade (9) nine were 15 years of age.

**Sex**

Majority of the respondents were males with the frequency of fifty-five (55) and percentage distribution of (52.38%) and females with the frequency of (50) and percentage distribution of (47.62%).

**Educational Attainment of the Mother**

Majority of the respondent's educational attainment of mother were college graduate with frequency of (57) and percentage of (54.28%). The least with the educational attainment of master's degree frequency of (5) and percentage of (4.76%).

**Table 1: Frequency and Percentage Distribution of Grade 9 Students' Profile**

| **Profile** | | **Frequency** | **Percentage** |
|---|---|---|---|
| Age | More than 16 | 5 | 4.76 |
| | 16 | 21 | 20.00 |
| | 15 | 61 | 58.10 |
| | 14 | 18 | 17.14 |
| | Total | 105 | 100.00 |
| Sex | Male | 55 | 52.38 |
| | Female | 50 | 47.62 |
| | Total | 105 | 100.00 |
| Educational Attainment of Mother | Master's Degree Holder | 5 | 4.76 |
| | College Graduate | 57 | 54.28 |
| | Technical-Vocational Graduate | 13 | 12.38 |
| | High School Graduate | 24 | 22.86 |
| | Elementary Graduate | 6 | 5.71 |
| | Total | 105 | 100.00 |
| Educational Attainment of Father | Master's Degree Holder | 2 | 1.90 |
| | College Graduate | 55 | 52.38 |
| | Technical-Vocational Graduate | 20 | 19.05 |
| | High School Graduate | 24 | 22.86 |
| | Elementary Graduate | 4 | 3.81 |
| | Total | 105 | 100.00 |
| House Hold Income (Php) | 25,000 and Above | 28 | 26.67 |
| | 20,000 – 24,000 | 13 | 12.38 |
| | 15,000 – 19,000 | 18 | 17.14 |
| | 8,000 – 15,000 | 46 | 43.81 |
| | Total | 105 | 100.00 |

**Educational Attainment of the Father**

Majority of the respondent's educational attainment of father were in college graduate with frequency of (55) and percentage of (52.38%). The least educational attainment of master's degree frequency of (2) and percentage of (1.90%).

**Household Income (Php)**

Majority of the grade nine (9) students have household income of (8000-14999) with frequency of 46 and percentage of (43.81%). The least on the result with a household income of (20000 - 24999) with frequency of (13) and percentage of (12.38%).

**Level of Acquisition of the Science Process Skills**

**Table 2: Level of Acquisition of Science Process Skill in Observing**

| **Observing** | **Never Used (1)** | **Rarely Used (2)** | **Sometimes Used (3)** | **Often Used (4)** | **Always Used (5)** | **WX** | **DR** |
|---|---|---|---|---|---|---|---|
| 1. I am able ask question that can be done by collecting data. | 4 | 18 | 41 | 22 | 20 | 3.35 | SU |
| 2. I am able to collect and record data accurately. | 6 | 16 | 43 | 27 | 13 | 3.24 | SU |
| 3. I am able to describe the data gathered. | 6 | 18 | 46 | 22 | 13 | 3.17 | SU |
| 4. I am able to Observe data both quantitatively and qualitatively. | 7 | 21 | 33 | 26 | 18 | 3.26 | SU |
| 5. I am able to provide elaborative observation in terms of gathered data. | 7 | 21 | 37 | 23 | 17 | 3.21 | SU |
| **Overall** | | | | | | **3.25** | **SU** |

The respondents garnered the highest mean of (3.35) rating on the first indicator, which specifies that they are able to ask question that can be done by collecting data. The least with lowest mean of (3.17), which specifies they are able to describe data gathered. The overall weighted mean for observing is 3.25 with description of sometimes used (SU). Lin Ting (2014) revealed that broadening the process of instructional learning beyond the classroom can enhance the capacity to observe; hence, it can give chances to see, touch, feel, smell, and hear that demand the use of all senses. Using the five senses to take note of the characteristics of objects and circumstances is a description of how something should be perceived is define in observation as one of the science process skills according to (Chiappetta and Koballa, 2002). The present scenario of distance learning reflected the results to the science process skills in terms of observing wherein students only acquired knowledge and concepts by means of listening. Moreover, answering module is far different from the delivery of the lesson in face to face where teachers can make laboratory-based activity and students can use their five senses and arrive with sound observation and results-based conclusions.

