

## **Teachers' Performance and Students' Learning Outcome in the Division of Cavite Province, Philippines**

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### **Abstract**

The paper aimed to correlate the teachers' performance and learning outcomes on grade 10 students' first periodic test and the teachers' Performance as assessed by headteachers and students in relationships with the knowledge of the subject matter and pedagogical approaches such as constructivism, collaborative, integrative, inquiry-based and reflective approaches. The respondents were the schools offering the same strands on Information and Communications Technology, Cookery and Wellness Massage located in North Cluster, Division of Cavite Province in the Philippines. As to the knowledge of the subject matter and pedagogical approaches, the teachers' Performance was outstanding as assessed by headteachers. Amongst the pedagogical approaches, the integrative approach obtained the highest meanwhile. The reflective approach got the lowest mean. The data were analyzed with the descriptive method and documentary analysis on teachers' performance and learning outcomes on students' first periodic tests. These were also the means of obtaining the data requirements of this research. The findings revealed that the teachers' Performance was highly satisfactory as assessed by students. Amongst the pedagogical approaches, constructivism approach acquired the highest mean while reflective approach got the lowest mean. Moreover, there is a significant difference on teachers' Performance as assessed by headteachers and by students, and there are a significant relationship and weak positive correlation on teachers' Performance on learning outcomes of students' first periodic test and on the assessments of students as to knowledge of the subject matter and pedagogical approaches except for reflective approach which has a very weak positive correlation.

### **Keywords:**

Teachers' Performance, Learning Outcomes Assessment, Pedagogical Approaches, Knowledge of the Subject Matter, Philippines



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### **INTRODUCTION**

Under Republic Act Number 10533 entitled, "An Act Enhancing the Philippine Basic Education System by Strengthening Its Curriculum and Increasing the Number of Years for Basic Education, Appropriating Funds Therefore and for Other Purposes," otherwise known as the Enhanced Basic Education Act of 2013, the State shall create, sustain and support a robust, effective and integrated education system. Section 7 of

RA 10533 states that the Department of Education (DepEd) and the Higher Education Commission (CHED) shall conduct in-service content and pedagogy training programs to meet the content and performance standards of the new K to 12 curricula.

Director Diosdado M. San Antonio, Director IV -Region IVA-CALABARZON, published Regional Memorandum Number 11 series 2015 entitled The 2C-2I-IR Pedagogical Approaches: K to 12

Approaches Across Learning Areas Supporting Teacher Practice, for use by all curriculum implementers of the curriculum.

The field is inspired to review the guide, which consists of several strategies on the five pedagogical approaches outlined in RA10533 (EBEC) to help all teachers in facilitating learner-centric instruction.

Regional Memorandum Number 233 series 2016 entitled 2C-2I-1R Pedagogical Approaches (Constructivist, Collaborative, inquiry-based, integrative, and Reflective), which restates the utilization of 2C-2I-1R pedagogical approaches was issued in support of Regional Memorandum Number 11 series 2015 and RA 10533.

The government is so determined to use the teachers' pedagogical methods 2C-2I-1R to implement their lessons to improve the academic performance of students. But there are only a few studies on these pedagogical approaches in the Philippines, and mostly based on integrative and collaborative approaches. However, a study in the Philippines and its effectiveness in the Philippine settings had not yet considered and proved other approaches.

With this, the researchers wanted to evaluate the correlation between the Performance of the teachers as assessed by the headteachers and the students using the standardized tool anchored on the knowledge of the subject matter of the

teachers and on the five pedagogical approaches such as constructivism, collaborative, integrative, inquiry-based and reflective approaches and student outcome on first periodic test for the school year 2019-2020.

The scope and delimitation of the study included Emiliano Tria Tirona Memorial National High School (ETTMNHS), Bagbag National High School (BNHS), and Rosario National High School (RNHS) teachers of ICT, cookery, and wellness massage from the Division of Cavite-North Cluster in the Philippines. The research also included the grade 10 students of the same teachers under the aforementioned Technical Vocational Track (ICT, cookery, wellness massage) and the headteachers of the Technology and Livelihood Education Department of the same schools.

