

Physical Education Amidst Pandemic: Contactless Interactions on Students Remote Learning Tasks and Performance in Physical Education

Aaron Paul M. Viñas

Laguna State Polytechnic University

Abstract

This descriptive study determines the Physical Education amidst Pandemic: Contactless Interactions on Student's Remote Learning Tasks and Performance in Physical Education. Three hundred fifty-three randomly selected (353) students were the subject of this study from grade 7 at Sta. Catalina Integrated National High School, District of Majayjay. It aimed to answer the questions such as the level of Contactless Interactions in terms instruction, feedback and support, learning resources, performance assessment and performance monitoring. Also, it sought answers the level of students Remote Learning Tasks in terms of aesthetic sensitivity, knowledge and practice of sports, motor and sports skills and Performance Tasks, and lastly, the level of performance in Physical Education of grade 7 students.

On the basis of the foregoing findings, the following conclusion was drawn that there is a significant relationship between the contactless interactions and the students' remote learning tasks. The researcher then come up to the conclusion that the null hypothesis of which states that the level of students' contactless interaction in physical education classes has no significant relationship on their remote learning tasks" is rejected. This calls for the acceptance of the alternative which incites that there is a significant relationship.

On the other hand, study reveals that there is no relationship between the contactless interactions to the students' performance in physical education.

It can infer that the null hypothesis stating that "The level of students' contactless interaction in physical education classes has no significant relationship on their performance" is true. Hence, there is no significant relationship between the two. Based on the drawn conclusions resulted to the following recommendations:

It is highly suggested that there must be modifications and improvement for the instruction use so that students may be able to clearly understand their task despite of contactless interactions. Differentiated instructions can also be used to enhance students' comprehension in answering their tasks.

It is recommended that the performance monitoring be focused on the students' need and enable them to learn at their own pace.

Furthermore, teachers may also emphasize the value of learning physical education and promotes its importance for the learners. Enhancement program and/or extended physical activities may help them to fully understand the help of physical education for their daily lives.

Grade 7 students may not that incline in their physical strength and activities, so that it is highly recommended to provide engaging activities wherein their can exhibit their sports skills despite of contactless interaction. Lastly, they may find the meaning physical education out of the context if they can experience more hands-on activities.

Keywords: Contactless Interactions, Learning Tasks, Performance Tasks

1. INTRODUCTION

One and a half billion students, according to UNESCO, were engaged in remote learning at the height of the COVID-19 pandemic in March 2020. In the Philippines, the coronavirus pandemic has turned the spotlight on one of the problems in the education system, making education accessible to all, under any circumstances.

With this, all learning instructions were given through remote learning where students and teachers interact not physically but digitally. This situation offers various challenges to both students and instructional leaders especially those with physical education subjects as the subject requires direct instruction, assessment and monitoring of learning tasks. But with the change in the educational trend, performance tasks were given, assess and monitored with remote instruction and teaching.

In addition, in-person classroom instruction has typically employed a range of active learning techniques. These include instructor-guided individual and group work to develop and reinforce conceptual understanding and participatory presentations that are necessary in the teaching and learning process in physical education. Remote learning eliminated much of that.

However, some students readily embraced this shift to e-learning, valuing its flexibility in terms of geographical location and time, whereas others experienced discomfort because of their limited digital literacy, or the absence of physical human engagement and collaboration.

With this prevailing situation, the teaching force in physical education must think and discover new approaches to teaching and learning to overcome the very real challenges this current reality gives rise to especially in the Sports-related sector.

In line with the above discussion, as other students prefer e-learning and remote instruction, it is necessary to understand the importance of physical interaction and direct instruction to physical education as this can affect their learning engagement in doing remote learning tasks and performance. However, this research seeks to find out if contactless interaction has significant relationship on student's Remote Learning Tasks and Performance in Physical Education.

Some students prefer e-learning and remote instruction amidst the prevailing health condition of pandemic. Truly, it greatly affects education system particularly the delivery of instruction. The physical and direct instruction in physical education to their learning engagement in doing remote learning tasks and performance is paramount to education administrators and all to joined hands together to address the problem.

1.1 Objectives of the Study

This study aimed to determine the relationship of Physical Education Amidst Pandemic: Contactless Interactions on Student's Remote Learning Tasks and Performance in Physical Education.

1. What is the level of Contactless Interactions in terms of:

- 1.1 Instruction;
- 1.2 Feedback and Support;
- 1.3 Learning Resources;
- 1.4 Performance Assessment; and
- 1.5 Performance Monitoring?

2. What is the level of Students Remote Learning Tasks in terms of:

- 2.1 Aesthetic Sensitivity;
- 2.2 Knowledge and Practice of Sports;
- 2.3 Motor and Sports Skills; and
- 2.4 Performance tasks?

3. What is the level of Performance in Physical Education of Grade 7 students?

4. Is there a significant relationship between the Contactless Interactions to the Students' Remote Learning Tasks?

5. Is there a significant relationship between the Contactless Interactions to the Performance in Physical Education?

2. METHODOLOGY

2.1 Research Design

The research design used by researcher is descriptive survey research method. According to Calmorin (2009), descriptive method of research is concerned with gathering, classification and presentation of data and the collection of summarizing values to describe group characteristics. The independent variable: that consist the students Contactless Interactions in terms of Instruction, Feedback and Support, Learning Resources, Performance Assessment and Performance Monitoring and the dependent variable consists of Aesthetic Sensitivity, Knowledge and Practice of Sports, Motor and Sport Skills and Performance Tasks and the performance in Physical Education in terms of grades. This method refers to the collection of data from members of the population in which direct contact is made employing the survey questionnaires and checklist both in hard copy and in the google form.

The descriptive method is preferred since it yields valid and reliable results for a manageable number of respondents and can be accomplished with limited resources. A survey instrument was used to obtain data from the randomly selected respondents.

The process of descriptive survey research goes beyond mere gathering and tabulation of data. It involves an element of interpretation of the meaning or significance of what is being described. The researcher believes that descriptive method is the best research method to be used in this research.

2.2 Respondents of the Study

The respondents of the study comprised of 353 three hundred fifty-three (353) grade 7 students from Sta. Catalina Integrated National High School, Majayjay District, Laguna to gather the needed information and to answer the research problem.

2.3 Research Instrument

The research instrument used in the study is a survey questionnaire checklist and google form conducted and administered to the 353 three hundred fifty-three (353) grade 7 students from Sta. Catalina Integrated National High School, Majayjay District, Laguna

The tasks of developing the questionnaire-checklist started with a review of the Contactless Interactions of students during the amidst pandemic. Reading books, published/unpublished thesis/dissertation, articles, magazines, journals, newspapers, surfing the net and interviews were done in order to conceptualize the ideas needed in developing the study.

The study aimed to determine the Contactless Interactions of Students Remote Learning Tasks and Performance Tasks in Physical Education for the school year 2021-2022. The respondents of the study comprised of 353 three hundred fifty-three (353) grade 7 students from Sta. Catalina Integrated National High School, Majayjay District, Laguna

The questionnaire-checklist was composed of 2 parts: Part I Students Contactless Interactions in terms of Instructions, Feedback and Support, Learning Resources, Performance Assessment and Performance Monitoring. Part II Students Remote Learning Tasks in terms of Aesthetic Sensitivity, Knowledge and Practice of Sports, Motor and Sport Skills, Performance Tasks.

The research instrument was presented to the grade 7 students and teachers. The research instrument was content-validated by the specialist consisting of the Panel Member and the Thesis Adviser.

The researcher adapted the Vagias (2008). a five-point likert-scale was used in the questionnaire to determine the level of Contactless Interactions of students Remote Learning Tasks and Performance in Physical Education. The five-point rating indicated below.

Point	Range	Remarks	Verbal Interpretation
5	4.21-5.00	Strongly Agree	Very High
4	3.41-4.20	Agree	High
3	2.61-3.40	Moderately Agree	Moderately High
2	1.81-2.60	Disagree	Low
1	1.00-1.80	Strongly Agree	Very Low

The researcher also gathered student's grades in Physical Education for the first and second quarter used as a secondary data to measure the level of student's performance in Physical Education through a Likert five point scale.