**Table 3: Level of Acquisition of Science Process Skill in Measuring**

| **Measuring** | **Never Used (1)** | **Rarely Used (2)** | **Sometimes Used (3)** | **Often Used (4)** | **Always Used (5)** | **WX** | **DR** |
|---|---|---|---|---|---|---|---|
| 6. I am able to perform computations required scientifically. | 5 | 25 | 45 | 19 | 11 | 3.06 | SU |
| 7. I have the basic knowledge in measurement required in scientific investigations aided with appropriate equipment or tools in measuring. | 7 | 17 | 42 | 25 | 14 | 3.21 | SU |
| 8. I am able to compare an object by using standard unit of measure. | 10 | 18 | 42 | 22 | 13 | 3.10 | SU |
| 9. I am able to compare a nonstandard measure of object beings studied. | 4 | 28 | 42 | 20 | 11 | 3.06 | SU |
| 10. I am able to describe the dimensions of an object or event beings studied. | 8 | 26 | 44 | 21 | 6 | 2.91 | SU |
| **Overall** | | | | | | **3.07** | **SU** |

The respondents acquired the highest mean of (3.21) rating with the 7th indicator that specifies the basic knowledge in measurement required in scientific investigations are aided with appropriate equipment or tools in measuring. The least among the indicator in measuring are the sixth indicator which specifies the ability to perform computations required scientifically and the nineth indicator which specifies the ability to compare a nonstandard measure of object being studied both with the mean of (3.06). The overall weighted mean for measuring as science process skill is (3.07) which is described as sometimes used (S U). Measuring is expressing the amount of an object or substance in quantitative terms as stated by Chiappetta and Koballa (2002). Measurement abilities require the use proper equipment and do necessary calculations. It is visible to someone who has a rudimentary grasp of measurement, as well as the necessary measuring equipment or instruments and the capacity to do scientific computation. (Abruscto, as cited in the works of Ozgelen 2012; Carin *et al*., 2005).

**Table 4: Level of Acquisition of Science Process Skill in Classifying**

| **Classifying** | **Never Used (1)** | **Rarely Used (2)** | **Sometimes Used (3)** | **Often Used (4)** | **Always Used (5)** | **WX** | **DR** |
|---|---|---|---|---|---|---|---|
| 11. I am able to categorize subjects in terms of similarities and differences. | 5 | 22 | 24 | 25 | 29 | 3.49 | OU |
| 12. I am able to classify terms interrelationship with one another. | 8 | 20 | 29 | 32 | 16 | 3.27 | SU |
| 13. I am able to classify Objects placed into rank order based on some property. | 5 | 20 | 37 | 25 | 18 | 3.30 | SU |
| 14. I am able to classify information on the basis of whether each object has or does not have a particular property. | 7 | 23 | 39 | 22 | 14 | 3.12 | SU |
| 15. I am able to do grouping or ordering of objects or events into categories based on criteria. | 8 | 14 | 38 | 25 | 20 | 3.33 | SU |
| **Overall** | | | | | | **3.30** | **SU** |

The respondents obtained the highest mean of (3.49) rating is the 11th indicator that specifies the ability to categorize subjects in terms of similarities and differences. The least among the indicator in measuring is the 14th indicator with (3.12) which specifies the ability to classify information on the basis of whether each object has or does not have particular property. The overall weighted mean for classifying as science process skill is (3.30) which is described as sometimes used (S U). Objects and events are classified according to their characteristics or attributes. According to Tanti, Kuswanto, and Wardhana's (2020) research, the importance of science process skills for junior high school students is that children learn more meaningfully when they are aware of and actively participating in discovering concepts from existing occurrences in the environment. Significant learning comprises learners immediately learning and having the capacity to recall knowledge readily.

**Table 5: Level of Acquisition of Science Process Skill in Inferring**

| **Inferring** | **Never Used (1)** | **Rarely Used (2)** | **Sometimes Used (3)** | **Often Used (4)** | **Always Used (5)** | **WX** | **DR** |
|---|---|---|---|---|---|---|---|
| 16. I am able to analyze a scientific problem that is according with the data collection. | 9 | 19 | 40 | 23 | 14 | 3.13 | SU |
| 17. I am able to explain a result of scientific investigation that is according with the data collection. | 5 | 26 | 34 | 25 | 15 | 3.18 | SU |
| 18. I am able to make an "educated guess" about an object or event based on previously gathered data or information. | 5 | 19 | 44 | 24 | 13 | 3.20 | SU |
| 19. I am able to use inferences based on the same observations. | 7 | 26 | 35 | 26 | 11 | 3.08 | SU |
| 20. I am able to use inferences as the gathered data increases evidently that will make the study substantial | 7 | 20 | 43 | 21 | 14 | 3.14 | SU |
| **Overall** | | | | | | **3.15** | **SU** |

The respondents gathered the highest mean of (3.20) rating is the 18th indicator that specifies the ability to make an educated guess about an object/event based on the previously gathered data. The least among the indicator in measuring is the 19th indicator with (3.08) which specifies the ability to use inferences based on the same observations. The overall weighted mean for inferencing is (3.15) which is described as sometimes used (S U). Inferring is the process of providing a quantitative explanation for a certain item or substance. Prediction is estimating what will happen as a result of an occurrence, whereas inference is drawing inferences from an observed event. Evidence must back up our findings. We form inferences about the causes of phenomena we witness based on data gained via observation (Aydodu & Keserciolu, 2005).