Among the other schools in the north cluster, these three schools, ETTMNHS, BNHS, and RNHS, were chosen because they are the schools offering the same strands of ICT, cookery, and wellness massage specializations. They're also classified as large schools having 81-120 teachers. ETTMNHS performed better for the fiscal year 2017 for the last three years, 2016-2018, but performed best for 2016 and 2018. In two consecutive years, BNHS has achieved better results and best performance

in the fiscal year 2018. For three consecutive years, RNHS has performed best.

The data sources for this study were the Performance of the teachers as assessed by the headteachers and the students using the research instrument of the researcher and the results of the evaluation of learning outcomes on the first periodic test of the students. The students assessed only their own teachers in the strand they belong to. The Performance of the students was measured based on the results of the student's first periodic test for the school year 2019-2020 assessment of learning outcomes. Furthermore, the study tested the significant difference between the assessment of headteachers and students in terms of knowledge of the subject matter and different pedagogical approaches. The significant relationship on teachers' Performance as assessed by the head teachers and by the students using the researcher's research instrument and also the results of learning outcomes assessment on students' first periodic test for the S.Y. 2019-2020 in Information and Communications Technology (ICT), cookery and wellness massage has been tested as well.

## **LITERATURE REVIEW**

This study was based on knowledge of the subject matter and various pedagogical approaches to teaching, such as the

constructivist approach, collaborative approach, integrative approach, inquiry-based approach, and reflective approach.

Shulman (1986) believed that the focus on knowledge and pedagogy about the subject matter of teachers was regarded as mutually exclusive. The conceptual origins of constructivism began with Jean Piaget's educational research that led to the concept of change of learning and development; Lev Vygotsky contributed to the idea that learning and growth were integrally linked to communicative relationships with others, and John Dewey contributed to the idea that schools had to incorporate real-world issues into the curriculum. Mcleod (2019) mentioned in his study that learners create their own knowledge by using a coding system to organize information and categorize it. Mcleod (2019) suggests that the most successful way to develop a coding system is to learn it, rather than the instructor informing them. The idea of exploration learning means that students are constructing their own knowledge, often known as a constructivist approach for themselves. The role of the instructor should not be to teach knowledge by rote learning but rather to promote the learning process. The use of the spiral technique will help with the discovery learning process. Mcleod (2019) cited that both Bruner and Vygotsky emphasize the atmosphere of a child more than Piaget did,

especially the social setting. All accept that adults should take an active part in educating the boy. Mcleod (2019) also stated that unlike Vygotsky, Bruner stressed the social nature of learning, stating that the scaffolding process would help a child develop skills by other individuals.

### **RESEARCH METHODOLOGY**

The study used the descriptive method of research in order to evaluate the correlation between the teachers' Performance and the result of the Learning Outcomes Assessment. Mean was used to measure the performance of the teachers as measured by the headteachers and by the students in terms of the knowledge of the subject matter and the various pedagogical approaches. Distribution was used to analyze students' Performance. Mann-Whitney U-Test was used to compare the assessment of headteachers and students on teachers' Performance. Spearman Rank was used to test the correlation between the performance of teachers as measured by the students using the testing instrument of the researcher and the results of the assessment of the learning outcomes based on the first periodic test of the students. The scope and limitation of the study included Emiliano Tria Tirona Memorial National High School (ETTMNHS), Bagbag National High School (BNHS) and Rosario National High School

(RNHS) Grade 10 Teachers of Information and Communications Technology (ICT), Cookery and Wellness Massage from the Division of Cavite-North Cluster. Also, this study included the Grade 10 students of the same teachers under the said strands of Technical Vocational Track (ICT, cookery, wellness massage) and the headteachers of Technology and Livelihood Education department of the same schools. These schools were selected because they are the ones in the north cluster, Division of Cavite, in the Philippines, offering the same strands.

