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Research Article

Modular Distance Learning Gaps: Relationship Between Teachers' and Students'Performances in Grade 9 Science

Nor Ayn A. Salindao*, Norton K. Salindao, Haron A. Mohamad, Noraysa B. Kasan
For affiliations and correspondence, see the last page.

Abstract

The study aimed to determine the relationship of teachers' and students' performances in Grade 9 Science during Modular Distance Learning in Maguindanao II Division. It determined some of the learning gaps experienced by the students in learning science in terms of knowledge, understanding and proficiency. Quantitative research design was used in this study. There were 30 secondary science major teachers and 90 selected grade 9 students' participants. Survey questionnaire was used to gather the data. The data were gathered and analyze using statistical tools such as weighted mean, correlation and standard deviation.The result revealed that the level of performance of Grade 9 students in learning Science in terms of knowledge, understanding and proficiency got the highest mean during Modular Distance Learning. It means that a Grade 9 students are prepared in this new learning modalities. In addition, it was found out that the level of teachers' in teaching science in terms of knowledge, understanding and proficiency got the highest mean. It means that Science teachers performed their task responsibly. Moreover, the investigation showed that there is no significant relationship between the students' mean performance and teachers' mean performance in terms of knowledge, understanding and proficiency.

Keywords: Modular Distance Learning, Student's Performances, Learning Gaps, Science

Introduction

Individual student learning gaps relate to the mismatch between what a student has actually learned and what he or she was expected to acquire at a given age or grade level. Learning gaps have a propensity to accumulate over time and grow more severe and pronounced if left ignored, which can raise the likelihood that a student will struggle academically and socially or drop out of school (Davis, 2020).

The first step in closing learning gaps is determining where and what those gaps are, as well as which students struggle. Quizzes are a simple and quick approach to formatively assess what students have learnt. These can be mini-quizzes at the end of a topic or simply a few units of a subject. Second, teachers must ensure that a diverse set of questions is used to identify learning gaps. Finally, once the gaps have been identified, teachers must take the appropriate steps and assess the mastery level attained by the students using quizzes. Learning gaps can be addressed and bridged using these procedures (Heather, 2020).

Education has a significant impact on the lives of students. The introduction of COVID-19 in the Philippines resulted in significant changes in the educational landscape. One of these is the Department of Education's instructional model. Due to the current economic crisis, most educational systems have been forced to adopt alternatives to face-to-face teaching and learning. Many educational systems transferred activities online to ensure that instruction could continue even while schools were closed (OECD, 2020). It is the transition of school-based teaching and learning to modular distance learning. That is why DepEd officials are constantly looking for solutions to alleviate challenges and equip teachers and school administrators to be more effective in the field of modular distance learning (Bagod, 2020).

In accordance with the "Most Essential Learning Competencies," the Education Program Supervisors produced modules in all topics for all grades/year levels throughout four quarters beginning in May 2020. These self- learning modules are already part of a learning package that includes a pre- test, discussion, and a series of evaluation/assessment questions. With the modular learning class schedule, they are dispersed to all students (Bagod,2020).

Academic performance is a metric used to assess a student's progress in several academic areas. Class performance, graduation rates, and test results are commonly used by teachers and education administrators to assess student accomplishment (Brooie, 2014).

When addressing a given activity, at a certain time, a learning approach is the combination of an objective

and a strategy. As a result, when a surface approach is used with the goal of achieving excellent grades through the use of acceptable memorizing techniques, the students' performance will be adequate. In terms of the deep approach, it entails self-determined motivation, which entails both effort and enjoyment for the subject under consideration. Students have a good chance of doing well in their academics if they follow this advice. The primary drivers of academic performance are the learning approaches (Barca, and Peralbo 2013).

The Ministry of Basic, Higher and Technical Education (MBHTE) particularly in Maguindanao-II Public Secondary Schools has been monitoring different schools and their students. Any gaps should be addressed at the soonest possible time for the successful mastery of competencies as prescribed in the curriculum. At this pandemic period, as we are embracing the various distance learning modalities, a big challenge for teachers and learners alike is facing our way on how to effectively bridge the identified gaps.