**Table 6: Level of Acquisition of Science Process Skill in Communicating**

| **Communicating** | **Never Used (1)** | **Rarely Used (2)** | **Sometimes Used (3)** | **Often Used (4)** | **Always Used (5)** | **WX** | **DR** |
|---|---|---|---|---|---|---|---|
| 21. I am able to communicate procedures & with others | 6 | 24 | 28 | 25 | 22 | 3.31 | SU |
| 22. I am able to develop a presentation to share observations & data collection to others. | 7 | 24 | 34 | 18 | 22 | 3.23 | SU |
| 23. I am able to use/ communicate information that can easily be related to my experiences. | 4 | 17 | 34 | 29 | 21 | 3.44 | OU |
| 24. I am able to use descriptive words for which both my fellowmen can share a common understanding | 4 | 19 | 36 | 29 | 17 | 3.34 | SU |
| 25. I am able to communicate effectively to other person by providing clear and understandable information. | 8 | 13 | 35 | 31 | 18 | 3.36 | SU |
| **Overall** | | | | | | **3.34** | **SU** |

The respondents accumulated the highest mean of (3.44) rating is the 23rd indicator that specifies the ability to make use information that can be easily be related to own experiences. The least among the indicator in communicating is 22nd indicator with (3.23) which specifies the ability to develop a presentation to share observations and data collection to others. The overall weighted mean for communicating is (3.34) which is described as sometimes used (S U). According to Abruscato (2010) it is vital to human effort and fundamental to scientific labor, and pertinent concepts may be conveyed through words, diagrams, maps, and graphs. It can be noticed in terms of an individual's capacity to communicate processes with others or ability to design a plan. To communicate observations and data collecting with others, make a presentation.

**Table 7: Level of Acquisition of Science Process Skill in Hypothesizing**

| **Hypothesizing** | **Never Used (1)** | **Rarely Used (2)** | **Sometimes Used (3)** | **Often Used (4)** | **Always Used (5)** | **WX** | **DR** |
|---|---|---|---|---|---|---|---|
| 26. I am able to create models to explain a scientific result | 12 | 23 | 44 | 16 | 10 | 2.90 | SU |
| 27. I am able to use a result of a scientific study to answer a question to a given problem. | 5 | 18 | 43 | 27 | 12 | 3.22 | SU |
| 28. I am able to hypothesize based on both good observation and inferences made about observed events. | 6 | 21 | 40 | 25 | 13 | 3.17 | SU |
| 29. I am able to hypothesize on constructed, modified, and even rejected hypothesis based on new observations. | 7 | 23 | 39 | 25 | 11 | 3.10 | SU |
| 30. I am able to make educated guesses about the outcomes of future events based on the gathered data and predictions. | 9 | 18 | 34 | 28 | 16 | 3.23 | SU |
| **Overall** | | | | | | **3.12** | **SU** |

The respondents gained the highest mean of (3.23) rating is the 30th indicator that specifies the ability to make educated guess about the outcomes of future events based on the gathered data and predictions. The least among the indicator in communicating is 26th d indicator with (2.90) which specifies the ability to create models to explain scientific results. The overall weighted mean for hypothesizing is (3.12) which is described as sometimes used (SU). According to (Arthur, 1993, 12-13; cited by Tan & Temiz, 2003) when a student develops a hypothesis, he proposes an explanation that is compatible with the observations, questions, and evidence that are accessible. It is noticeable in terms of the capacity to build models and explain outcomes, or to utilize a scientific study result to answer a query about a specific situation.

**Table 8: Level of Test Performance of Grade 9 Students**

| **Science Process Skill** | **Mean** | **SD** | **Interpretation** |
|---|---|---|---|
| Observing | 4.86 | 2.00 | Good |
| Measuring | 4.40 | 1.50 | Poor |
| Classifying | 4.50 | 1.63 | Good |
| Inferring | 4.08 | 1.72 | Poor |
| Communicating | 4.27 | 1.69 | Poor |
| Hypothesizing | 3.64 | 1.75 | Poor |
| **Overall Performance** | **25.74** | **7.77** | **Poor** |

The performance of the grade nine students in Science (Biology) is the in observing is the highest with the mean of (4.86) and standard deviation of (2.00) and interpretation of good. Gathering data about objects and events using all appropriate skill senses or tools that enhance the senses, such as magnifying glasses, telescopes, microphones, speakers, and medical devices, is the first step in basic SPS. Science's most fundamental process is observation (Abruscato, 1995; Carin *et al*., 2005). Among the Science Process skill, the lowest is hypothesizing with the mean of (3.64) which is interpreted as poor. A hypothesis is a testable statement of the investigator's best estimate about the relationship between two variables based on experience and observation. When a student develops a hypothesis, he proposes an explanation that is compatible with the observations, questions, and evidence that are accessible (Arthur, 1993, 12-13; cited by Tan & Temiz, 2003). The overall performance in Science (Biology) of the grade nine students in the selected private secondary schools in Olongapo City with the mean of (25.44) and is poor. Science processes are the fundamental steps in the

development of practical abilities, appropriate interests, attitudes, and values, as well as in making the teaching-learning process more dynamic, exciting, and relevant. Since high school is a time when students begin to consider their academic interests and future careers. They must also get experience as active assessors or appraisers of their own learning in the classroom (Santos & David, 2016).