The data sources for this analysis were the Performance of the teachers as measured by the headteachers and by the students using the testing instrument of the researcher and the results of the assessment of the learning outcomes on the first periodic student test. The students evaluated only their own teachers in the strand they belong to. The Performance of the students was measured based on the results of the student's first periodic test for the school year 2019-2020 assessment of learning outcomes.

In addition, the study tested the significant difference between the assessment of the knowledge of the subject matter and the different pedagogical approaches of the headteachers and the

students. The significant relationship on teachers' Performance as assessed by the head teachers and by the students using the researcher's research instrument and the result of learning outcomes assessment on students' first periodic test for the S.Y. 2019-2020 in Information and Communications Technology (ICT), Cookery and Wellness Massage was also tested. The names of the

teachers under study were not disclosed for their personal protection and rights.

## FINDING AND DISCUSSION

The teachers' performance was assessed by the headteachers as to the knowledge of the subject matter and pedagogical approaches. The responses range from poor to outstanding.

**Table 1. Head Teachers' Ratings of Teachers' Performance in terms of Knowledge of the Subject Matter**

Indicator	Mean	Verbal Interpretation
Teaches the lesson surely without opening the books all the time	4.75	Outstanding
Accomplishes the objectives and scope of the subject as contained in the course guide.	4.75	Outstanding
Explains the lesson well.	4.75	Outstanding
Does not rely on textbooks alone but utilizes other relevant and up-to-date materials	4.75	Outstanding
<b>Grand Mean</b>	<b>4.75</b>	<b>Outstanding</b>

The data shows that in all four items, the headteachers rated the Performance of the teachers outstanding and all have the same mean of 4.75. According to Abdul Manaf, Abdullah, & Osman (2015), a lecturer's knowledge and skills is related to and provided by the students during the class session. A lecturer with experience in a particular field could provide more comprehension, knowledge acquisition, and analytical skills to help students understand

a subject better. Effectiveness of teaching requires that the instructor has adequate knowledge to allow them to present information by providing adequate explanations for achieving the course's objectives.

**Table 2. Head Teachers' Ratings of Teachers' Performance in terms of Constructivism Approach**

Indicator	Mean	Verbal Interpretation
Encourages students to think, ask questions, and express their own opinions	4.58	Outstanding
Develops learners' ability to consider ideas	4.58	Outstanding
Engages students in individual or group experiential learning (Group Activity, Project Planning, Product Creation, Hands-on Activity)	4.75	Outstanding
Guides the learning in the simplest way.	4.67	Outstanding
Promotes independent and lifelong learning.	4.67	Outstanding
<b>Grand Mean</b>	<b>4.65</b>	<b>Outstanding</b>

The results imply that teachers engage the students constructively in individual or group experiential learning (group activity, project planning, product creation, hands-on activity), and on most of the indicators given. So they are excellent in their teaching when applying the constructivist approach. As stated in the book, *What is a Constructivist Approach to Teaching* (2011), theoretical constructivist approaches to learning claim children have their own way of thinking? Students should be treated as individuals and should be given the

opportunity to collaborate with others and learn through group observation, expression, and practice. Model students have ideas and skills that aren't fully developed but have the potential to be developed, particularly through this form of interaction with others. Constructivism also recognizes the importance of social and cultural influences on the intellect's development. In effect, these influences the way kids learn from each other.

**Table 3. Head Teachers' Ratings of Teachers' Performance in terms of Collaborative Approach**

Indicator	Mean	Verbal Interpretation
Integrates Information Technology in the lessons.	4.75	Outstanding
Reflects on group discussions.	4.67	Outstanding
Engages learners to work in small groups.	4.58	Outstanding

Lets students think through questions using three distinct steps: Think, Pair, Share	4.67	Outstanding
It requires the whole group to think of the entire project and all of its systems together.	4.50	Highly Satisfactory
Emphasizes connections and improve communication among students.	4.67	Outstanding
Involves learners in taking on a teaching role in the school setting.	4.58	Outstanding
Promotes independent and lifelong learning.	4.67	Outstanding
<b>Grand Mean</b>	<b>4.64</b>	<b>Outstanding</b>