Point	Range	Remarks	Verbal Interpretation
5	90-100	Outstanding	Very High
4	85-89	Very Satisfactory	High
3	80-84	Satisfactory	Moderately High
2	75-79	Fairly Satisfactory	Low
1	74 and below	Did Not Meet Expectations	Very Low

In the construction of the questionnaire described above, an extensive review of various books, publications, and internet sites was used. An initial draft of the research tool was prepared and presented to the professors and panel members for comments and suggestions. Validation was done to assess the representation of the items with those of others dealing with the same area of investigation. The assistance of the adviser relevant to the content of the questionnaire was solicited.

The final form of the questionnaire will be reproduced and administered to the respective respondents.

2.4 Statistical Treatment

The statistical treatment of data was used to compute then analyze and interpret the data given by the respondents. After administering the questionnaire to the respondents, all the data were gathered, analyze and interpreted. The responses was tabulated using google forms as the basis for the statistical treatment of the data. To analyze and interpret the data gathered, the following statistical tools will be utilized in the study.

To determine the level Contactless Interactions in terms of Instructions, Feedback and Support, Learning Resources, Performance Assessment and Performance Monitoring. The Mean and Standard Deviation were used.

To determine the level of Students Remote Learning Tasks in terms of Aesthetic Sensitivity, Knowledge and Practice of Sports, Motor and Sports Skills and Performance Tasks. The Mean and Standard Deviation were also used.

To determine the level of Performance in Physical Education in terms of grades. The frequency and percentage were used.

To determine the significant relationship between Contactless Interactions to the Students Remote Learning Tasks.

The Pearson Product-Moment Correlation Coefficient was used.

To determine the significant relationship between Contactless Interactions to the Performance in Physical Education.

The Pearson Product-Moment Correlation Coefficient was also used.

3. RESULTS AND DISCUSSION

This section presents the data gathered which were statistically treated, presented, analysed in tables and interpreted in relation to the problems and hypotheses specified in the study. The results were presented in the same sequence with the research questions posed in the study.

Table 1 shows the students level of Contactless Interactions in terms of Instruction. It presents the statements, mean, standard deviation and verbal Interpretation in terms of Instructions.

Table 1. Level of Contactless Interactions in terms of Instructions

Statement	Mean	SD	REMARKS	Verbal Interpretation
Instructions are easy to understand by the students.	4.20	0.80	Agree	High
Instructions can stimulate student's interest to learn.	4.16	0.75	Agree	High
Instructions use imperative mood to give directions for doing their activities.	4.17	0.78	Agree	High
Instructions provides clear and specific commands.	4.11	0.86	Agree	High
Instructions are supported by precise explanations so that students can easily understand their tasks.	4.13	0.96	Agree	High

Overall Mean = 4.15

Standard Deviation = 0.83

Verbal Interpretation = High

Table 1 illustrates the level of contactless interaction in terms of instructions. Among the statements above, "Instructions are easy to understand by the students" yielded the highest mean score ($M=4.20$, $SD=0.80$) and was remarked to a very great extent. This is followed by "Instructions use imperative mood to give directions for doing their activities" with a mean score ($M=4.17$, $SD=0.78$) and was remarked to a great extent. On the other hand, the statement "Instructions provides clear and specific commands" received the lowest mean score of responses with ($M=4.11$, $SD=0.86$) yet was also remarked to a great extent.

Overall, the level of contactless interaction in terms of instructions attained a mean score of 4.15 and a standard deviation of 0.83 and was High among the respondents.

Findings shows that students clearly understand instructions and

Activities however, the mastery of skills depends on student's focus and capabilities. And the result shows high among the contactless interactions in terms of instructions which means that is given effectively. Despite the contactless interactions it is evident based on the data gathered shown on table 1 that students are able to clearly understand their learning tasks.

Instructional experiences on online instruction are designed in a planned manner, over weeks and months, most often with support of an instructional designer and a media services team as online instruction is defined as the facilitation that occurs in a course that has been developed with the intention for fully online delivery. The learning experiences and instructional objects in an online course are typically fully-developed before the start of a semester (Priego, 2020).

Table 2 shows the level of students Contactless Interactions in terms of Feedback and Support.

Table 2 illustrates the level of contactless interaction in terms of feedback and support. Among the statements above, "Feedback and support make a good flow of communication within the learners and educators" yielded the highest mean score ($M=4.28$, $SD=0.83$) and was remarked to a very great extent.

This is followed by "Feedback and support give the students an explanation of what they are doing correctly and incorrectly" with a mean score ($M=4.25$, $SD=0.85$) and was also remarked to a very great extent.

Table 2. Level of Contactless Interactions in Terms of Feedback and Support

Statement	Mean	SD	Remarks	Verbal Interpretation
Feedback and support allow students to learn metacognitive strategies such as goal setting and task planning	4.18	0.85	Agree	High
Feedback and support help the students to develop self-reflection and self-regulated learning.	4.17	0.83	Agree	High
Feedback and support give the students an explanation of what they are doing correctly and incorrectly.	4.25	0.85	Agree	Very High
Feedback and support help the students to change and make adjustments when needed.	4.23	0.78	Agree	Very High
Feedback and support make a good flow of communication within the learners and educators.	4.28	0.83	Agree	Very High

Overall Mean = 4.22**Standard Deviation = 0.83****Verbal Interpretation = Very High**

On the other hand, the statement “Feedback and support help the students to develop self-reflection and self-regulated learning” received the lowest mean score of responses with (M=4.17, SD=0.83) and was remarked to a great extent.

On the level of contactless interaction in terms of feedback and support attained an overall mean score of 4.22 and a standard deviation of 0.83 and was Very High among the respondents.

Findings present that feedback and support is highly manifested in teaching Physical Education during the contactless interaction. It enables the student to fully appreciate their knowledge and fully understand their strengths and weaknesses as a learner.

Quality feedback is immediate, focused on one or two changes that can make an impact, and phrased positively. Teachers need not compare students to each other but should focus on helping students master a skill. One type of feedback includes descriptive.

Table 3 shows the level of students Contactless Interactions in terms of Learning Resources.

Table 3. Level of Contactless Interactions in Terms of Learning Resources

Statement	Mean	SD	Remarks	Verbal Interpretation
Learning resources are appropriate for the students.	4.27	0.76	Strongly Agree	Very High
Learning resources incorporate deliberate learning supports that help learners understand key concepts.	4.20	0.71	Agree	High
Learning resources organize material as clearly as possible to avoid overloading the students.	4.14	0.82	Agree	High
Learning resources provide specific and general information for the learner's understanding.	4.18	0.79	Agree	High
Learning resources enable to transfer and skills and knowledge to the students.	4.23	0.86	Agree	Very High

Overall Mean = 4.21**Standard Deviation = 0.79****Verbal Interpretation = Very High**

Table 3 illustrates the level of Contactless Interactions in terms of Learning Resources. Among the statements above, “Learning resources are appropriate for the students” yielded the highest mean score (M=4.27, SD=0.76) and was remarked to a very great extent. This is followed by “Learning resources enable to transfer and skills and knowledge to the students” with a mean score (M=4.23, SD=0.86) and was also remarked to a very great extent. On the other hand, the statement “Learning resources organize material as clearly as possible to avoid overloading the students” received the lowest mean score of responses with (M=4.14, SD=0.82) and was remarked to a great extent.

Overall, the level of Contactless Interaction in terms of Learning Resources attained a mean score of 4.21 and a standard deviation of 0.79 and was Very High among the respondents.

It reveals that learning resources are appropriate for the student. It is efficient in giving definite knowledge and specific lesson for them. It can also shows that learning resources are able to further enhance student's skills.

Learning Resources that are used in the education of university students are often available online. The nature of new technologies causes an interweaving of formal and informal learning, with the result that a more active role is expected from students with regard to the use of ICT for their learning. (Lebeničnik, Pitt and Starčič, 2019)

Electronic resources have become a dominant feature of higher education, both traditional and distance learning based. Unlike in the past when universities relied majorly on the physical library and hard copy of books, e-books accessible through e-libraries are the dominant features of this century's institutions of higher learning.

Table 4 shows the level of students Contactless Interactions in terms of Performance Assessment.