**Problems encountered by the teachers in the Implemetation of Blended learning in terms of Integrating Science Process Skills:**

**Table 9: Problems encountered by the Science Teachers mostly in teaching science process skills in biology in terms of utilizing the blended learning modality**

| Lack of Teaching Materials for Experiments | Never (1) | Rarely (2) | Sometimes (3) | Often (4) | Always (5) | WX | DR |
|---|---|---|---|---|---|---|---|
| 61. There is lack of study materials and resources. | 5 | 22 | 24 | 25 | 29 | 3.49 | OE |
| 62. Activities involving microscopic organisms to be observed on a microscope is quite difficult to attain | 8 | 20 | 29 | 32 | 16 | 3.27 | SE |
| **Overall** | | | | | | **3.38** | **SE** |

The respondents gained the highest mean of (3.49) rating is the indicator that "There is lack of study materials and resources". The least among the indicator is "Activities involving microscopic organisms to be observed on a microscope is quite difficult to attain." The overall weighted mean for hypothesizing is (3.38) which is described as sometimes experienced (SE). Furthermore, in an online distance learning setting, both teachers and students must have access to these online platforms. These modifications and concerns are not limited to Earth science education. Challenges associated with online education in other disciplines of science, such as biology, chemistry, and physics, as well as potential solutions to solve and/or learn from them, have also been identified by (Arnaud, 2020; Budrikis, 2020; Guidote, 2020; Herzog & Mawn, 2020; Lansangan, 2020 as cited in the works of Landicho 2020).

**Table 10: Problems encountered by the Science Teachers mostly in teaching science process skills in biology in terms of utilizing the blended learning modality**

| Experimentation is not well emphasized | Never (1) | Rarely (2) | Sometimes (3) | Often (4) | Always (5) | WX | DR |
|---|---|---|---|---|---|---|---|
| 63. Hands-on experiments are very difficult to conduct. | 4 | 18 | 41 | 22 | 20 | 3.35 | SE |
| 64. Learners were not able to experience experimental activities | 6 | 16 | 43 | 27 | 13 | 3.24 | SE |
| **Overall** | | | | | | **3.29** | **SE** |

The respondents gained the highest mean of (3.29) rating is the indicator that "Learners were not able to experience experimental activities." The least among the indicator is" Learners were not able to experience experimental activities." With (3.24) mean. The overall weighted mean for hypothesizing is (3.29) which is described as sometimes experienced (SE). Teachers' reaction to experimentation is lacking. Widyaningsih, Gunarhadi, and Muzzazinah (2020) attribute this to a paucity of experimental activities in science education. Science education must encourage students to think critically while conducting real-life experiments.

**Table 11: Problems encountered by the Science Teachers mostly in teaching science process skills in biology in terms of utilizing the blended learning modality**

| The Utilization of Technology | Never (1) | Rarely (2) | Sometimes (3) | Often (4) | Always (5) | WX | DR |
|---|---|---|---|---|---|---|---|
| 65. Poor Internet connection. | 4 | 17 | 34 | 29 | 21 | 3.44 | OE |
| 66. Difficulty in adapting technological platform in blended learning. | 5 | 22 | 24 | 25 | 29 | 3.49 | OE |
| **Overall** | | | | | | **3.47** | **OE** |

**Significant Variations in the Level of Acquisition of Science Process Skills when Grouped According to Profile-Variables**

**Table 12: Significant Variations in the Level of Acquisition of Science Process Skills when Grouped by Age**

| Source of Variation | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Observing | Between Groups | 1.046 | 3 | .349 | 1.527 | .212 |
| | Within Groups | 23.055 | 101 | .228 | | Accept Ho |
| | Total | 24.101 | 104 | | | Not Significant |
| Measuring | Between Groups | .696 | 3 | .232 | .827 | .482 |
| | Within Groups | 28.342 | 101 | .281 | | Accept Ho |
| | Total | 29.038 | 104 | | | Not Significant |
| Classifying | Between Groups | .054 | 3 | .018 | .068 | .977 |
| | Within Groups | 26.676 | 101 | .264 | | Accept Ho |
| | Total | 26.730 | 104 | | | Not Significant |
| Inferring | Between Groups | .119 | 3 | .040 | .209 | .890 |
| | Within Groups | 19.163 | 101 | .190 | | Accept Ho |
| | Total | 19.282 | 104 | | | Not Significant |
| Communicating | Between Groups | .375 | 3 | .125 | .420 | .739 |
| | Within Groups | 30.130 | 101 | .298 | | Accept Ho |
| | Total | 30.505 | 104 | | | Not Significant |
| Hypothesizing | Between Groups | .492 | 3 | .164 | .492 | .689 |
| | Within Groups | 33.707 | 101 | .334 | | Accept Ho |
| | Total | 34.200 | 104 | | | Not Significant |

Table 12 reveals that there are no significant variations in the level of acquisition of science process skills in observing, measuring, classifying, inferring, communicating, and hypothesizing when grouped by age. The computed F-values of 1.527, 0.827, 0.068, 0.209, 0.420, and 0.492, respectively are not significant at 5% alpha; thus, the null hypothesis is accepted. Age is not a factor in the acquisition of such skills. According to the study of Widyaningsih, Gunarhadi & Muzzazinah (2020) proved that there were no significant differences in science process skills between ages.

