The International Review of Multidisciplinary Research
Volume 1, Issue 6, May 2026, pp. 596-611
https://doi.org/10.5281/zenodo.20544672

Innovative Teaching Strategies Employed by Secondary Physical Education Teachers at Cauayan City National High School

Hanna Clarisse B. Pascua
Department of Education
pascuahanna1998@gmail.com

Article Details:

Received: 23 April 2026
Revised: 5 May 2026
Accepted: 10 May 2026
Published: 31 May 2026
Corresponding Email:
pascuahanna1998@gmail.com

Recommended Citation:

Pascua H. B. (2026). Innovative Teaching Strategies Employed by Secondary Physical Education Teachers at Cauayan City National High School. The International Review of Multidisciplinary Research. 1 (6), 596-611. https://doi.org/10.5281/zenodo.20544672

Index Terms:

innovative teaching strategies, 2C-2I-1R pedagogical framework, physical education instruction, MATATAG curriculum alignment, constructivist teaching enhancement, junior high school PE teachers, most essential learning competencies (MELCs), student-centered learning experiences

Abstract. This study explored the extent of implementation of innovative teaching strategies among Physical Education (PE) teachers using the 2C-2I-1R framework Collaborative, Constructivist, Inquiry-Based, Integrative, and Reflective approaches at Cauayan City National High School. Utilizing total enumeration and purposive sampling, 28 Junior High School teachers handling PE for the school year 2025–2026 were selected as respondents. The study aimed to assess how these strategies are applied in relation to the K–12 Most Essential Learning Competencies (MELCs) and the MATATAG curriculum. Findings revealed that despite many teachers being early in their careers and few having specialized training in MAPEH, there was a strong commitment to professional growth and teaching excellence, as reflected in their active use of the 2C-2I-1R strategies. Inquiry-Based and Reflective approaches were most commonly applied, while Constructivist strategies were used the least, indicating a need for further support in implementing student-centered, real-life learning experiences. In response to these findings, a 12-week Constructivist Physical Education Teaching Enhancement Plan is proposed to improve strategy implementation. Recommendations for the school administrators of Cauayan City National High School include providing equal access to resources, encouraging professional development, and supporting strategy integration while future researchers are encouraged to expand the study scope, explore cross-subject applications of the framework, and develop better tools for assessing strategy use.

Introduction

This section introduces the study by explaining its background, research questions, and hypotheses about how Physical Education teachers use innovative teaching strategies. This research seeks to identify how modern instructional methods specifically the 2C-2I-1R pedagogical approach are being utilized to enhance student outcomes.

Research Question

1. What are the demographic characteristics of Physical Education teachers in terms of:
    1.1 highest level of educational attainment;
    1.2 years of experience teaching Physical Education subjects;
    1.3 field of specialization; and,
    1.4 the number of professional development training in teaching Physical Education?
2. What is the extent to which Physical Education (PE) teacher-respondents implement the specific innovative teaching strategies in their classes in general as assessed by themselves and their students based on the 2C-2I-1R pedagogical approach as follows:
    2.1 inquiry-based;
    2.2 integrative;
    2.3 collaborative;
    2.4 constructivist; and,

2.5 reflective?

3. Which innovative teaching strategy is least employed by teachers in teaching the learning competencies in Physical Education subject?
4. What plan of action can be developed to effectively employ the least employed innovative teaching strategy in delivering learning competencies in the Physical Education subject?

Conceptual Framework

This study emphasizes a student-centered approach, which is rooted in the constructivist theory of learning. This study uses the Input-Process-Output (IPO) model as a guide to better understand how innovative teaching strategies are being employed by Physical Education (PE) teachers, especially in connection with the MATATAG Curriculum and the K to 12 Most Essential Learning Competencies (MELCs) set by the Department of Education. The input part considers the background of the PE teachers, including their highest educational attainment, years of experience in teaching PE, the number of PE classes they handle each week, and how often they attend professional development trainings related to the subject. Second, it looks at the specific teaching strategies being used, based on the 2C-2I-R1 pedagogical approach namely collaborative, constructivist, inquiry-based, integrative, and reflective strategies.