Table 4. Level of Contactless Interactions in terms of Performance Assessment

Statement	Mean	SD	Remarks	Verbal Interpretation
Performance assessment allows the effective use of general and specific rubrics for every activity.	4.27	0.76	Strongly Agree	Very High
Performance assessment helps with the alignment of instructions and the learning targets.	4.20	0.79	Agree	High
Performance assessment supports the students with various kinds of activities that can improve their abilities.	4.17	0.82	Agree	High
Performance assessment let the students to apply their authentic knowledge in constructing the concepts.	4.26	0.74	Strongly Agree	Very High
Performance assessment allows the student to demonstrate their knowledge.	4.19	0.80	Agree	High
Overall Mean = 4.22				
Standard Deviation = 0.78				
Verbal Interpretation = Very High				

Table 4 illustrates the level of Contactless Interactions in terms of Performance Assessment. Among the statements above, "Performance assessment allows the effective use of general and specific rubrics for every activity" yielded the highest mean score ($M=4.27$, $SD=0.76$) and was remarked to a very great extent. This is followed by "Performance assessment let the students to apply their authentic knowledge in constructing the concepts" with a mean score ($M=4.26$, $SD=0.74$) and was also remarked to a very great extent. On the other hand, the statement "Performance assessment supports the students with various kinds of activities that can improve their abilities" received the lowest mean score of responses with ($M=4.17$, $SD=0.82$) and was remarked to a great extent.

While the overall level of contactless interaction in terms of performance assessment attained a mean score of 4.22 and a standard deviation of 0.78 and was Very High among the respondents.

Students may have different level of interest and level of focus and attention in their studying but the study findings reveal that in contactless interaction of student in remote learning, performance assessment are highly varied and effectively affects the students. It shows that learners are able to experience activities and performances that appropriate for them.

Difficulties in conveying the value of sports in online physical education classes remained in the modified technical practice. This value included maintaining health through physical activities, cultivating community consciousness through physical activities with friends, and developing sports etiquette through sports participation. Students engaged in online physical education classes often cannot secure enough space to effectively take part in physical activity and also have limited access to supplies and equipment needed to follow online physical education classes (Park et. al, 2020).

Table 5 shows the level of students Contactless Interactions in terms of Performance Monitoring.

Moreover, form the remarks given, the verbal interpretation can be determined as Very High, High, Moderately High, Low and Very Low.

Table 5 illustrates the level of Contactless Interaction in terms of Performance Monitoring. Among the statements above, "Performance monitoring allows the student to reinforce with the standardized test and assessment which include all the benchmarks that is needed" yielded the highest mean score ($M=4.27$, $SD=0.70$) and was remarked to a very great extent. This is followed by "Performance monitoring help the students to get their feedback and opinions about the lesson they have learned" with a mean score ($M=4.26$, $SD=0.78$) and was also remarked to a very great extent. On the other hand, the statement "Performance monitoring allows frequent and consistent evaluations" received the lowest mean score of responses with ($M=4.07$, $SD=0.83$) and was remarked to a great extent.

Table 5. Level of Contactless Interactions in Terms of Performance Monitoring

Statement	Mean	SD	Remarks	Verbal Interpretation
Performance monitoring allows the student to reinforce with the standardized test and assessment which include all the benchmarks that is needed.	4.27	0.70	Strongly Agree	Very High
Performance monitoring permits the students to not only use written exams rather also with the use of observation and interaction.	4.21	0.77	Agree	High
Performance monitoring let the students experience various kinds of evaluation.	4.15	0.78	Agree	High
Performance monitoring allows frequent and consistent evaluations.	4.07	0.83	Agree	High
Performance monitoring help the students to get their feedback and opinions about the lesson they have learned.	4.26	0.78	Strongly Agree	Very High

Overall Mean = 4.19**Standard Deviation = 0.77****Verbal Interpretation = High**

Overall, the level of Contactless Interaction in terms of Performance Monitoring attained a mean score of 4.19 and a standard deviation of 0.77 and was High among the respondents.

In the process of physical education, a person not only satisfies the need for physical education, but also generates interests, motives, feelings, norms and rules of human behavior with the means of monitoring (Uher et.al, 2017).

The statement of the problem two (2), What is the level of Students Remote Learning Tasks in terms of Aesthetic Sensitivity, Knowledge and Practice of Sports, Motor and Sports Skills and Performance Tasks.

The following table shows the statement, Mean, Standard Deviation and the Verbal Interpretation.

Level of Students Remote Learning Tasks

The statement of the problem number two (2), What is the level of students Remote Learning Tasks in terms of Aesthetic Sensitivity, Knowledge and Practice of Sports, Motor and Sports Skills and Performance Tasks.

Table 6 shows the level of students Remote Learning Tasks in terms of Aesthetic Sensitivity.

Moreover, from the remarks given, the verbal interpretation can be determined as Very High, High, Moderately High, Low and Very Low.

Table 6 illustrates the level of students learning tasks in terms of aesthetic sensitivity. Among the statements above, "I am able to appreciate the beauty of everything in my surroundings" yielded the highest mean score ($M=4.47$, $SD=0.72$) and was remarked to a very great extent. This is followed by "I am able to develop self and mutual respect" with a mean score ($M=4.30$, $SD=0.85$) and was also remarked to a very great extent. On the other hand, the statement "I am able to emphasize different sensory combinations and degrees of intensity" received the lowest mean score of responses with ($M=4.19$, $SD=0.80$) and was remarked to a great extent.

Meanwhile, on the level of students learning tasks in terms of aesthetic sensitivity, it got an overall mean score of 4.28 and a standard deviation of 0.82 and was Very High among the respondents.

In terms of aesthetic sensitivity, students are very aware with their physical environment and able to integrate their skills in understanding the nature of their sensory and skills.

If sports can promote aesthetic experiences, and if physical education has a role on the development of the aesthetic sensibility of students, so important to a global education – as it seems to aspire when we look at most of western physical education programs, even though not that much in praxis, where this seems to be conveyed only to dance and rhythmic activities – then we need to deepen the aesthetic potential and criteria of several sporting activities, and to search ways of taking it in account in physical education classes in a more wide and concrete means.

Table 6. Level of Students Remote Learning Tasks in terms of Aesthetic Sensitivity

Statement	Mean	SD	Remarks	Verbal Interpretation
I am able to appreciate the beauty of everything in my surroundings.	4.47	0.72	Strongly Agree	Very High
I am able to combine my mind and emotion, cognition and sensory experience.	4.22	0.87	Strongly Agree	Very High
I am able to analyze intuition toward understanding something as a whole.	4.24	0.84	Strongly Agree	Very High
I am able to develop self and mutual respect.	4.30	0.85	Strongly Agree	Very High
I am able to emphasize different sensory combinations and degrees of intensity.	4.19	0.80	Agree	High
Overall Mean = 4.28				
Standard Deviation = 0.82				
Verbal Interpretation = Very High				

Table 7 shows the level of students Remote Learning Tasks in terms of Knowledge and Practice of Sports.

Moreover, from the remarks given, the verbal interpretation can be determined as Very High, High, Moderately High, Low and Very Low.

Mean score and Standard Deviation obtained from the points given by the respondents for each statement can be remarked as Strongly Agree, Agree, Moderately Agree, Disagree and Strongly Disagree.

The level of students Contactless Interactions in terms of Knowledge and Practice of Sports is analyzed and determined.

Table 7. Level of Students Remote Learning Tasks in terms of Knowledge and Practice of Sports

Statement	Mean	SD	Remarks	Verbal Interpretation
I am able to develop tactical ability in sports to organize and get the best out of me.	4.16	0.86	Agree	High
I am able to integrate sport content in sporting life.	4.09	0.87	Agree	High
I am able to use my personal knowledge in sports and apply it for my everyday lifestyle.	4.23	0.82	Strongly Agree	Very High
I am able to pinpoint the areas that I need to improve.	4.12	0.86	Agree	High
I am able to enhance my sporting knowledge and ability by consistently doing related activities.	4.22	0.78	Strongly Agree	Very High
Overall Mean = 4.17				
Standard Deviation = 0.84				
Verbal Interpretation = High				

Table 7 illustrates the level of students learning tasks in terms of knowledge and practice of sports. Among the statements above, "I am able to use my personal knowledge in sports and apply it for my everyday lifestyle" yielded the highest mean score ($M=4.23$, $SD=0.82$) and was remarked to a very great extent. This is followed by "I am able to enhance my sporting knowledge and ability by consistently doing related activities" with a mean score ($M=4.22$, $SD=0.78$) and was also remarked to a very great extent. On the other hand, the statement "I am able to integrate sport content in sporting life" received the lowest mean score of responses with ($M=4.09$, $SD=0.87$) and was remarked to a great extent.