Research Questions

The study aimed to determine the student's performance and teacher's teaching performance in Grade 9 during Modular Distance Learning in Maguindanao II Division. Specifically, it answered the following questions:

1. What are the students' performances in learning Grade-9 Science in terms of:
   1.1. knowledge;
   1.2. understanding; and
   1.3. proficiency?
2. What are the teachers' performances in teaching Science in terms of:
   2.1. knowledge;
   2.2. understanding; and
   2.3. proficiency?
3. What are the learning gaps in various Grade 9 Science areas in terms of:
   3.1. knowledge;
   3.2. understanding; and
   3.3. proficiency?
4. Are there significant relationships between the students' performances and the teachers' performances in Grade-9 Science in terms of:
   4.1. knowledge;
   4.2. understanding; and
   4.3. proficiency?

Literature Review

Distance Learning

Distance learning is a type of learning that takes place between a teacher and students who are geographically separated at the time of instruction. The three types of this modality are Modular Distance Learning (MDL), Online Distance Learning (ODL), and TV/Radio-Based Instruction. Individualized instruction that allows learners to use self-learning modules (SLMs) in print or digital format/electronic copy, depending on the learner's context, and other learning resources such as Learner's Materials, textbooks, activity sheets, study guides, and other study materials are all part of modular distance learning. Learners access electronic copies of learning materials via a computer, tablet PC, or smartphone. CDs, DVDs, USB storage, and computer-based programs can all be used to offer e-learning resources, including offline e-books (Dangle 2020).

The teacher is in charge of keeping track of the students' progress. Email, phone, text message/instant messaging, and other methods can be used to reach the teacher. When possible, the instructor should pay home visits to students who require remediation or help. Any family member or other community participant must volunteer as a substitute instructor (Sumaong, 2020).

The Department of Education wanted to know which off-school pedagogical modes best suited students based on their location in the archipelago, and they discovered that most parents chose the modular learning modality for their children over other possibilities. This is based on the preliminary results of the Learner Enrollment and Survey Form (LESF), which revealed that 8.8 million parents preferred modular learning to the 3.9 million who preferred blended learning, which is a combination of different modalities such as module, television, and radio with online (Bernado, 2020).

Modular Distance Learning (MDL)

Is a type of distance learning that use Self-Learning Modules (SLM) based on the Department of Education's most essential learning abilities (MELCs). The modules feature motivation and assessment parts that act as a comprehensive guide to both teachers' and students' desired competencies. These modules are a self-contained unit bundle of study resources for use by individuals, and are especially beneficial for adult

learners at the graduate and undergraduate levels. When a group or individual education session is not possible, it provides learners with a learning activity (Liego, 2020).

Student's Performance

Student performance is described as a student's level of knowledge in a specific area or subject in comparison to the norm, and it is commonly measured using the grade point average (Wilcox, 2011). Most people think about a person's GPA when they hear the words "academic performance." However, a number of variables represent a student's academic performance. While some students may not be at the top of their class, they may hold positions of leadership in numerous student organizations or perform highly on standardized examinations (Williams, 2018). Class performance, graduation rates, and test scores are frequently used by teachers and school officials to assess students' performance (Kaiser, 2019).

Learning approaches are critical components of academic success because they explain how to combine a goal and a strategy when addressing a certain subject at a specific time. As a result, when there is a superficial approach and the goal of earning good grades utilizing acceptable memorization techniques, the students will do well. The deep approach necessitates a self-determined motivation that involves both effort and enjoyment for the subject under consideration. In this regard, the pupil has a good chance of succeeding in school (Barca, and Peralbo 2003).

It's important to note that children' learning styles aren't set in stone, and they can alter over time. A student, on the other hand, can adopt either learning approach depending on the academic task (surface or deep). To put it another way, learning strategies are built on both. "A learning method determines the nature of the relationship between student, circumstance, and task," according to the learner's and teaching setting characteristics (Cabigao, 2014)

Academic success is influenced by a variety of characteristics, contexts, and circumstances that should be addressed by empirical research, despite the challenges in its design and methodological strategy (Nieto, 2008). Academic performance refers to a student's, teacher's, or institution's achievement of educational goals. As a result, students' performance is measured by how well they do on coursework-related tests as well as other types of exams (Kyoshaba, 2009).

Factors contributing to Academic Performance

Academic performance is the degree to which a student, instructor, or institution has attained their educational goals. Several studies have been undertaken in various nations to determine the elements that influence students' academic success at various levels. Farooq and Berhanu (2011) found that a student's academic performance is influenced by his or her parents' education and socioeconomic level in Pakistan. According to a study conducted in Singapore by (Jayanthi and Balakrishan, 2014).

A student's academic performance is influenced by his or her desire in pursuing a subject, co-curricular activities, nationality, and gender. Furthermore, regular study, punctuality in school, and self-motivation are the most important determinants of students' academic achievement (Sibanda, Iwu and Olumide).