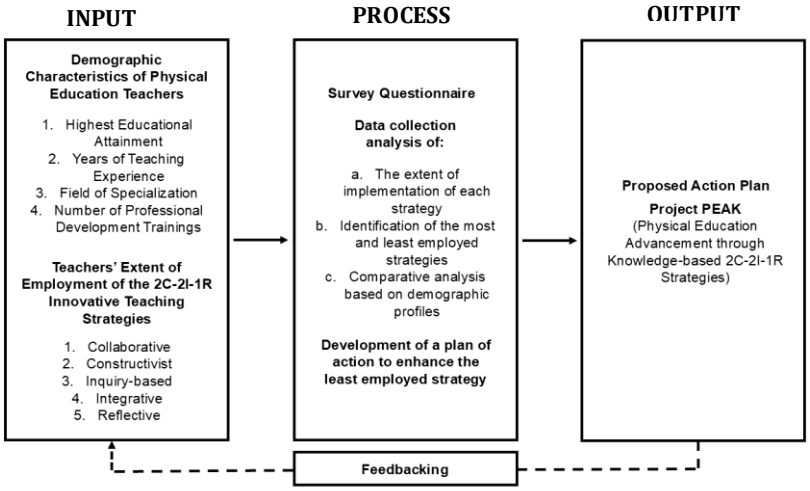

Figure 2. An I-P-O Framework of the Study

For the process, questionnaires or surveys were given to the respondents to find out how often and how effectively these strategies are used in the classroom. The responses helped in identifying which strategies are commonly applied, which ones are not, and whether factors like experience or training affect how strategies are used. It also includes analyzing the results and using the findings to develop a realistic and well-informed plan that could help increase the use of the least employed teaching strategy in PE.

The first and second boxes forms the foundation of Project PEAK (Physical Education Advancement through Knowledge-based 2C-2I-1R Strategies), which is the output. The feedback loop part highlights how Project PEAK is not a one-time effort, but an ongoing process. It allows the program to be regularly checked, improved, and adjusted based on how well it is working. The insights gathered from implementing the action plan are fed back into the system to support continuous professional growth and help ensure the long-term improvement of Physical Education instruction in the Philippine education sector. The project is a proposed action plan aimed at strengthening underutilized approaches and enhancing the overall quality of PE instruction through capacity-building interventions.

Methodology

Research Design

The appropriate research design for this study was a descriptive research design which is the only design that can explore a single variable (Siedlecki, 2020). It is defined as a research method used to describe the existing phenomena as accurately as possible (Atmowardoyo, 2018). This design was suitable as the study aimed to describe the demographic characteristics of Physical Education (PE) teachers and assess the extent to which they implemented the 2C-2I-1R innovative teaching

strategies. Descriptive analysis including frequency counts, percentages, and weighted means were used to summarize the data.

Study Site and Participants

The study was conducted in the Schools Division of Cauayan City, specifically at Cauayan City National High School located in Turayong, Cauayan City, Isabela. The selection of this study site was intentional, as it is the institution where the researcher is currently employed. Moreover, the researcher aims to implement and pilot the proposed interventions within this school, making it a relevant and practical setting for the study.

The participants of the study consisted of Junior High School teachers who are handling Physical Education subjects across different grade levels. These respondents were not limited to teachers with a specialization in Physical Education; rather, they included all teachers assigned to teach Physical Education in the Junior High School level. The key criterion for selection was that participants must have been currently teaching Physical Education at any grade level during the school year 2025–2026. Their participation provided valuable insights into the implementation of innovative teaching strategies aligned with the MATATAG Curriculum and the K–12 Most Essential Learning Competencies (MELCs).

Population, Sample Size and Sampling Method

The sampling method employed was total enumeration, as the population of 28 respondents was small and manageable for the researcher. Purposive sampling was also applied to ensure that only teachers who met the study's criteria were selected to provide relevant data on Physical Education. A total of 28 teachers were identified as eligible and participated in the study. These participants provided valuable insights regarding the implementation of innovative teaching strategies in line with the MATATAG Curriculum and K–12 Most Essential Learning Competencies (MELCs).