**Table 13: Significant Variations in the Level of Acquisition of Science Process Skills when Grouped by Sex**

| Source of Variation | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Observing | Between Groups | .171 | 1 | .171 | .735 | .393 |
| | Within Groups | 23.930 | 103 | .232 | | Accept Ho |
| | Total | 24.101 | 104 | | | Not Significant |
| Measuring | Between Groups | .020 | 1 | .020 | .071 | .790 |
| | Within Groups | 29.018 | 103 | .282 | | Accept Ho |
| | Total | 29.038 | 104 | | | Not Significant |
| Classifying | Between Groups | .080 | 1 | .080 | .309 | .579 |
| | Within Groups | 26.650 | 103 | .259 | | Accept Ho |
| | Total | 26.730 | 104 | | | Not Significant |
| Inferring | Between Groups | .001 | 1 | .001 | .006 | .938 |
| | Within Groups | 19.281 | 103 | .187 | | Accept Ho |
| | Total | 19.282 | 104 | | | Not Significant |
| Communicating | Between Groups | .377 | 1 | .377 | 1.289 | .259 |
| | Within Groups | 30.128 | 103 | .293 | | Accept Ho |
| | Total | 30.505 | 104 | | | Not Significant |
| Hypothesizing | Between Groups | .582 | 1 | .582 | 1.784 | .185 |
| | Within Groups | 33.617 | 103 | .326 | | Accept Ho |
| | Total | 34.200 | 104 | | | Not Significant |

Seen in Table 13 that there are no significant variations in the level of acquisition of science process skills in observing, measuring, classifying, inferring, communicating, and hypothesizing when grouped by sex. The computed F-values of 0.735, 0.071, 0.309, 0.006, 1.289, and 1.784, respectively are not significant at 5% alpha; thus, the null hypothesis is accepted. Sex is not a factor in the acquisition of observing, measuring, classifying, inferring, communicating, and hypothesizing skills. According to the study of Widyaningsih, Gunarhadi & Muzzazinah (2020) proved that there were no significant differences in science process skills between sexes.

**Table 14: Significant Variations in the Level of Acquisition of Science Process Skills when Grouped by Mother's Educational Attainment**

| Source of Variation | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Observing | Between Groups | 1.013 | 4 | .253 | 1.097 | .363 |
| | Within Groups | 23.088 | 100 | .231 | | Accept Ho |
| | Total | 24.101 | 104 | | | Not Significant |
| Measuring | Between Groups | 1.351 | 4 | .338 | 1.220 | .307 |
| | Within Groups | 27.688 | 100 | .277 | | Accept Ho |
| | Total | 29.038 | 104 | | | Not Significant |
| Classifying | Between Groups | .210 | 4 | .052 | .198 | .939 |
| | Within Groups | 26.520 | 100 | .265 | | Accept Ho |
| | Total | 26.730 | 104 | | | Not Significant |
| Inferring | Between Groups | .333 | 4 | .083 | .439 | .780 |
| | Within Groups | 18.949 | 100 | .189 | | Accept Ho |
| | Total | 19.282 | 104 | | | Not Significant |
| Communicating | Between Groups | 1.062 | 4 | .265 | .901 | .466 |
| | Within Groups | 29.443 | 100 | .294 | | Accept Ho |
| | Total | 30.505 | 104 | | | Not Significant |
| Hypothesizing | Between Groups | .847 | 4 | .212 | .635 | .639 |
| | Within Groups | 33.352 | 100 | .334 | | Accept Ho |
| | Total | 34.200 | 104 | | | Not Significant |

Table 14 reveals that there are no significant variations in the level of acquisition of science process skills among Grade 9 students in observing, measuring, classifying, inferring, communicating, and hypothesizing when grouped by their mother's educational attainment. The computed F-values of 1.097, 1.220, 0.198, 0.439, 0.901, and 0.635, respectively are not significant at 5% alpha; thus, the null hypothesis is accepted. The educational attainment of their mothers is not a factor in the acquisition of science process skills.