Based on the results, the teachers incorporate information technology with outstanding performance and most of the indicators provided in their lessons, but it is highly satisfying when it comes to requiring the entire group to think together about the entire project and all its processes. Ultimately, with outstanding Performance, teachers use the collaborative approach in their teaching. Based on the results of Chime, Ene & Nnene's (2019) research, the

collaborative learning approach will help learners achieve higher levels of achievement, increase time on tasks building cross-ethnic friendship, experience enhanced self-esteem, lifelong interaction and communication skills, and master the vital self-regulated creative habits of life that are required to work as a productive member of society.

**Table 4. Head Teachers' Ratings of Teachers' Performance in terms of Integrative Approach**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
It helps students learn from others.	4.67	Outstanding
He has a good command of the language of instruction and conveys his thoughts and his ideas within the level of understanding of his students.	4.75	Outstanding
Applies theories and principles to practical situations.	4.75	Outstanding

Integrates desirable Filipino values in the daily lesson.	4.75	Outstanding
Promotes independent and lifelong learning.	4.67	Outstanding
Provides complex projects.	4.67	Outstanding
<b>Grand Mean</b>	<b>4.71</b>	<b>Outstanding</b>

The results imply that the teachers have a good command of the instructional language and convey their thoughts and ideas within their students' level of understanding, apply theories and principles to practical situations, and integrate desirable Filipino values into the daily lesson. Thus teachers are evidently practicing an integrative approach in their teaching with outstanding Performance. The use of an integrative approach is more effective than using a conventional method, according to the study

by Emata & Nicolas (2018). Students perceived the strategy as a primary learning tool and an essential to foster self-mastery and focus and concentration sense development.

Overall results suggest teachers have outstanding Performance in applying the inquiry-based approach, particularly when it comes to asking open-ended questions that allow learners to reflect on their experience.

**Table 5. Head Teachers' Ratings of Teachers' Performance in terms of Inquiry-Based Approach**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
Demonstrate an activity or a process of a given content/topic.	4.67	Outstanding
Asks questions and makes comments to the prompt and to each other's posts.	4.67	Outstanding
Asks questions and makes comments to the prompt and to each other's posts.	4.67	Outstanding
It gives an idea of what the learners did and did not get from an activity or experiment.	4.67	Outstanding
Promotes independent and lifelong learning.	4.67	Outstanding
<b>Grand Mean</b>	<b>4.68</b>	<b>Outstanding</b>



In Aktamis, Highe & Ozden's (2016) study, on student achievement as opposed to the traditional teaching method. It was found that the inquiry-based learning method used had far more significant effects

**Table 6. Head Teachers' Ratings of Teachers' Performance in terms of Reflective Approach**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
Engages learners in writing journals.	4.58	Outstanding
Seeks facts before reaching conclusions.	4.58	Outstanding
Recognizes and accepts strengths and weaknesses and exerts efforts to improve them.	4.58	Outstanding
Post questions to get ideas or opportunities in an area that needs to be improved or developed.	4.67	Outstanding
Promotes independent and lifelong learning.	4.67	Outstanding
<b>Grand Mean</b>	<b>4.62</b>	<b>Outstanding</b>

The data imply that teachers have outstanding Performance in practicing reflective approach inside the classroom, especially when posting questions to get ideas or opportunities in an area that needs to be improved or developed and to promote independent and lifelong learning.

One important process in teacher education is a reflective teaching practice. It

encourages teachers and students to develop different competencies such as decision-making, metacognition, and logical thinking (Khanam & Zahid, 2019).

The teachers' performance was assessed by the students in terms of the knowledge of the subject matter, and pedagogical approaches results were all Highly satisfactory.