Instrument of the Study

The primary tool used in this study was a survey questionnaire designed to collect data from Physical Education (PE) teachers regarding their implementation of innovative teaching strategies in line with the MATATAG Curriculum and the K–12 MELCs. Since the questionnaire was researcher-made and not adapted, it underwent both validity and reliability testing. To establish the content validity of the instrument, a panel of four (4) Physical Education Master Teachers served as expert validators who reviewed the questionnaire in terms of essentiality and relevance. Their evaluations and recommendations were carefully considered, and necessary revisions were incorporated to improve the clarity, appropriateness, and alignment of the items with the intended constructs. The validation process continued until the instrument achieved acceptable scale-level indices for the Content Validity Index (CVI). Following the revisions, all items met the required cut-off values, with each item obtaining an Item-Level CVI (I-CVI) of at least 0.78. Consequently, no item was discarded, and the final version of the questionnaire demonstrated excellent content validity for relevance with an S-CVI of 0.91.

Following the validity testing, the questionnaire underwent reliability analysis to determine its internal consistency using Cronbach's alpha. The results indicated that the 43-item instrument obtained a Cronbach's alpha coefficient of 0.731, signifying acceptable reliability and demonstrating that the questionnaire consistently measured the intended constructs. The reliability testing was conducted by administering the instrument to a small group of Physical Education teachers from a neighboring school who met the inclusion criteria of the study. The data gathered from this pilot testing were used solely for reliability analysis and were not included in the final data analysis.

The survey consisted of two main parts: Part 1 – demographic information and Part 2 – extent of use of innovative teaching strategies.

Part 1 gathered basic data about the respondents, such as highest educational attainment, years of experience in teaching PE, respective field of specialization, and participation in professional development trainings.
Part 2 evaluated the extent to which the respondents implemented innovative teaching strategies in their classrooms. It focused on five core strategies: inquiry-based, integrative, collaborative, constructivist, and reflective.

Data Gathering Procedure

The data gathering process began with securing formal approval from the Schools Division Office of Cauayan City and the principal of Cauayan City National High School. A request letter reflecting the objectives, significance, and procedures of the study was submitted to obtain permission to conduct the research.

Upon approval, the researcher coordinated with the school administration to identify and schedule the participation of the respondents. Using purposive sampling, all twenty-eight (28) Junior High School Physical Education (PE) teachers who met the inclusion criteria specifically those currently teaching Physical Education during the School Year 2025-2026 were selected as participants. Prior to the distribution of the survey instrument, the researcher personally met with the participants to explain the purpose of the study, the nature of their participation, and their rights as respondents. Informed consent forms were then distributed and signed to ensure voluntary participation. The finalized questionnaire was administered in paper form only. The researcher personally distributed the printed questionnaires to the participants during their available time within the school premises. Clear instructions were provided on how to answer each part of the questionnaire. Participants were given sufficient time to complete the instrument.

After completion, the researcher personally retrieved the questionnaires to guarantee a high retrieval rate. Follow-up visits and direct communication were conducted when necessary to collect any remaining responses. All accomplished questionnaires were checked for completeness before leaving the study site. The collected data were then organized, encoded, and securely stored to maintain confidentiality. No identifying information was disclosed, and all responses were used solely for academic purposes.

Statistical Data Analysis

The study employed various statistical tools for data analysis.

Scale	Range	Description	Equivalent Parameter
5	4.21 - 5.00	Always	I consistently employ the strategy.
4	3.41 - 4.20	Often	I regularly employ the strategy, but not always.
3	2.61 - 3.40	Sometimes	I employ the strategy frequently but not always.
2	1.81 - 2.60	Rarely	I seldom employ the strategy.
1	1.00 - 1.80	Never	I do not employ the strategy.