**Table 15: Significant Variations in the Level of Acquisition of Science Process Skills when Grouped by Father's Educational Attainment**

| Source of Variation | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Observing | Between Groups | .220 | 4 | .055 | .230 | .921 |
| | Within Groups | 23.881 | 100 | .239 | | Accept Ho |
| | Total | 24.101 | 104 | | | Not Significant |
| Measuring | Between Groups | .428 | 4 | .107 | .374 | .827 |
| | Within Groups | 28.611 | 100 | .286 | | Accept Ho |
| | Total | 29.038 | 104 | | | Not Significant |
| Classifying | Between Groups | 1.889 | 4 | .472 | 1.901 | .116 |
| | Within Groups | 24.841 | 100 | .248 | | Accept Ho |
| | Total | 26.730 | 104 | | | Not Significant |
| Inferring | Between Groups | .818 | 4 | .204 | 1.107 | .357 |
| | Within Groups | 18.465 | 100 | .185 | | Accept Ho |
| | Total | 19.282 | 104 | | | Not Significant |
| Communicating | Between Groups | .987 | 4 | .247 | .836 | .506 |
| | Within Groups | 29.518 | 100 | .295 | | Accept Ho |
| | Total | 30.505 | 104 | | | Not Significant |
| Hypothesizing | Between Groups | 1.011 | 4 | .253 | .762 | .553 |
| | Within Groups | 33.188 | 100 | .332 | | Accept Ho |
| | Total | 34.200 | 104 | | | Not Significant |

Shown in Table 15 that there are no significant variations in the level of acquisition of science process skills among Grade 9 students in observing, measuring, classifying, inferring, communicating, and hypothesizing when grouped by their father's educational attainment. The computed F-values of 0.230, 0.374, 1.901, 1.107, 0.836, and 0.762, respectively are not significant at 5% alpha; thus, the null hypothesis is accepted. The educational attainment of their fathers is not a factor in the acquisition of science process skills.

**Table 16: Significant Variations in the Level of Acquisition of Science Process Skills when Grouped by Household Income**

| Source of Variation | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| Observing | Between Groups | .477 | 3 | .159 | .680 | .566 |
| | Within Groups | 23.623 | 101 | .234 | | Accept Ho |
| | Total | 24.101 | 104 | | | Not Significant |
| Measuring | Between Groups | .666 | 3 | .222 | .790 | .502 |
| | Within Groups | 28.373 | 101 | .281 | | Accept Ho |
| | Total | 29.038 | 104 | | | Not Significant |
| Classifying | Between Groups | .192 | 3 | .064 | .243 | .866 |
| | Within Groups | 26.538 | 101 | .263 | | Accept Ho |
| | Total | 26.730 | 104 | | | Not Significant |
| Inferring | Between Groups | .228 | 3 | .076 | .402 | .752 |
| | Within Groups | 19.055 | 101 | .189 | | Accept Ho |
| | Total | 19.282 | 104 | | | Not Significant |
| Communicating | Between Groups | 1.715 | 3 | .572 | 2.006 | .118 |
| | Within Groups | 28.790 | 101 | .285 | | Accept Ho |
| | Total | 30.505 | 104 | | | Not Significant |
| Hypothesizing | Between Groups | 1.371 | 3 | .457 | 1.406 | .245 |
| | Within Groups | 32.828 | 101 | .325 | | Accept Ho |
| | Total | 34.200 | 104 | | | Not Significant |

Shown in Table 16 that when grouped by household income, there are no significant variations in the level of acquisition of science process skills among Grade 9 students in observing, measuring, classifying, inferring, communicating, and hypothesizing. The computed F-values of 0.680, 0.790, 0.243, 0.402, 2.006, and 1.406, respectively are not significant at 5% alpha; thus, the null hypothesis is accepted.) Household income is not also a factor in the acquisition of science process skills. There were no significant differences in science process skills between sexes and ages, except at the level of the class.

**Correlation of Level of Acquisition of Science Process Skills and Overall Performance of Grade 9 Students**

**Table 17: Correlation of Level of Acquisition of Science Process Skills and Overall Performance of Grade 9 Students**

| Variables | | VAR00018 | Decision and Interpretation |
|---|---|---|---|
| Observing | Pearson Correlation | 0.104 | Very Low Positive Correl |
| | Sig. (2-tailed) | 0.289 | Accept Ho |
| | N | 105 | Not Significant |
| Measuring | Pearson Correlation | 0.187 | Very Low Positive Correl |
| | Sig. (2-tailed) | 0.057 | Accept Ho |
| | N | 105 | Not Significant |
| Classifying | Pearson Correlation | -0.075 | Very Low Negative Correl |
| | Sig. (2-tailed) | 0.445 | Accept Ho |
| | N | 105 | Not Significant |
| Inferring | Pearson Correlation | -0.190 | Very Low Negative Correl |
| | Sig. (2-tailed) | 0.053 | Accept Ho |
| | N | 105 | Not Significant |
| Communicating | Pearson Correlation | -0.039 | Very Low Negative Correl |
| | Sig. (2-tailed) | 0.696 | Accept Ho |
| | N | 105 | Not Significant |
| Hypothesizing | Pearson Correlation | -0.121 | Very Low Negative Correl<br>Accept Ho<br>Not Significant |

Revealed in Table 17 that the overall performance of the Grade 9 students in Science shows a very low correlation with the level of acquisition of the Science process skills. It has a very low positive correlation with the level of acquisition of the Science process skills in observing and in measuring with R-values of 0.104 and 0.187, respectively. It has a very low negative. Correlation with the level of acquisition of the Science process skills in classifying, inferring, communicating and hypothesizing with R-values of -

0.075, -0.190, -0.039, and -0.121, respectively. These correlations are not significant at 5% level, thus accepting the null hypothesis.