**Table 7. Head Teachers' Ratings of Teachers' Performance in terms of Knowledge of the Subject Matter**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
Teaches the lesson surely without opening the books all the time	4.09	Highly Satisfactory
Accomplishes the objectives and scope of the subject as contained in the course guide.	4.23	Highly Satisfactory

Explains the lesson well.	4.45	Highly Satisfactory
Does not rely on textbooks alone but utilizes other relevant and up-to-date materials	4.08	Highly Satisfactory
<b>Grand Mean</b>	<b>4.21</b>	<b>Highly Satisfactory</b>

In his study, Jadama (2014) concluded that a teacher's knowledge of subject matter positively impacts the teaching and learning process in schools.

**Table 8. Students' Ratings of Teachers' Performance in terms of Constructivism Approach**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
Encourages students to think, ask questions, and express their own opinions.	4.43	Highly Satisfactory
Develops learners' ability to consider ideas	4.34	Highly Satisfactory
Engages students in individual or group experiential learning (Group Activity, Project Planning, Product Creation, Hands-On Activity)	4.28	Highly Satisfactory
Guides the learning in the simplest way.	4.36	Highly Satisfactory
Promotes independent and lifelong learning	4.19	Highly Satisfactory
<b>Grand Mean</b>	<b>4.32</b>	<b>Highly Satisfactory</b>

The results reveal that the Performance of the teachers in terms of the approach to constructivism is highly satisfactory, especially in encouraging students to think, ask questions, and express their opinions. According to *What is a Constructivist Approach to Teaching* (2011), students should be involved in active learning, and that the role of the teacher is to assist their

students in what they do. Students should be given the opportunity to explore a problem, to try out solutions, to build on this new knowledge to adapt, and to develop new solutions. Students should be encouraged to write, discuss, and draw on what they are learning. They should also converse with others while working actively and not just sitting in groups.

**Table 9. Students' Ratings of Teachers' Performance in terms of Collaborative Approach**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
Integrates Information Technology in the lessons.	4.19	Highly Satisfactory
Reflects on group discussions.	3.96	Highly Satisfactory
Engages learners to work in small groups.	3.92	Highly Satisfactory
Lets students think through questions using three distinct steps: Think, Pair, Share	3.86	Highly Satisfactory
It requires the whole group to think of the entire project and all of its systems together.	4.11	Highly Satisfactory
Emphasizes connections and improve communication among students.	4.21	Highly Satisfactory
Involves learners in taking on a teaching role in the school setting.	4.07	Highly Satisfactory
Promotes independent and lifelong learning.	4.22	Highly Satisfactory
<b>Grand Mean</b>	<b>4.07</b>	<b>Highly Satisfactory</b>

Based on the results, students are highly satisfied with teachers' Performance in applying a collaborative approach to their teaching, particularly as they promote independent and lifelong learning among students.

Chime, Ene & Nnene (2019) cited that an active learning strategy is believed in a collaborative approach. All students should be involved in the process of learning. This approach believes that there is something everyone has to contribute to the learning process. The students may be involved in pair work, group work, or group brainstorming, project, or discussion. The

lesson should involve interaction between students and groups, students, and teachers.

The results imply that the teachers have a good command of the language of instruction and convey their thoughts and ideas both within their students' level of comprehension and with the other indicators. Thus, the students are highly satisfied as the teachers apply an integrative approach in their teachings.

The integrative approach has positive effects on the achievement of the students, according to the Becker & Park study (2011).

**Table 10. Students' Ratings of Teachers' Performance in terms of Integrative Approach**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
It helps students learn from others.	4.25	Highly Satisfactory
He has a good command of the language of instruction and conveys his thoughts and his ideas within the level of understanding of his students.	4.35	Highly Satisfactory
Applies theories and principles to practical situations	4.08	Highly Satisfactory
Integrates desirable Filipino values in the daily lesson	4.25	Highly Satisfactory
Promotes independent and lifelong learning.	4.22	Highly Satisfactory
Provides complex projects.	3.86	Highly Satisfactory
<b>Grand Mean</b>	<b>4.17</b>	<b>Highly Satisfactory</b>

The teachers' Performance in terms of inquiry-based approach is highly satisfactory, especially as they demonstrate an activity or process of a given content or topic. This also applies to all other given indicators.