Finding reveals that students can to apply their knowledge and practice of sports in their daily lives. It can be helpful for them to develop their physical strength and improve learnings in sports and physical education.

As physical activity is related to improved physical fitness and body composition it is of interest whether these variables are also associated with the awareness and knowledge of the recommendations.

Table 8. Level of Students Remote Learning Tasks in terms of Motor and Sports Skills

Statement	Mean	SD	Remarks	Verbal Interpretation
I am able to engage on more physical and performing activities	4.18	0.81	Agree	High
I am able to develop greater range of independence towards my daily activities.	4.10	0.85	Agree	High
I am able to do some work-outs that can help me improve my muscle strength.	4.20	0.85	Agree	High
I am able to spend time doing physical activities to improve my motor and sports skills.	4.16	0.90	Agree	High
I am able to learn skilled task and apply it on my daily works.	4.22	0.88	Strongly Agree	Very High

Overall Mean = 4.17**Standard Deviation = 0.86****Verbal Interpretation = High**

Table 8 illustrates the level of students learning tasks in terms of motor and sports skills. Among the statements above, “I am able to learn skilled task and apply it on my daily works” yielded the highest mean score ($M=4.22$, $SD=0.88$) and was remarked to a very great extent. This is followed by “I am able to do some work-outs that can help me improve my muscle strength” with a mean score ($M=4.20$, $SD=0.85$) and was also remarked to a very great extent. On the other hand, the statement “I am able to develop greater range of independence towards my daily activities” received the lowest mean score of responses with ($M=4.10$, $SD=0.85$) and was remarked to a great extent.

Grade 7 students, as a respondents of this study may still not that conscious on their physical strength and activities. Thus, the application of their motor and sports skills may not that manifested but still learned in context.

Various factors contribute to motor skill learning in PE, such as practice time and teacher optimization. One of the essential factors that may affect motor skill learning is feedback. Feedback has been defined as an action taken by an agent to deliver information about one or more aspects of student performance.

Table 9 shows the level of students Remote Learning Tasks in terms of Performance Tasks.

Table 9. Level of Students Learning Tasks in terms of Performance Tasks

Statement	Mean	SD	Remarks	Verbal Interpretation
I am able to answer performance task without distressing myself.	4.20	0.72	Strongly Agree	Very High
I am able to demonstrate my own knowledge by doing performance tasks.	4.20	0.73	Agree	High
I am able to develop deep understanding and proficiency with the concepts.	4.16	0.78	Agree	High
I am able to work independently and pay attention to the quality of my work.	4.19	0.81	Agree	High
I am able to develop cognitive skills through answering various kinds of Performance tasks.	4.18	0.83	Agree	High

Overall Mean = 4.19**Standard Deviation = 0.77****Verbal Interpretation = High**

Table 9 illustrates the level of Students Learning Tasks in terms of Performance Tasks. Among the statements above, "I am able to answer performance task without distressing myself" and "I am able to demonstrate my own knowledge by doing performance tasks" yielded the highest mean score ($M=4.20$, $SD=0.72$) and ($M=4.20$, $SD=0.73$) respectively, and were remarked to a very great extent. This is followed by "I am able to work independently and pay attention to the quality of my work" with a mean score ($M=4.19$, $SD=0.81$) and was remarked to a great extent. On the other hand, the statement "I am able to develop deep understanding and proficiency with the concepts" received the lowest mean score of responses with ($M=4.16$, $SD=0.78$) and was remarked to a great extent.

Overall, the level of students learning tasks in terms of performance tasks attained a mean score of 4.19 and a standard deviation of 0.77 and was High among the respondents.

Since the respondents of this study is from grade 7 students, their level of independency in answering task, understanding the lesson and comprehension may varied, however finding still shows that performance task has a high contribution on developing students' skills, knowledge and abilities.

Performance tasks enable teachers to gather evidence not just about what a student knows, but also what he or she can do with that knowledge (Darling-Hammond and Adamson 2018).

Level of Performance in Physical Education of in terms of Grades.

The statement of the problem number three (3), What is the level of Performance in Physical Education of grade 7 students in terms of grades.

Table 10. Level of Performance in Physical Education of Grade 7 Students

RANGE	1 ST QUARTER		V.I	2 ND QUARTER		V.I
	FREQUENCY	PERCENTAGE		FREQUENCY	PERCENTAGE	
		E			E	
90-100	20	5.67	Outstanding	22	6.23	Outstanding
85-89	129	36.54	Very Satisfactory	176	48.86	Very Satisfactory
80-84	186	52.69	Satisfactory	141	39.94	Satisfactory
75-79	18	5.10	Fairly Satisfactory	14	3.97	Fairly Satisfactory
Below 75	0	0.00	Did Not Meet Expectations	0	0.00	Did Not Meet Expectations
Total	353	100.00		353	100.00	
Mean		84.17			85.12	
S.D		3.11			3.05	
Verbal Interpretation		Satisfactory			Very Satisfactory	

Table 10 presents the level of Performance in Physical Education of the grade 7 students in the first and second quarter.

During the first quarter, of the three hundred fifty-three (353) students, 52.69% of the population or one hundred eighty-six (186) performed on a satisfactory level with grades ranging from 80-84. This is seconded in frequency by the students who achieved grades between 85-89 and had performed very satisfactorily which accounts to 36.54% of the population. On the other hand, only eighteen (18) respondents or 5.10% of the population garnered grades between 75-79 and had performed on a fairly satisfactory level.

During the second quarter, of the three hundred fifty-three (353) students, 48.86% of the population or one hundred seventy-six (176) performed on a very satisfactory level with grades ranging from 85-89. This is followed in frequency by the students who achieved grades between 80-84 and had performed satisfactorily which accounts to 39.94% of the population. On the other hand, only fourteen (14) respondents or 3.97% of the population garnered grades between 75-79 and had performed on a fairly satisfactory level.

Despite of contactless interaction of students during the remote learning, findings show that students have a high level of academic performances. Their grades manifests that they are able to learn, practice and physical education in their real-life situations.

Field studies investigating self-determined motivation in relation to learning strategy use and its educational outcomes in physical education are lacking. The purpose of the present study was therefore to test a Self-Determination Theory (Deci & Ryan, 2016) process model of learning strategy use as it related to participation and performance in physical education courses in eighth through tenth grades. In this model, autonomy support from teachers was hypothesized to be positively related to basic psychological need satisfaction.

Significant Relationship between the Contactless Interactions to the Students' Remote Learning Tasks

The statement of the problem number four (4), Is there a significant relationship between the Contactless Interactions to the students' Remote Learning Tasks.

The table show the Contactless Interactions and Students Learning Tasks. Pearson R Correlation was utilized to measure the significant relationship between the independent and dependent variables.

Table 11 below presents the significant relationship between the contactless interactions to the students' remote learning tasks.

Instruction is observed to have a significant weak relationship with the Performance Tasks ($r=0.253$), Motor and Sports Skills ($r=0.270$), Knowledge and Practice Sports ($r=0.283$), and Aesthetic Sensitivity ($r=0.286$) with the p-value of 0.000 across the tests.

Similarly, Learning Resources is observed to have a significant weak relationship with the Performance Tasks ($r=0.279$), Motor and Sports Skills ($r=0.260$), Knowledge and Practice Sports ($r=0.345$), and Aesthetic Sensitivity ($r=0.345$) also with the p-value of 0.000 across the tests.