Catherine (2015) discovered that parents' socioeconomic position, particularly those with high earnings, has a significant impact on students' academic achievement. Academic achievement has also been linked to a positive classroom atmosphere (Nghambi and Osei-Mensah,2012).

The availability of teaching and learning resources, teacher competency, and the environment in which a school is located all influence students' academic success. Furthermore, students' personality features, personal goals and motivation, as well as teacher support and degree of expertise, all have a substantial impact on their academic achievement (Ulate & Carballo, 2011)

Learning Gaps

Various educators agreed on a definition of learning gaps, which are generally the difference between what learners are anticipated to have acquired by a specific grade level and what they have learned up to that time. These learning gaps are frequently accumulating, which means that if they are not addressed promptly, learners are likely to fall farther and further behind due to the skills and knowledge they have lost. Learning gaps occurred when students missed a skill and moved on to the next course without remediation (Torres, 2020).

Identifying learning gaps in writing the outputs of the students in his class. He planned and performed the intervention program from the date obtained. The level of improvement gained was determined by comparing learners' performance before and after the

implementation phase (Cabigao, 2020).

A learning gap is a mismatch between what a pupil has learnt and what they should have learned by a certain point in their schooling. While some learning gaps are tiny and easily remedied (for example, a student missing a single lesson due to illness), others are more serious and result in considerable learning losses or academic setbacks (Sullivan, 2018).

Closing achievement gaps among these various student groups became a focus of federal education accountability with the passage of the No Child Left Behind Act of 2001, and schools and districts were required to disaggregate student test scores and other performance data by student characteristics to enable better comparisons between groups. This resulted in increased awareness of racial disparities as well as increased worry about other types of success gaps. The focus resulted in more tailored interventions for diverse groups of pupils, although most achievement gaps remained unbridged a decade after the law was established (Ansell, 2011).

Knowledge

Knowledge acts as a glue, binding information and learning together. We grasp a topic better when we have prior knowledge of it. It is very significant in the lives of students, especially at school. They will have difficulty understanding the text if they do not have relevant knowledge. It is about obtaining, growing, sharing, and using information to have an impact while learning in the process of studying, teaching, and education (Kaiser, 2019). Parents are crucial in providing their children with prior information. It is because a child's education begins at home, with their parents serving as their first teachers. Teachers, after parents, play an essential role in a child's earning process. They must comprehend, evaluate, and analyze what the students already know about the subject. One of the most powerful indicators of how effectively students acquire new knowledge connected to the material is what they already know about it. Teachers can involve students in a variety of activities to better grasp their prior knowledge. This will help pique their interest in learning and connecting with the subject. It is easier to create learning with background information (Sharna, 2019).

Understanding

When someone truly understands, they can: (1) put concepts, principles, and processes into their own words, teach it to others, justify their answer, and show their reasoning; (2) interpret data, text, and experience through images, analogies, stories, and models; (3) apply what they know in new and complex contexts; and (4) demonstrate perspective by effectively seeing the big picture and recognizing patterns (Wiggins and McTighe,2021).

Proficiency

Learning to perform an activity with competence, as measured by ease, speed, and accuracy of execution, is a skill that may be gained via extensive practice. Motor, perceptual, cognitive, or a mix of these skills may be required. Learning in the twenty-first century skills are often called the 4 C's (1) Critical thinking is a focused, careful examination of something in order to gain a better understanding of it. People frequently allude to critical thinking when they talk about "left brain" function. Analyzing, disputing, classifying, comparing and contrasting, defining, assessing, explaining, problem solving, and tracking cause and effect are some of the most important critical-thinking skills. (2) Expansive, open-ended creativity and discovery of possibilities are examples of creative thinking. When individuals talk about "right brain" activity, they're usually referring to creative thinking. Brainstorming, inventing, designing, entertaining, envisioning, improvising, innovating and creative thinking abilities. (3) In Communicating here are some of the most common attributes in communicating: analyzing the situation, Choosing a medium, evaluating messages listening actively, reading – decoding written words and images in order to under speaking, turn taking, and writing (4) In Collaborating here are some of the most common attributes in collaborating: allocating resources, brainstorming, decision-making, delegating, evaluating ,goal setting, managing time, resolving conflicts and, team building (Mendoza, 2016).