**Table 18: Correlation of Level of Acquisition of Science Process Skills and Performance of Grade 9 Students in Each Science Process Skills**

| Variables | Pearson R-values | P-Value (Sig.) | Decision |
|---|---|---|---|
| Observing | 0.305 | 0.474 | Accept Ho (Not Significant) |
| Measuring | 0.078 | 0.429 | Accept Ho (Not Significant) |
| Classifying | 0.012 | 0.902 | Accept Ho (Not Significant) |
| Inferring | -0.101 | 0.306 | Accept Ho (Not Significant) |
| Communicating | 0.008 | 0.936 | Accept Ho (Not Significant) |
| Hypothesizing | -0.183 | 0.061 | Accept Ho (Not Significant) |

Table 18 shows the correlation when paired in terms of level of acquisition of science process skills and performance of Grade 9 students in each Science process skills. The null hypothesis is also accepted at 5% level in all the science process skills. Thus, the findings on the problem faced by the teachers in teaching science process skills are anchored with the thematic such as lack of teaching materials for experiments and experimentation is not well emphasize are probable factors that gives substance to the acceptance of the null hypothesis that there is no significant relationship between the Level of Acquisition of the Science Process Skills and the test Performance of the Grade 9 Junior Highschool Students.

In the study of Widyaningsih, Gunarhadi, and Muzzazinah (2020) emphasized the fact that Science education must teach students to think critically in the midst of experimentation. Santi (2014), which also demonstrate that the use of experimental techniques can increase scientific learning success. Experiments may be used to improve students' science process abilities in science learning, according to these assertions.

## CONCLUSION

From the results and findings of the data collection process, the researcher have formulated the following conclusions:

1. The result implied that majority of respondents enrolled in grade (9) nine were 15 years of age. Majority of the respondents are male with the frequency of fifty-five (55) and percentage distribution of (52.38 %). Majority of the respondent's educational attainment of mother is college graduate with frequency of (57) and percentage of (54.28 %). Majority of the respondent's educational attainment of father are in college graduate with frequency of (55) and percentage of (52.38%). Majority of the grade nine (9) students have household income of (8000-14999) with frequency of 46 and percentage of (43.81 %).
2. The level of Science Process Skills shown in the study is defined by Communicating with the weighted average mean of 3.34 and followed by Classifying with the weighted average mean of 3.30, Observing with the weighted average mean of 3.25, Inferring with the weighted average mean of 3.15 and Hypothesizing with the weighted average mean of 3.12 and the least among the Science Process Skills is Measuring with the weighted average mean of 3.07
3. The overall performance in Science (Biology) of the grade nine students in the selected private secondary schools in Olongapo City with the mean of (25.44) and is poor.
4. The Problems faced by the teachers in teaching science process skills in the blended learning based on the respondents are the lack of teaching materials. Experimentation is not well emphasized and the utilization of technology. The acquisition of science process skills would be minimal in the distance learning compared to face-to-face learning instruction. Teacher resolution in the problems encountered in utilizing the blended learning modality emphasized the importance of collaborative activities among instructors, such as exchanging techniques and learning from the experiences of colleagues, which might inspire them to "deliver excellent education by using the available resources in times of emergency remote teaching." The benefits utilizing the blended learning modality in teaching science process skills in biology amidst the pandemic as availability of online materials for teachers and students and flexibility for both teachers and students.
5. The results of the findings of the data collection defines that there is no significant variation in the Level of Acquisition of Science Process Skills when Grouped According to Profile-Variables it means if grouped in age, sex, educational attainment of mother, educational attainment of father and household income have no variation to the acquisition level of Science Process Skills.
6. The Correlation of Level of Acquisition of Science Process Skills and Overall Test Performance of Grade 9 Students shows a very low correlation with the level of acquisition of

the Science process skills. It has a very low positive correlation with the level of acquisition of the Science process skills in observing and in measuring with R-values of 0.104 and 0.187, respectively. Thus , the descriptive qualitative findings on the problems encountered by the science teacher teaching science process skills in biology thematized factors such as lack of teaching materials for experiments and experimentation is not well emphasize are probable factors that gives substance to the acceptance of the null hypothesis that there is no significant relationship between the Level of Acquisition of the Science Process Skills and the test Performance of the Grade 9 Junior High school Students.