Abdi (2014) said the students who were educated through inquiry-based learning were more effective than the students who were educated through the conventional methods of teaching.

**Table 11. Students' Ratings of Teachers' Performance in terms of Inquiry-Based Approach**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
Demonstrate an activity or a process of a given content/topic.	4.03	Highly Satisfactory
Asks questions and make comments to the prompt and to each other's posts.	4.16	Highly Satisfactory
Asks open-ended questions that allow learners to reflect on their experience.	4.19	Highly Satisfactory
It gives an idea of what the learners did and did not get from an activity or experiment.	4.26	Highly Satisfactory
Promotes independent and lifelong learning.	4.17	Highly Satisfactory

<b>Grand Mean</b>	<b>4.22</b>	<b>Highly Satisfactory</b>
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The teachers recognize and accept they engaged learners in writing journals. strengths and weaknesses and make efforts Goker (2016) concluded that the writing of to improve them and promote independent journals makes a positive contribution to and lifelong learning, as evident in their learning. highly satisfactory. Students are, however, satisfied with the performance of teachers as

**Table 12. Students' Ratings of Teachers' Performance in terms of Reflective Approach**

<b>Indicator</b>	<b>Mean</b>	<b>Verbal Interpretation</b>
Engages learners in writing journals.	3.47	Satisfactory
Seeks facts before reaching conclusions.	3.95	Highly Satisfactory
Recognizes and accepts strengths and weaknesses and exerts efforts to improve them.	4.26	Highly Satisfactory
Post questions to get ideas or opportunities in an area that needs to be improved or developed.	4.20	Highly Satisfactory
Promotes independent and lifelong learning.	4.26	Highly Satisfactory
<b>Grand Mean</b>	<b>4.03</b>	<b>Highly Satisfactory</b>

The Performance of the students was assessed on the basis of the learning outcome assessment of the raw scores of their first periodic test for the 2019-2020 school year. The said test consisted of 60 items, with a 60% pass rate based on the transmutation table of the Department of Education.

**Table 13. Distribution on Students Performance Based on the Result of the First Periodic Test**

<b>Scores</b>	<b>Frequency</b>	<b>Percentage (%)</b>	<b>Verbal Interpretation</b>
35 and Below	124	40.4	Did Not Meet Expectations
36 to 40	48	15.6	Fairly Satisfactory
41 to 45	46	15.0	Satisfactory
46 to 50	43	14.0	Very Satisfactory
51 to 60	46	15.0	Outstanding
<b>Total</b>	<b>307</b>	<b>100.0</b>	

The data shows that most students received scores of 36 and above, consisting of 183 students or 59.6 %, indicating that most students passed the 60% passing rate as prescribed by the Education Department in their transmutation table in their periodic test. This may also have a significant influence on students' academic performance, and thus may be responsible for students' observed low Performance compared to their teachers' effectiveness. In the area of pedagogical approaches, specifically for the constructivist approach, there is a significant difference between the assessment of students and headteachers on teachers' Performance.

## **CONCLUSION AND FURTHER RESEARCH**

Generally, the results suggest that there is a significant relationship between the teachers' Performance as assessed by the students using the researcher's research instrument in terms of knowledge of the subject matter and of pedagogical approaches specifically the constructivism, collaborative, integrative and inquiry-based approach. However, the results also imply that there is no significant relationship on teachers' performance as assessed by the students' using the researcher's research instrument as regards with reflective

approach and the results on learning outcomes assessment on students' first periodic test.

The researchers strongly recommend that there's a need to enhance a collaborative approach by the teachers that require the whole group of students to think of the entire project and all its systems together. Group projects and activities can help students develop skills specific to collaborative efforts. A proposed training related to a reflective approach on how the teachers engage learners in writing journals, and there is a need In-Service Training program related to reflective approach is titled Creative Reflection Techniques for Junior High School. Further qualitative research like Lived Experiences of Teachers related to their Performance is also recommended for future research.

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