Table 11. Significant Relationship between the Contactless Interactions to the Students' Remote Learning Tasks

Contactless Interactions	Learning Tasks	Computed r value	Strength	p-value	Analysis
Instruction	Performance Tasks	0.253	Weak	0.000	Significant
	Motor and Sports Skills	0.270	Weak	0.000	Significant
	Knowledge and Practice Sports	0.283	Weak	0.000	Significant
	Aesthetic Sensitivity	0.286	Weak	0.000	Significant
Learning Resources	Performance Tasks	0.279	Weak	0.000	Significant
	Motor and Sports Skills	0.260	Weak	0.000	Significant
	Knowledge and Practice Sports	0.345	Weak	0.000	Significant
	Aesthetic Sensitivity	0.345	Weak	0.000	Significant
Performance Monitoring	Performance Tasks	0.323	Weak	0.000	Significant
	Motor and Sports Skills	0.306	Weak	0.000	Significant
	Knowledge and Practice Sports	0.308	Weak	0.000	Significant
	Aesthetic Sensitivity	0.360	Weak	0.000	Significant
Performance Assessment	Performance Tasks	0.336	Weak	0.000	Significant
	Motor and Sports Skills	0.324	Weak	0.000	Significant
	Knowledge and Practice Sports	0.288	Weak	0.000	Significant
	Aesthetic Sensitivity	0.393	Weak	0.000	Significant
Feedback and Support	Performance Tasks	0.309	Weak	0.000	Significant
	Motor and Sports Skills	0.296	Weak	0.000	Significant
	Knowledge and Practice Sports	0.290	Weak	0.000	Significant
	Aesthetic Sensitivity	0.397	Weak	0.000	Significant

Legend:

Range	Verbal Interpretation
0.80-1.00	Very Strong
0.60-0.79	Strong
0.40-0.59	Moderate
0.20-0.39	Weak
0.00-0.19	Very Weak

The same is true for Performance Monitoring as it is observed to have a significant weak relationship with the Performance Tasks ($r=0.323$), Motor and Sports Skills ($r=0.306$), Knowledge and Practice Sports ($r=0.308$), and Aesthetic Sensitivity ($r=0.360$) with the p-value of 0.000 which is less than the significance alpha.

Performance Assessment is observed to have a significant weak relationship with the Performance Tasks ($r=0.336$), Motor and Sports Skills ($r=0.324$), Knowledge and Practice Sports ($r=0.288$), and Aesthetic Sensitivity ($r=0.393$) due to the p-value of 0.000 are less than 0.05.

This pattern is also seen with Feedback and Support as it is observed to have a significant weak relationship with the Performance Tasks ($r=0.309$), Motor and Sports Skills ($r=0.296$), Knowledge and Practice Sports ($r=0.290$), and Aesthetic Sensitivity ($r=0.397$).

From the findings above, we can infer that at 0.05 level of significance, the null hypothesis "The level of students' contactless interaction in physical education classes has no significant effect on their remote learning tasks" is rejected. This calls for the acceptance of the alternative which incites that there is a significant relationship.

Significant Relationship between the Contactless Interactions to the Students' Performance in Physical Education

The statement of the problem number four (4), Is there a significant relationship between the Contactless Interactions to the Performance in Physical Education.

Table 12. Significant Relationship between the Contactless Interactions to the Students' Performance in Physical Education

Contactless Interactions	Performance	Computed r value	Strength	p-value	Analysis
Instruction	1 st Quarter	0.022	Very Weak	0.684	Not Significant
	2 nd Quarter	0.035	Very Weak	0.517	Not Significant
Learning Resources	1 st Quarter	0.034	Very Weak	0.521	Not Significant
	2 nd Quarter	0.051	Very Weak	0.337	Not Significant
Performance Monitoring	1 st Quarter	0.007	Very Weak	0.896	Not Significant
	2 nd Quarter	0.064	Very Weak	0.231	Not Significant
Performance Assessment	1 st Quarter	0.041	Very Weak	0.448	Not Significant
	2 nd Quarter	0.045	Very Weak	0.397	Not Significant
Feedback and Support	1 st Quarter	0.026	Very Weak	0.630	Not Significant
	2 nd Quarter	0.063	Very Weak	0.234	Not Significant

Legend:

Range	Verbal Interpretation
0.80-1.00	Very Strong
0.60-0.79	Strong
0.40-0.59	Moderate
0.20-0.39	Weak
0.00-0.19	Very Weak

Similarly, Learning Resources is observed to have no significant relationship with the 1st Quarter ($r=0.034$) and 2nd Quarter ($r=0.051$) grades as it also incurred the p-values that are greater than the significance alpha of 0.05.

The same is true for Performance Monitoring as it is observed to have no significant relationship with the 1st Quarter ($r=0.007$) and 2nd Quarter ($r=0.064$) grades as it resulted with the p-values 0.896 and 0.231 respectively.

Performance Assessment is observed to have no significant relationship with the 1st Quarter ($r=0.041$) and 2nd Quarter ($r=0.045$) grades for it was able to incur the p-values 0.448 and 0.397.

This pattern is also seen with Feedback and Support as it is observed to have no significant relationship with the 1st Quarter ($r=0.026$) and 2nd Quarter ($r=0.063$) grades as it is with the p-values that are greater than the significance alpha of 0.05.

From the findings above, we can infer that at 0.05 level of significance, the null hypothesis "The level of students' contactless interaction in physical education classes has no significant effect on their performance" is true. Hence, there is no significant relationship between the two.

4. CONCLUSION AND RECOMMENDATION

On the basis of the foregoing findings, the following conclusion was drawn.

The study shows that there is a significant relationship between the Contactless Interactions and the Students' Remote Learning Tasks. The researcher then come up to the conclusion that the null hypothesis of which states that the level of students' contactless interaction in physical education classes has no significant relationship on their remote learning tasks"

is rejected. This calls for the acceptance of the alternative which incites that there is a significant relationship. On the other hand, study reveals that there is no significant relationship between the contactless interactions to the students' performance in physical education. It can infer that the null hypothesis stating that "The level of students' contactless interaction in physical education classes has no significant relationship on their performance" is true. Hence, there is no significant relationship between the two.

Contactless Interactions do affect the student's remote learning tasks in terms of performance tasks, motor and sport skills, knowledge and practice of sports and aesthetic sensitivity. From the findings above, all variables are less than the 0.05 level of significance. With this, the researcher came up to the conclusion that the null hypothesis stating that "There is no significant relationship between the contactless interactions and the student's remote learning tasks" is rejected.

Nevertheless, in terms of performance in physical education, the variable is less than 0.05 level of significance. The researcher therefor concludes that the null hypothesis stating "There is no significant relationship between the contactless interactions and performance in physical education" is true. Hence, there is no significant relationship between the two.

1. The level of Students' Contactless Interactions in Physical Education classes has no significant relationship on their Remote Learning Tasks.

2. The level of Students' Contactless Interactions in Physical Education classes has no significant relationship to the students' Performance in Physical Education.

Recommendations

Based on the drawn conclusions resulted to the following recommendations:

1. It is highly suggested that there may a modifications and improvement for the instruction use so that students will be able to clearly understand their task despite of contactless interactions. Differentiated instructions can also use to enhance students' comprehension in answering their tasks.

2. It is recommended that the performance monitoring may focus on the students' need and enable them to learn at their own paced.

3. Furthermore, teachers may also emphasize the value of learning physical education and promotes its importance for the learners. Enhancement program and/or extended physical activities may help them to fully understand the help of physical education for their daily lives.

4. Grade 7 students may not that incline in their physical strength and activities, so that it is highly recommend to provide engaging activities wherein their can exhibit their sports skills despite of contactless interaction. Lastly, they may find the meaning physical education out of the context if they can experience more hands on activities.