Teachers Performance

Teachers' performance is a series of process actions carried out by teachers in carrying out their tasks and jobs to the best of their abilities in order to achieve institutional goals. It can be measured by the competency of teachers at the time of their teaching. Teachers cannot be detached from many difficulties and work issues while performing their duties and jobs, particularly during the COVID-19 pandemic (Savtri, E., 2020 & Sudarsyah A., 2020).

Teachers should apply appropriate teaching strategies that best suit specific objectives and competencies to secure and facilitate the process of knowledge

transmission (Tebabal and Kahsay, 2011). Effective teaching requires flexibility, creativity, and responsibility in order to provide an instructional environment able to respond to the learner's individual needs (Tulbure, 2014).

Methodology

Research Design

This study utilized combined descriptive-correlational type of research design. This method describes and at the same time correlates the relationship between the students and teachers performances in terms of knowledge, understanding and proficiency.

Locale of the study

This study was conducted in selected Secondary Public Schools of Maguindanao II Division of Bangsamoro Autonomous Region in Muslim Mindanao (BARMM). The secondary schools were Sarilikha National High School, Bai Hanina National High School, Camp Siongco National High School, Datu Alamada Memorial National High School, Datu Arnel Datukon National High School, Datu Malambot National High School, Datu Mantato National High School, Datu Usngtan S. Mastura National High School, Dulangan National High School, Kabuntalan National High School, Camp Darapanan Integrated School, Nuling National High School, Sultan Kudarat National High School and Sultan Mastura National High School, Sulon National High School, Bugabungan National High School, Dr Bernabe G. Dela Fuente Sr. National High School, Kibucay National High School, Nangi National High School, Sabaken National High School, Samad Sumali National High School, Upi Agricultural School, Amir Bara Lidasan National High School, ARMM Regional National High School, Making Integrated Voc & Tech National High School.

Research Participants

The target participants of this study were the 30 Science major teachers in Secondary Schools of Maguindanao II Division and 90 selected Grade-9 Junior High School Students. I used convenient sampling in choosing 90 Grade-9 Junior High School Students. The availability sampling relies on data collection from the population members who are conveniently available to participate in study.

Research Instrument

The study utilized survey questionnaire as the primary tool in the gathering of data from the respondents. The questionnaire has three parts. The first part was the assessment of performances of students in learning science in Modular Distance Learning. The second part was the assessment of performances of science teacher's in teaching science in Modular Distance Learning. The last part was the learning gaps experienced by the students in terms of knowledge, understanding and proficiency.

Data Gathering Procedures

The researcher performed the following steps in conducting the study. First, she asked permission from the school principal through a letter endorsed by the adviser. Then she asked approval also from the respondents before obtaining the data. After distributing the researcher-made instrument to the participants she collected and extracted the data from the responses of the participants. Then, she utilized the gathered data and used certain statistical tools for the analysis and interpretation of the findings.

Statistical Treatment of Data

The statistical formula used in this study were mean, standard deviation and Correlation Coefficient (Person R). Weighted mean was used to determine the status of grade 9 students' performances in learning science and the status of science teachers' performances in teaching science 9. Standard deviation was used to determine how far the individual responses to a question vary from the mean. Lastly, Correlation Coefficient (Person R) was used to measure the relationship between the students' and the teachers' performances in grade 9 science. The analysis and interpretation of data were presented in details through tables, accompanied by paragraphs of discussion which pointed out important aspect of data using descriptive statistic

Results and Discussion

Relationship Between the Students' and the Teachers' Performance in Grade 9 Science By Subjects in Terms of Knowledge

The data in Table 1 shows the relationship between the Students' and the Teachers' performance in Grade 9 Science by subjects in terms of knowledge.

Table 1 shows that in Biology, there is no significant relationship between the student's mean performance

and teacher's mean performance in terms of knowledge. This is indicated by the smaller computed r-value 0.389 as compared to the tabular or critical value ±0.878 at 5% level of significance.

In chemistry subject there is no significant relationship between the student's mean performance and teacher's mean performance in terms of knowledge. This is indicated by the computed r-value 0.802 as compared to the tabular or critical value ±0.878 at 5% level of significance.