- The Integration of Science Process Skills needed to be emphasized in the science subjects in the pandemic setting needed to be enhanced.
- The utilization science experiment approaches in the blended learning settings need to be defined and the experimentation addressed well in the modality of blended learning.
- The Head Teachers/Supervisors can secure the facility of learning in terms of utilization of available learning materials so that proper assessment and evaluation is to be inculcated in the quality process.
- Collaborative /Coaching or sharing of knowledge in the faculty for the science teachers is important in the private schools to improve strategies amidst the pandemic.
- Faculty development in the integration of Science Process Skills is important to be properly address and prioritized to equip science faculty, also initiatives/endeavors amidst the pandemic to assure quality of teaching is essential to be observe.
- Utilization of e-learning materials is important to be align with the blended learnings needs of the faculty and students in science (biology area).

## REFERENCES


- Carin, A. A., Bass, J. E., & Contant, T. L. (2005). Methods for teaching science as inquiry. Upper Saddle River, NJ: Pearson Education, Inc.
- Ciriaco, C. (2019). DepEd vows to improve quality of education after PISA showing Retrieved https://businessmirror.com.ph/2019/12/06/deped-vows-to-improve-quality-of-education-afterpisashowing/#:~:text=Released%20on%20December%203%2C%202019,and%20Development%20(OECD)%20countries.
- Dakabesi, D., & Louise, I. S. Y. (2019). The Effectiveness of Problem-Based Learning Model to Increase the Students' Critical Thinking Skills. *Journal of Education and Learning (EduLearn)*, *13*(4), 543-549.
- Kurniawan, D. A., Perdana, R., & Ikhlas, M. (2020). Do a Science Process Skills Affect on Critical Thinking in Science? Differences in Urban and Rural. *International Journal of Evaluation and Research in Education*, *9*(4), 874-880.
- Department of Education. (2021). *Championing-Emerging-Technologies*. Https:// Authdocs.Deped.Gov.Ph/Wp-Content/Uploads/2021/09/FINAL-27-Championing-Emerging-Technologies-AP-0921045-20210903.Pdf. https://authdocs. deped. gov.ph/wp-April29_2021
- Department of Education, DepEd prepares Self-Learning Modules for education's new normal Retrieved https://www.slideshare.net/victorpilates/badminton-8378048
- Department of Education, The Basic Education Learning Continuity Plan in the Time of COVID-19 Retrieved https://drive.google.com/drive/folders/1T7Vh0rPHaASD ntlBr3P1HI9kdwlYbJCS?fbclid=IwAR2o561w3o92FNvIPqjQWd4qXkrLRC7l8nqQlE9A_MRL74zwZ3UgO-OnM4k
- OECD. (2019). https://www.oecd.org/pisa/publications/PISA2018_CN_PHL.pdf
- Ozgelen, S. (2012). Students' Science Process Skills within a Cognitive Domain Framework. *Eurasia Journal of Mathematics, Science & Technology Education*, 8(4), 283-292. http://dx.doi.org/10.12973/eurasia.2012.846a
- Raj, R. G., & Devi, S. N. (2014). Science process skills and achievement in science among high school students. *Scholarly Research Journal for Interdisciplinary Studies*, 2(15), 2435-2443.
- Safaah, E. S., Muslim, M., & Liliawati, W. (2017, September). Teaching science process skills by using the 5-stage learning cycle in junior high school. In *Journal of Physics: Conference Series* (Vol. 895, No. 1, p. 012106). IOP Publishing.
- Safaah, E. S., Muslim, M., & Liliawati, W. (2017, September). Teaching science process skills by using the 5-stage learning cycle in junior high school. In *Journal of Physics: Conference Series* (Vol. 895, No. 1, p. 012106). IOP Publishing.
- Safaah, E. S., Muslim, M., & Liliawati, W. (2020). Teaching Science Process Skills by Using the 5-Stage Learning Cycle in Junior High School. Retrieved https://iopscience.iop.org/article/10.1088/1742-6596/895/1/012106

- Santos, M., & David, A. (2016). The Normal Lights Self-and Teacher-Assessment of Science. Process Skills. 64-81.
- SEI-DOST. & UP NISMED. (2011) Science Framework for Philippine Basic Education. Manila: SEI-DOST & UP NISMED. Retrived from https://sei.dost.gov.ph/images/downloads/publ/sei_scibasic.pdf
- Tanti, T., Kurniawan, D. A., Kuswanto, K., Utami, W., & Wardhana, I. (2020). Science Process Skills and Critical Thinking in Science: Urban and Rural Disparity. *Journal Pendidikan IPA Indonesia*, 9, 489-498.
- Widyaningsih, D. & Gunarhadi, G., & Muzzazinah (2020). Analysis of Science Process Skills on Science Learning in Primary School. *Advances in Social Science, Education and Humanities Research*, 397. http://doi.org/10.2991/assehr.k.200129.085


**Cite This Article:** Joey O. Manes, Adelia Calimlim, Elizabeth Nalupa-Farin (2022). Acquisition of Science Process Skills of Junior High School Students among Private Schools of Olongapo City. *East African Scholars J Edu Humanit Lit*, 5(6), 146-159.