Table 1. Scale Used for Part II of the Survey with Equivalent Parameter

A five-point Likert scale was employed to measure the frequency of teachers' instructional practices, with response options ranging from "Always" to "Never." Respondents rated each statement according to how often they applied the specified teaching strategies in their classes. The interpretation of the responses followed the scale and equivalent parameters presented in Table 1. Frequency counts and percentages were used to summarize the demographic characteristics of PE teachers, including highest educational attainment, years of experience, field of specialization, and professional development training attended. The weighted mean was used to determine the extent to which innovative teaching strategies namely inquiry-based, integrative, collaborative, constructivist, and reflective were implemented by the teachers. The analysis also assessed how extensively these strategies were used in addressing the learning competencies outlined in the K–12 MELCs and identified the most frequently employed strategy.

Ethical Considerations

Participants were fully informed about the purpose of the research, the procedures involved, and their role in the study. They were also informed in black and white that participation was entirely voluntary, and that they had the right to withdraw at any point without any consequences. Before data collection, informed consent forms were provided and signed by the participants (See Appendix D).

Results and Discussion

This presents the results of the study based on the data gathered from the 28 Physical Education teachers at Cauayan City National High School. The data are organized and presented in tables, followed by interpretations that reveal patterns, frequencies, and key insights.

Part 1. Demographic Characteristics of Physical Education Teachers

Profile of the Respondents		
Highest Educational Attainment	**Frequency**	**Percentage**
Baccalaureate	12	42.90
Masteral Degree	16	57.10

Total	**28**	**100%**
Years of Experience	**Frequency**	**Percentage**
1-5 years	14	50
6-10 years	9	32.10
11-15 years	5	17.90
Total	**28**	**100%**
Field of Specialization	**Frequency**	**Percentage**
Math	2	7.10
Social Science	5	10.70
MAPEH	21	7.10
Total	**28**	**100%**
Number of Professional Trainings	**Frequency**	**Percentage**
1	9	32.10
2	6	21.40
4	6	21.40
More than 5	7	25.00
Total	**28**	**100%**

Table 2. Demographic Profile

Table 2 presents the demographic profile of the 28 respondents. In terms of educational attainment, 16 Physical Education teachers hold a Master's degree, which accounts for 57.10 percent, while 12 have completed only a Baccalaureate.

Regarding years of teaching experience, 14 respondents or 50.00 percent have been in the profession for one to five years, 9 respondents or 32.10 percent have six to ten years of experience, and 5 respondents or 17.90 percent have been teaching for eleven to fifteen years. This indicates that most of the participants are in the early stages of their teaching careers.

In addition, the distribution of respondents according to their field of specialization shows that the majority of the participants were from the MAPEH discipline, accounting for 21 individuals or 75 percent of the total sample. This was followed by teachers specializing in Social Science, who comprised 5 individuals or 17.90 percent. The smallest group was from the field of Mathematics, with only 2 individuals, representing 7.10 percent. These figures indicate that MAPEH teachers formed the dominant group in the study.

In terms of professional development, 9 respondents or 32.10 percent have attended one professional training, 6 respondents or 21.40 percent have attended two trainings, another 6 respondents or 21.40 percent have attended four trainings, and 7 respondents or 25.00 percent have attended more than five trainings. These figures show that while training attendance varies, a portion of the respondents are actively engaging in continuous professional growth as Physical Education teachers.

Part 2. The Extent of Implementation of Innovative Teaching Strategies in their Classes Based on the 2C-2I-R1 Pedagogical Approach

2.1 Inquiry-Based Strategy

Item	**Inquiry-Based Strategies** Focus: Promotes exploration and problem-solving through student-centered inquiry **Statement Indicators**	**Mean**	**Interpretation**
1.	I encourage learners to identify issues in their fitness habits and explore ways to improve them.	4.86	Always
2.	I allow learners to experiment with different physical approaches to solve movement-related challenges.	4.71	Always