Table 1. *Relationship Between the Students' and the Teachers' Performance in Grade 9 Science By Subjects in Terms of Knowledge*

Science 9 Subjects	*Paired Variable*	*Computed r- Value*	*Critical r-value (5%level,2-tailed)*	*Description*
A. Biology				
	Student's Mean Performance and Teachers' Mean Performance	0.389	±0.878	Not Significant
B. Chemistry				
	Student's Mean Performance and Teacher's Mean Performance	0.802	±0.878	Not Significant
C. Physics				
	Student's Mean Performance and Teacher's Mean Performance	0.308	±0.878	Not Significant
D. Earth Science				
	Student's Mean Performance and Teacher's Mean Performance	- 0.184	±0.878	Not Significant
E. In General				
	Student's Mean Performance and Teachers Mean Performance	0.598	±0.950	Not Significant

In Physics subject there is no significant relationship between the student's mean performance and teacher's mean performance in terms of knowledge. This is indicated by the computed smaller r-value 0.308 as compared to the ±0.878 at 5% level of significance.

In Earth Science subject there is no significant relationship between the student's mean performance and teacher's mean performance in terms of knowledge. This is indicated by the computed r-value -0.184 as compared to the tabular or critical value ±0.878 at 5% level of significant tabular or critical value level of significance.

In general, there is no significant relationship between the student's mean performance and teacher's mean performance in terms of knowledge. This is indicated by the computed r-value 0.598 as compared to the tabular or critical value ±0.950 at 5% level of significance. This implies that both student's mean performances and teacher's mean performances are most likely the same.

Relationship Between the Students' and the Teachers' Performance in Grade 9 Science By Subjects in Terms of Understanding

The data in Table 2 shows the relationship between the Students' and the Teachers' performance in Grade 9 Science by subjects in terms of understanding.

In Biology, there is no significant relationship between the student's mean performance and teacher's mean performance in terms of understanding. This is indicated by the computed r-value -0.065 as compared to the tabular or critical value ±0.878 at 5% level of significance

Table 2. *Relationship Between the Students' and the Teachers' Performance in Grade 9 Science By Subjects in Terms of Understanding*

Science 9 Subjects	*Paired Variable*	*Computed r- Value*	*Critical r-value r- Value (5%level,2-tailed)*	*Description*
A. Biology				
	Student's Mean Performance and Teachers' Mean Performance	- 0.065	±0.878	Not Significant
B. Chemistry				
	Student's Mean Performance and Teacher's Mean Performance	0.273	±0.878	Not Significant
C. Physics				
	Student's Mean Performance and Teacher's Mean Performance	-0.226	±0.878	Not Significant
D. Earth Science				
	Student's Mean Performance and Teacher's Mean Performance	- 0.021	±0.878	Not Significant
E. In General				
	Student's Mean Performance And Teachers Mean Performance	0.897	±0.950	Not Significant

In chemistry, there is no significant relationship between the student's mean performance and teacher's mean performance in terms of understanding. This is indicated by the computed r-value 0.273 as compared to the tabular or critical value ±0.878 at 5% level of significance.

In Physics, there is no significant relationship between the student's mean performance and teacher's mean

performance in terms of understanding. This is indicated by the computed smaller value r-value -0.226 as compared to the ±0.878 at 5% level of significance.

In Earth Science, there is no significant relationship between the student's mean performance and teacher's mean performance in terms of understanding. This is indicated by the computed r-value 0.021 as compared to the tabular or critical value ±0.878 at 5% level of significant tabular or critical value level of significance.

In general, there is no significant relationship between the student's mean performance and teacher's mean performance in terms of understanding. This is indicated by the computed r-value 0.897 as compared to the tabular or critical value ±0.950 at 5% level of significance. Which means that both student's mean performances and teacher's mean performance are most likely the same.

Relationship Between the Students' and the Teachers' Performance in Grade 9 Science By Subjects in Terms of Proficiency

The data in Table 3 shows the relationship between the Students' and the Teachers' performance in Grade 9 Science by subjects in terms of proficiency.

Table 3**.** *Relationship Between the Students' and the Teachers' Performances in Grade 9 Science By Subjects in Terms of Proficiency*

Science 9 Subjects	*Paired Variable*	*Computed r- Value*	*Tabular/Critical r- Value (5%level,2-tailed)*	*Description*
A. Biology				
	Student's Mean Performance and Teachers' Mean Performance	- 0.403	±0.878	Not Significant
B. Chemistry				
	Student's Mean Performance and Teacher's Mean Performance	0.099	±0.878	Not Significant
C. Physics				
	Student's Mean Performance and Teacher's Mean Performance	-0.155	±0.878	Not Significant
D. Earth Science				
	Student's Mean Performance and Teacher's Mean Performance	- 0.872	±0.878	Not Significant
E. In General				
	Student's Mean Performance and Teachers Mean Performance	0.225	±0.950	Not Significant

In Biology, there is no significant relationship between the student's mean performance and teacher's mean performance in terms of proficiency. This is indicated by the computed r-value -0.403 as compared to the tabular or critical value ±0.878 at 5% level of significance.