5. ACKNOWLEDGMENTS

First and foremost, I would like to thank our Almighty God for his knowledge, wisdom and protection to work throughout this research. **Julie Rose P. Mendoza, EdD**, GSAR Coordinator and his Technical Expert, for valuable suggestions and for understanding the shortcomings of the researcher during the study; **Liza L. Bartolome, PhD**, his Thesis Adviser and professor in master's program, her for being approachable, understanding, for the support, motivation, commendable suggestions, assistance and rich ideas that helped him pursue this thesis writing; **Evelyn A. Sunico, EdD**, his Statistician, for the statistical expertise, for guiding and providing the needed information in the analysis and interpretation of data; **Benny B. Juacalla, PhD**, his Subject Specialist, for the unconditional support in the development of the study; **Roderick C. Tobias, PhD**, his External Subject Specialist, for the unconditional support and suggestions in the development of the study; **Florhaida V. Pamatmat, EdD**, His English Critic, For Her Suggestions And Corrections For The Improvement Of The Manuscript; **All Grade 7 Learners And Grade 7 Mapeh Teachers**, for their cooperation and participation during the conduct of the study; **Nenita B. Evasco** the School Head of Sta. Catalina Integrated National High schools for her permission to become respondents of the study; His friends, who were always with him not only in times of happiness but also in times of hardships and struggles; His siblings, **Faye Marie V. Octaviano, Clarisse Angelie V. Monteiro, Ryan Ted M. Vinas** for the undying love and support. His loving nephew, **Vince Yuan V. Octaviano** And **Zayn Stephen V. Monteiro** for the love and inspiration. Finally, His **Parents**, Namely, **Angelita M. Viñas** And **Tirso A. Viñas** for their assistance and support to make this thesis writing possible.

6. REFERENCES

- Aboagye, E., Yawson, J. A. & Appiah, K. N. (2020). COVID-19 and e-Learning: The challenges of students in tertiary institutions. *Social Education Research*, 1(1), 109-115. <https://doi.org/10.37256/ser.122020422>
- Abuatog, C. A. (2021). Comparing student performance in an online versus a face-to-face introductory turfgrass science course-a case study. *NACTA J*, 53, 1-7.

- Adnan, M., Anwar, K. (2020). Online learning amid the COVID-19 pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2(1), 45-51. <http://www.doi.org/10.33902/JPSP.2020261309>
- AlAteeq, D. A., Alijhani, S. & AlEesa, D. (2020). Perceived stress among students in virtual classrooms during the COVID-19 outbreak in KSA. *Journal of Taibah University Medical Sciences*, 15(5), 398-403. <https://doi.org/10.1016/j.jtumed.2020.07.004>
- Albertson, L. (2018) A meta-analysis of approaches to engage social work students online. *Journal of Teaching in Social Work*. 38:2, 183-197.
- Alvarez, A. V. (2020). The phenomenon of learning at a distance through emergency remote teaching amidst the pandemic crisis. *Asian Journal of Distance Education*, 15(1), 144-153. <https://doi.org/10.5281/zenodo.3881529>
- Amadora, M. G. (2020, September 18). Common Problems that Occur During Online Classes. Retrieved from <https://mb.com.ph/2020/09/18/common-problems-that-occur-during-online-classes/>
- Amali, I., Bello, M., & Adeoye, G. (2018). Influence of domestic works on female students' academic performance in upper-basic schools in Kwara State, Nigeria. *Journal of Education in Developing Areas*, 26(1), 196-202. <https://journalsplace.org/index.php/JEDA/article/view/44>
- An, B., (2020). 10 Ghanaian students talk about the experience of e-learning. Retrieved from <https://www.pulse.com.gh/lifestyle/10-ghanaian-students-talk-about-theexperience-of-e-learning/zfm19w5>
- Arinto, P. B. (2016). Issues and challenges in open and distance e-Learning: Perspectives from the Philippines. *International Review of Research in Open and Distributed Learning*, 17(2), 162- 180. <https://doi.org/10.19173/irrodl.v17i2.1913>
- Baldikov, N. (2019, December 17). What Is Instant Messaging (IM) - Brosix Instant Messenger. Retrieved from BROSIX website: <https://www.brosix.com/blog/what-is-instant-messaging/>
- Balaran, E. (2020). Knowledge, attitudes, anxiety, and coping strategies of students during COVID-19 pandemic. *Journal of Loss and Trauma*, 25(8), 1-8. <https://doi.org/10.1080/15325024.2020.1769300>
- Bao, W. (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior and Emerging Technologies*, 2(2), 113-115. <https://doi.org/10.1002/hbe2.191>
- Billings, A., & Walqui, C. (2010). Find out the Zone of Proximal Development? Retrieved from Verywell Mind website: <https://www.verywellmind.com/what-is-the-zone-of-proximal-development-2796034>
- Biggs, J. L. (2019). Comparing student performance in online and face-to-face delivery modalities. *J. Asynchr. Learn. Netw.* 18, 1–14. doi: 10.24059/olj.v18i1.348
- Bourne, J. R., McMaster, E., Rieger, J., & Campbell, J. O. (2018). Paradigms for on-line learning: a case study in the design and implementation of an asynchronous learning networks (ALN) course. *Proceedings Frontiers in Education 1997 27th Annual Conference. Teaching and Learning in an Era of Change*. <https://doi.org/10.1109/fie.1997.644851>
- Bozkurt, A. & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian Journal of Distance Education*, 15(1), 1-6. <https://doi.org/10.5281/zenodo.3778083>
- Brooks, K. (2019). Examining social presence in online courses in relation to student's perceived learning and satisfaction. *J. Asynchr. Learn.* 7, 68–88.
- Burgess, J. F. (2019). Comparing student achievement in online and face-to-face class formats. *J. Online Learn. Teach.* Long Beach 6, 30–42.
- Burgess, S. & Sievertsen, H. H. (2020, April 01). Schools, skills, and learning: The impact of COVID-19 on education. Retrieved from <https://voxeu.org/article/impact-covid-19-education>

- Chen, T., Peng, L., Yin, X., Rong, J., Yang, J. & Cong, G. (2020). Analysis of user satisfaction with online education platforms in China during the COVID-19 pandemic. *Healthcare*, 8(3), 1-26. <https://doi.org/10.3390/healthcare8030200>
- Cherry, K. (2019, December 1). How Social Learning Theory Works. Retrieved from Verywell Mind website: <https://www.verywellmind.com/social-learning-theory-2795074>
- Daniels, E. (2018). Introduction: Learning in the brain. *Teaching with Learning in Mind*. <https://sites.google.com/view/efratfurst/teaching-with-learning-in-mind>
- Darling-Hammond, J., Adamson, K. (2018). Learner-content interaction in distance education: the weakest link in interaction research. *Distance Education*, 38(1), 123-135.
- Das, R. (2019). A Brief History (and Future) of Online Degrees. *Forbes/Education*. Available online at: <https://www.forbes.com/sites/ryanraig/2015/06/23/a-brief-history-and-future-of-online-degrees/#e41a4448d9a8>
- De Guzman, D. (2020). President Duterte approves limited face-to-face classes in low-risk areas starting 2021 | Department of Education. Retrieved from <https://www.deped.gov.ph/2020/07/21/president-duterte-approves-limited-face-to-face-classes-in-low-risk-areas-starting-2021/>
- Do, K. (2020). Knowledge retention in capstone experiences: an analysis of online and face-to-face courses. *Knowl. Manag. ELearn.* 8, 528–539. doi: 10.34105/j.kmel.2016.08.033
- Dotson, D. T. (2019). Why don't students like school? A cognitive scientist answers questions about how the mind works and what it means for the classroom. John Wiley & Sons.
- Dumford, A. D., & Miller, A. L. (2018). Online learning in higher education: exploring advantages and disadvantages for engagement. *Journal of Computing in Higher Education*, 30(3), 452–465. <https://doi.org/10.1007/s12528-018-9179-z>
- Dungton, C., Do, L., Wang, M. (2020). E-Learning and Online Instructions of Higher Education during the 2019 Novel Coronavirus Diseases (COVID-19) Epidemic. *Journal of Physics: Conference Series*, 1574, 1-5. <https://doi.org/10.1088/1742-6596/1574/1/012166>
- Dunton, G. F., Do, B., & Wang, S. D. (2020). Early effects of the COVID-19 pandemic on physical activity and sedentary behavior in children living in the U.S. *BMC Public Health*, 20(1). <https://doi.org/10.1186/s12889-020-09429-3>
- Edwards, B. (2020). A Meta-Analysis of Three Types of Interaction Treatments in Distance Education. *Review of Educational Research*, 79(2), 1243-1288.
- Elca, S. S. (2017). A comparison of online vs proctored final exams in online classes. *Imanagers J. Educ. Technol.* 6, 76–81. doi: 10.26634/jet.6.1.212
- Elliot, T., (2019). Efficiency, costs, rankings and heterogeneity: the case of US higher education. *Stud. High. Educ.* 40, 60–82. DOI: 10.1080/03075079.2013.818644
- Ferlazzo, T., (2020). Face-to-face versus online coursework: a comparison of costs and learning outcomes. *Contemp. Issues Technol. Teach. Educ.* 7, 318–326.
- Ferrantelli, J. (2020, September 22). Preparing Prerecorded Presentations - Today's Learner - Cengage. Retrieved March 25, 2021, from Today's Learner website: <https://todayslearner.cengage.com/how-to-prepare-prerecorded-presentations-that-work/>
- Finley, M. J. (2020). A comparison of the performance of online versus traditional on-campus earth science students on identical exams. *J. Geosci. Educ.* 58, 310–312. DOI: 10.5408/1.3559697