3.	I provide materials that encourage learners to find answers to important questions in sports or fitness.	4.68	Always
4.	I use project-based tasks with guide questions that let learners create and test ideas about strategies for games or physical activities.	4.68	Always
5.	I encourage learners to ask questions about their movement techniques and discover better alternatives.	4.68	Always
6.	I facilitate inquiry task that enable learners to investigate how physical activities affect their holistic well-being including health and wellness.	4.61	Always
7.	I guide learners in studying game situations to predict outcomes of different tactical decisions.	4.57	Always
8.	I design lessons that begin with open-ended questions to help learners find solutions to physical activity challenges.	4.50	Always
9.	I design scenarios where learners solve problems related to physical activity or sports.	4.50	Always
	Over-all Mean	**4.64**	**Always**

Table 3. Extent of Implementation of Inquiry-Based Strategy

Table 3 presents the extent to which Physical Education teachers implement inquiry-based strategies in their classes following the 2C-2I-1R pedagogical approach. The overall mean score is 4.64, which corresponds to the qualitative description "Always." This result indicates that the teachers consistently apply inquiry-based strategies in their teaching practices.

Among the indicators, the highest-rated item is "I encourage learners to identify issues in their fitness habits and explore ways to improve them," with a mean score of 4.86, meaning it is always implemented. This means teachers are helping students understand their own fitness routines and guiding them to make better, healthier choices. Several other indicators received a mean score of 4.68, including "I provide materials that encourage learners to find answers to important questions in sports or fitness," "I use project-based tasks with guide questions that let learners create and test ideas about strategies for games or physical activities," and "I encourage learners to ask questions about their movement techniques and discover better alternatives." These practices show that teachers are dedicated to putting students at the center of learning by allowing them to explore, ask questions, and try out new ideas on their own. The items with the lowest mean scores, though still high, are "I design lessons that begin with open-ended questions to help learners find solutions to physical activity challenges" and "I design scenarios where learners solve problems related to physical activity or sports," both having a mean of 4.50. Other strongly implemented strategies include "I guide learners in studying game situations to predict outcomes of different tactical decisions," which has a mean of 4.57, and "I allow learners to experiment with different physical approaches to solve movement-related challenges," with a mean of 4.71. These findings show that Physical Education teachers always use inquiry-based teaching strategies in their classes. They regularly let students ask questions, explore ideas, work on projects, and reflect on their learning. This matches the goals of the 2C-2I-1R approach, which focuses on helping students think critically, be creative, and solve problems while staying actively involved in physical education activities.

2.2 Integrative Strategies

Integrative Strategies Focus: Encourages the integration of Physical Education with other subject areas to foster authentic and holistic learning.		**Mean**	**Interpretation**
Item	**Statement Indicators**		
1.	I connect physical activities with lessons on nutrition, health, and mental well-being to promote a holistic understanding of wellness.	4.82	Always
2.	I include lessons on environmental awareness by linking outdoor physical activities to nature conservation and sustainability.	4.68	Always
3.	I combine PE lessons with arts or creative expression, such as choreographing movements that align with music or storytelling.	4.64	Always
4.	I incorporate lessons on teamwork and leadership into group sports and fitness activities to build essential life skills.	4.57	Always
5.	I integrate movement-based tasks that emphasize creativity, problem-solving, and connections between physical education and other disciplines.	4.57	Always

6.	I encourage learners to explore and reflect on the cultural significance of traditional games or sports in their communities.	4.50	Always
7.	I provide digital tools for learners to access interdisciplinary resources that enhance their physical education experience.	4.46	Always
8.	I design projects where learners develop personalized fitness plans, integrating knowledge from subjects like biology or social studies.	4.43	Always
	Over-all Mean	**4.64**	**4.58**

Table 4. Extent of Implementation of Integrative Strategy

Table 4 shows how Physical Education teachers apply integrative strategies in their classes using the 2C-2I-1R pedagogical approach.

The strategies focus on connecting Physical Education with other subject areas to support holistic and authentic learning. The overall mean score is 4.58, with all indicators falling under the qualitative description of "Always," which suggests that teachers consistently use integrative approaches in their lessons. As can be gleaned from the table, the highest-rated item, with a mean score of 4.82, is "I connect physical activities with lessons on nutrition, health, and mental well-being to promote a holistic understanding of wellness." This shows that teachers strongly emphasize the importance of overall wellness by linking physical activities with topics that contribute to students' physical and mental health. Teachers also reported regularly incorporating life skills into their classes. For example, the item "I incorporate lessons on teamwork and leadership into group sports and fitness activities to build essential life skills" received a mean of 4.57.
Similarly, "I integrate movement-based tasks that emphasize creativity, problem-solving, and connections between physical education and other disciplines" also had a mean of 4.57 which reveals the teachers' efforts to go beyond physical training and develop well-rounded learners.