In Chemistry, there is no significant relationship between the student's mean performance and teacher's mean performance in terms of proficiency. This is indicated by the computed r-value -0.099 as compared to the tabular or critical value ±0.878 at 5% level of significance.

In Physics subject there is no significant relationship between the student's mean performance and teacher's mean performance in terms of understanding. This is indicated by the computed smaller r-value 0.155 as compared to the ±0.878 at 5% level of significance.

In Earth Science subject there is no significant relationship between the student's mean performance and teacher's mean performance in terms of understanding. This is indicated by the computed r-value 0.872 as compared to the tabular or critical value ±0.878 at 5% level of significant tabular or critical value level of significance.

In general, there is no significant relationship between the student's mean performance and teacher's mean performance in terms of understanding. This is indicated by the computed r-value 0.225 as compared to the tabular or critical value ±0.950 at 5% level of significance. This implies that both student's mean performances and teacher's mean performances are most likely the same.

Relationship Between the Students' and the Teachers' Performances in Grade 9 Science in Terms of Knowledge, Understanding, and Proficienc

The correlation coefficient obtained from the association between the student's mean performance and the teacher's mean performance in terms of knowledge, understanding, and proficiency are reflected in Table 4.

Table 4. *Relationship Between the Students' and the Teacher's Performances in Grade 9 Science in Terms of Knowledge, Understanding, and Proficiency*

Science 9 Subjects	Paired Variable	Computed r- Value	Critical r- Value (5%level,2-tailed)	Description
Knowledge				
	Student's Mean Performance and Teachers' Mean Performance	0.598	±0.950	Not Significant
Understanding				
	Student's Mean Performance and Teacher's Mean Performance	0.897	±0.950	Not Significant
Proficiency				
	Student's Mean Performance and Teacher's Mean Performance	-0.225	±0.950	Not Significant

As shown in Table 4, there is no significant relationship between the student's mean performance and the teacher's performance in terms of knowledge. This is indicated by the smaller computed r-value of 0.598 as compared to the tabular or critical r-value of 0.950 at 5% level of significance.

The computed r-value of 0.598 is high but not sufficient to reject the null hypothesis. However, the coefficient of determination, $r^2 = (0.598)^2 = 35.76\%$ which indicates that 35.76% of the variations of the students' performance is explained by or associated with the teachers' performance. This means further that 64.24% in the variation of the students' performance is associated with the other factors that are outside or not part of the study.

In the case of "understanding", although the computed r-value of 0.897 is high but failed to reach the critical r-value of 0.950 to be significant at 5% level or significance. The coefficient of determination, $r^2 = (0.897)^2 = 80.46\%$ indicates that 80.46% of the variation of the students' performance is explained by or associated with the teacher's performance. This means further that 19.54% in the variation of the students' performance is associated with the other factors that are outside or not part of the study.

In the aspect of proficiency, the relationship between the student's mean performance and the teacher's mean performance is not significant. This is indicated by the smaller computed r-value of 0.225 as compared to the tabular or critical r-value of 0.950 at 5% level of significance. This means that in terms of proficiency, the performance of the Grade 9 students in learning Science do not influence the teachers' performance in teaching Science subjects.

Conclusion

The level of performance of grade 9 students in learning science in terms of knowledge, understanding and proficiency has a fair result, and the level of performance of grade 9 science teachers in teaching science in terms of knowledge, understanding and proficiency has an excellent result. Though there are learning gaps in specific science areas, the result is negligible.

Based on the findings of this study, the following recommendations are given: (1) Aside from conducting an in-service training for teachers, the school leaders should provide a regular technical assistance and learning action cell (LAC) session to their teachers to ensure that they are properly practicing the spiral approach in their respective classes. (2) An intervention program may be developed for students with the aim of improving their academic performance. (3) A similar research may be conducted determining the relationship of teaching method to the academic performance of students and other learning areas. (4) Further research studies may be conducted to explore others factors that affect the academic performance of students in science.

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Affiliations and Corresponding Information

Nor Ayn Salindao
Sarilikha National High School
Maguindanao-II Division
MBHTE BARMM- Philippines

Norton Salindao
PRO BAR Philippine National Police

Haron Mohamad
MBHTE-BARMM
Talitay National High School
Maguindanao-1 Division, Philippines

Noraysa Kasan
Sarilikha National High School
Maguindanao-II Division
MBHTE BARMM- Philippines