- Frank, S. R. (2020). Online versus face-to-face: students' preferences for college course attributes. *J. Agric. Appl. Econ.* 46, 1–19. DOI: 10.1017/S1074070800000602
- Gardiner, E. (2020, March 19). When to Use Synchronous vs. Asynchronous Teaching Methods. Retrieved from Top Hat website: <https://tophat.com/blog/remote-teaching-when-and-how-to-use-synchronous-vs-asynchronous-methods/>
- Gaur, R., Mudgal, S. K., Dharni, I. T., Sharma, R. & Suyal, N. (2020). Barriers encountered during online classes among undergraduate nursing students during COVID-19 pandemic in India. *International Journal of Research in Medical Sciences*, 8(10), 3687–3693. <https://dx.doi.org/10.18203/2320-6012.ijrms20204252>
- George, L. (2018). Synchronous and asynchronous communication in distance learning: A review of the literature.
- Glover, C. S. (2020). Comparative analysis of learning outcomes in face-to-face foreign language classes vs. language lab and online. *J. Coll. Teach. Learn.* 7, 43–54. DOI: 10.19030/tlc.v7i2.88
- Grunt, Y. (2020). Effects of online instruction vs. traditional instruction on student's learning. *Int. J. Instruct. Technol. Dist. Learn.* 2, 57–64.
- Guido, S. S. (2019). Performance gaps between online and face-to-face courses: differences across types of students and academic subject areas. *J. Higher Educ.* 85, 633–659. DOI: 10.1353/jhe.2014.0028
- Gumban, R. (2019). Face-to-Face or face-to-screen? Undergraduates' opinions and test performance in classroom vs. online learning. *Front. Psychol.* 5:1278. DOI: 10.3389/fpsyg.2014.01278
- Hackingson, B. S. (2020). A comparison of online and face-to-face instruction in an undergraduate foundation of American education course. *Contemp. Issues Technol. Teach. E[duc. J.* 4, 196–213.
- Hale, J. H. (2019). Evaluating the cost-effectiveness of online and face-to-face instruction. *Educ. Technol. Soc.* 7, 167–175.
- Hastie, M., Hung, I., Chen, N., & Kinshuk. (2018). A blended synchronous learning model for educational international collaboration. *Innovations in Education and Teaching International*, 47(1), 9–24. <https://doi.org/10.1080/14703290903525812>
- Hampton, P. (2020). Synchronous and asynchronous modes of teaching. Retrieved from OpenLearn website: <https://www.open.edu/openlearn/ocw/mod/oucontent/view.php?id=77528&ion=1>
- Henaku, E. A., (2020). COVID-19 online learning experience of college students: The case of Ghana. *International Journal of Multidisciplinary Sciences and Advanced Technology*, 1(2), 54–62. <https://www.researchgate.net/publication/342586709>
- Henri, J., Castillo-Merino, D., and Dahmani, M. (2019). Do online students perform better than face-to-face students? Reflections and a short review of some Empirical Findings. *Rev. Univ. Soc. Conocim.* 5, 35–44. DOI: 10.7238/rusc.v5i1.326
- Hernando-Malipot, M. (2021). Briones receives COVID-19 jab. Retrieved July 12, 2021, from Manila Bulletin website: <https://mb.com.ph/2021/05/11/briones-receives-covid-19-jab/>
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference Between Emergency Remote Teaching and Online Learning. *EDUCAUSE Review*. Retrieved from <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teachingand-online-learning>
- Holthuis, K. J., Bonk, C. J. Teng, Y. T., Zeng, T. & Oh, E. J. (2018). Future trends of blended learning in workplace learning settings across different cultures, 20th Annual Proceedings of the Association for Educational Communications and Technology, 176–183.

- Jeong, S., & So, H. H. (2020, April 1). Schools, skills, and learning: The impact of COVID-19 on education. *https://voxeu.org/article/impact-covid-19-education*
- Joaquin, J. J. B., Biana, H. T., & Dacela, M. A. (2020). The Philippine Higher Education Sector in the Time of COVID-19. *Frontiers in Education*, 5. <https://doi.org/10.3389/feduc.2020.576371>
- Kalacas, C. G. (2018). Are undergraduate students ready for online learning? A comparison of online and face-to-face sections of a course. *Rural Special Educ. Q.* 31, 25–39. DOI: 10.1177/875687051203100405
- Kirkson, V. H. (2017). A retrospective look at replacing face-to-face embryology instruction with online lectures in a human anatomy course. *Am. Assoc. Anat.* 7, 234–241. DOI: 10.1002/ase.1396
- Kohn, J. (2019). Students' experiences of e-Learning challenges: A phenomenological study. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 10(3), 1-10. <https://doi.org/10.30476/IJVLMS.2019.45841>
- Kim, K. L., Aziz, S., Ozan, E., Kishore, M., & Tabrizi, M. (2020, October 1). Pedagogical Characteristics of Online and Face-to-Face Classes. Retrieved March 25, 2021, from www.learntechlib.org website: <https://www.learntechlib.org/p/24071/>
- Kurt, S. (2020, July 7). Lev Vygotsky - Sociocultural Theory of Cognitive Development. Retrieved from Educational Technology website: <https://educationaltechnology.net/lev-vygotsky-sociocultural-theory-of-cognitive-development/>
- Kuzmina, T., and Lazareva, G. (2017). Student performance in online and traditional sections of an undergraduate management course. *J. Behav. Appl. Manag.* 9, 275–294.
- Larson, G. (2019). Instant messaging | communication. Retrieved from Encyclopedia Britannica website: <https://www.britannica.com/topic/instant-messaging>
- Li, X., Yang, Y., Chu, S. K. W., Zainuddin, Z., & Zhang, Y. (2020). Applying blended synchronous teaching and learning for flexible learning in higher education: an action research study at a university in Hong Kong. *Asia Pacific Journal of Education*, 1–17. <https://doi.org/10.1080/02188791.2020.1766417>
- Llego, M. A. (2020, February 5). Legal Bases of Parents-Teachers Association (PTA). Retrieved March 14, 2021, from TeacherPH website: <https://www.teacherph.com/legal-bases-of-parents-teachers-association-pta/>
- Loughran, D.K (2018). Comparing student performance: online versus blended versus face-to-face. *J. Asynchr. Learn. Netw.* 13, 31–42. DOI: 10.24059/olj.v13i1.1675
- MacIntyre, T., Vincze, K., (2017). The comparative effectiveness of web-based and classroom instruction: A meta-analysis. *Personnel Psychology*, 59(3), 623-664.
- Marjanovic, O. (2019). Learning and teaching in a synchronous collaborative environment. *Journal of Computer Assisted Learning*, 15(2), 129–138. <https://doi.org/10.1046/j.1365-2729.1999.152085.x>
- Mateo, J. (2020, October 5). As Classes Open, 'Learning Crisis' Highlighted with Millions of Students Left Behind. Retrieved from <https://www.onenews.ph/as-classes-open-learning-crisishighlighted-with-millions-of-students-left-behind>
- Matswetu, V. S., Munakandafa, W., Munodawafa, V. & Mandoga, E. (2020). Science student teachers' challenges and coping strategies in an open and distance learning environment in Zimbabwe. *Makarere Journal of Higher Education*, 4(2), 125-137. <https://doi.org/10.4314/majohe.v4i2.1>
- McLeod, S. (2016). Albert Bandura | Social Learning Theory | Simply Psychology. Retrieved from www.simplypsychology.org website: <https://www.simplypsychology.org/bandura.html#:~:text=Social%20learning%20theory%2C%20proposed%20by>
- Milford, C. L. (2016). A comparative analysis of online and classroom-based instructional formats for teaching social work research. *Adv. Soc. Work* 7, 74–88. DOI: 10.18060/184

- Montoya, S. (2020, May 15). The Importance of Monitoring and Improving ICT Use in Education Post-Confinement. Retrieved from uis.unesco.org website: <http://uis.unesco.org/en/blog/importance-monitoring-and-improving-ict-use-education-post-confinement>
- Nieman, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology*, 49(1), 5-22. <https://doi.org/10.1177/0047239520934018>
- Nikolic, S. (2018). Asynchronous and synchronous e-learning. *Educause Quarterly*, 4, 51-55.
- Park, H., Lian, D., Cao, Y., Wu, Y., & Zhou, T. (2020). Predicting Academic Performance for College Students. *ACM Transactions on Intelligent Systems and Technology*, 10(3), 1–21. <https://doi.org/10.1145/3299087>
- Peterson, K. (2018). Understanding interactions in distance education: A review of the literature. *International Journal of Instructional Technology and Distance*.
- Peterson, R. (2018). Surface and deep learning processes in distance education: Synchronous versus asynchronous systems. *Computers & Education*. 51, 1172–1183.
- Priego, C. (2020). Spotlight: Quality education for all during COVID-19 crisis (hundrED Research Report #01). United Nations. <https://hundred.org/en/collections/quality-education-for-all-during-coronavirus>
- Rajkumar R. P. (2020). COVID-19 and mental health: A review of the existing literature. *Asian Journal of Psychiatry*, 52, 102066. <https://doi.org/10.1016/j.ajp.2020.102066>
- Reese, O. (2017). Exploring the factors that enhance student–content interaction in a technology-mediated learning environment. *Cogent Education*, 5(1), 1-21.
- Reimers, D. (2020). Coronavirus: Impacts of school and university lockdowns. Retrieved from University World News website: <https://www.universityworldnews.com/post.php?story=2020081313184272>
- Retrieved from Verywell Mind website: <https://www.verywellmind.com/what-is-the-zone-of-proximal-development-2796034>
- Richards, N. W. (2021). Becoming a Virtual Professor: Pedagogical Roles and Asynchronous Learning Networks. *Journal of Management Information Systems*, 18(4), 169–189. <https://doi.org/10.1080/07421222.2002.11045703>
- Rotas, E., & Cahapay, M. (2020). Difficulties in Remote Learning: Voices of Philippine University Students in the Wake of COVID-19 Crisis. *Asian Journal of Distance Education*, 15(2), 2020. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1285295.pdf>
- Saavedra, J. (2020). Educational challenges and opportunities of the Coronavirus (COVID-19) pandemic. Retrieved from <https://blogs.worldbank.org/education/educational-challenges-andopportunities-covid-19-pandemic>
- Santos, A. P. (2020, October 6). In the Philippines, distance learning reveals the digital divide. Retrieved from <https://eu.boell.org/en/2020/10/06/philippines-distance-learning-reveals-digital-divide>
- Sarwar, H., Akhtar, H., Naeem, M. M., Khan, J. A., Waraich, K., Shabbir, S., Hasan, A., & Khurshid, Z. (2020). Self-reported effectiveness of e-Learning classes during COVID-19 pandemic: A nationwide survey of Pakistani undergraduate dentistry students. *European Journal of Dentistry*, 1-10. <https://doi.org/10.1055/s-0040-1717000>
- Sam, A. (2020, August 27). What Is A Virtual Classroom And Why Does It Matter? Retrieved from eLearning Industry website: <https://elearningindustry.com/virtual-classroom-why-future-online-learning>
- Sasson, T. A. (2019). A comparison of student achievement and satisfaction in an online versus a traditional face-to-face statistics class. *Innov. High. Educ.* 29, 233–250. DOI: 10.1007/s10755-005-1938-x

- Shank, P. (2020, May 12). The Right Asynchronous Learning Elements. Retrieved from eLearning Industry website: <https://elearningindustry.com/asynchronous-digital-learning-modalities-elements>
- Smith, J. (2020). What is an e-meeting? Definition and examples. Retrieved March 25, 2021, from Market Business News website: <https://marketbusinessnews.com/financial-glossary/e-meeting/#:~:text=An%20e%2Dmeeting%20is%20a>
- Subedi, S., Nayaju, S., Subedi, S., Shah, S. K. & Shah, J. M. (2020). Impact of e-Learning during COVID-19 pandemic among nursing students and teachers of Nepal. *International Journal of Science and Healthcare Research*, 5(3), 68-76. https://ijshr.com/IJSHR_Vol.5_Issue.3_July2020/IJSHR0012.pdf
- Sullivan, C. W. (2020). A comparison of student learning outcomes in traditional and online personal finance courses. *MERLOT J. Online Learn. Teach.* 7, 465–474.
- Sundarasan, S., Chinna, K., Kamaludin, K., Nurunnabi, M., Baloch, G. M., Khoshaim, H. B., Hossain, S. F. A. & Sukayt, A. (2020). Psychological impact of COVID-19 and lockdown among university students in Malaysia: Implications and policy recommendations. *International Journal of Environmental Research and Public Health*, 17(17), 6206. <https://doi.org/10.3390/ijerph17176206>
- Stroebe, L. C. E., Hay, J., & Bloemhoff, H. J. (2020). An approach to re-skilling of in-service teachers in Physical Education in South African schools. *South African Journal of Education*, 39(2). <https://doi.org/10.4314/saje.v39i2>.
- Sy, A. Y. (2020). A multi-semester comparison of student performance between multiple traditional and online sections of two management courses. *J. Behav. Appl. Manag.* 8, 66–81.
- Szeto, E. (2019). Community of Inquiry as an instructional approach: What effects of teaching, social and cognitive presences are there in blended synchronous learning and teaching? *Computers & Education*, 81, 191–201. <https://doi.org/10.1016/j.compedu.2014.10.015>
- Tandon R. (2020). COVID-19 and mental health: Preserving humanity, maintaining sanity, and promoting health. *Asian Journal of Psychiatry*, 51, 102256. <https://doi.org/10.1016/j.ajp.2020.102256>
- UNESCO (2020, May 29). The socio-cultural implications of COVID-19. Retrieved from <https://en.unesco.org/news/socio-cultural-implications-covid-19>
- Vangrieken, A., Jung, I., Xiao, J., Vladimirsch, V., Schuwer, R., Egorov, G., ... & Paskevicius, M. (2017). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, 15(1), 1-126. <https://doi.org/10.5281/zenodo.3878572>
- Verawardina, U., Asnur, L., Lubis, A. L., Hendriyani, Y., Ramadhani, D., Dewi, I. P., Darni, R., Betri, T., Susanti, W. & Sriwahyuni, T. (2020). Reviewing online learning facing the Covid-19 outbreak. *Talent Development & Excellence*, 12. <https://www.iratde.com/index.php/jtde/>
- Waters, H. M. (2016). Blended learning and sense of community: a comparative analysis with traditional and fully online graduate courses. *Int. Rev. Res. Open Dist. Learn.* 5. doi: 10.19173/irrodl.v5i2.192
- Watson, C. J. (2018). Traditional versus online biology courses: connecting course design and student learning in an online setting. *J. Microbiol. Biol. Educ.* 17, 417–422. DOI: 10.1128/jmbe.v17i3.1157
- Wiley, A. C. (2017). The online STEM classroom-who succeeds? An exploration of the impact of ethnicity, gender, and non-traditional student characteristics in the community college context. *Commun. Coll. Rev.* 43, 142–164. DOI: 10.1177/0091552115571729
- Yetman, A. (2020). Impact of COVID-19 and Lockdown on Mental Health of Children and Adolescents: A Narrative Review with Recommendations. *Psychiatry Research*, 293(113429), 113429. <https://doi.org/10.1016/j.psychres.2020.113429>

Yoon, R. E., Alberto, N. R., Baron, M. B., Mabulay, R. E., Rizada, L. G., Sy, J. J., Tiu, C. J., Clarion, C. A. & Reyes, J. C. (2018). Barriers to online learning in the time of COVID-19: A national survey of medical students in the Philippines. medRxiv. <https://doi.org/10.1101/2020.07.16.20155747>