Other strategies were also highly rated. For instance, the integration of PE with the environment through outdoor activities and sustainability lessons received a mean of 4.68. This suggests that teachers use physical education to raise environmental awareness among learners. The strategy of combining PE with arts and creative expression, such as dance or storytelling, also received a high rating of 4.64. Meanwhile, encouraging cultural reflection through traditional games scored 4.50, showing a commitment to helping students appreciate their heritage. Projects that merge Physical Education with academic subjects like biology or social studies received a mean of 4.43, and the use of digital tools to access interdisciplinary content was rated at 4.46. Though slightly lower than others, these scores still fall under "Always," indicating consistent use of technology and cross-curricular learning. The results show that Physical Education teachers always connect their lessons with other subjects. This helps students learn more than just physical skills but they also develop life skills, creativity, appreciation for culture, care for the environment, and a better understanding of how different subjects work together. This approach clearly supports the goals of the 2C-2I-1R teaching method.

2.3 Collaborative Strategy

	Collaborative Strategies Focus: Learners learn from each other's resources and skills.	**Mean**	**Interpretation**
Item	**Statement Indicators**		
1.	I organize team-based activities where learners collaborate to develop strategies and solve movement challenges.	4.82	Always
2.	I facilitate group discussions where learners analyze each other's performance and suggest constructive feedback for improvements.	4.71	Always
3.	I facilitate cooperative exercises where learners support each other in achieving shared physical fitness goals.	4.61	Always
4.	I encourage learners to create inclusive game rules that accommodate individuals with varying abilities.	4.54	Always
5.	I create gamified lessons where learners work together to solve tactical problems in small-sided games.	4.54	Always
6.	I provide opportunities for students to mentor peers, focusing on improving skills and understanding game tactics.	4.54	Always
7.	I facilitate reflective sessions where learners discuss the outcomes of their group collaboration and propose ways to improve.	4.50	Always

8.	I design tasks that require learners to leverage each other's strengths to achieve success in team-based physical activities.	4.46	Always
	Over-all Mean	**4.59**	**Always**

Table 5. Extent of Implementation of Collaborative Strategy

Table 5 shows that Physical Education teachers often use collaborative strategies in their classes, following the 2C-2I-1R teaching approach. These strategies give students the chance to learn from one another by working together and making the most of each other's strengths. With an overall average score of 4.59, described as "Always," it's clear that teachers regularly include teamwork and group activities in their lessons. The highest-rated item, with a mean score of 4.82, is "I organize team-based activities where learners collaborate to develop strategies and solve movement challenges." This shows that teachers actively promote teamwork and shared problem-solving during physical activities. Group discussions where students analyze each other's performance and give helpful feedback also scored highly, with a mean of 4.71, showing that peer interaction and learning are valued in the classroom. Other commonly used strategies include encouraging learners to create inclusive game rules and designing small group games that involve solving tactical problems, both with a mean of 4.54. These practices support cooperation and inclusivity among students. Sessions that encourage students to reflect on their teamwork experience received a score of 4.50, while tasks that require students to rely on each other's strengths had a mean of 4.46. These results suggest that students are often encouraged to work together, support one another, and learn Teachers also give students the chance to act as peer mentors, with this strategy earning a mean of 4.54. Cooperative exercises focused on shared fitness goals were also highly implemented, with a mean of 4.61. These findings show that Physical Education teachers often use group-based activities to help students learn together. By encouraging teamwork, they give students the chance to communicate, support one another, and take on leadership roles. This kind of learning not only makes classes more engaging but also reflects the heart of the 2C-2I-1R approach, which values cooperation and shared experiences as a way to grow both in and out of the classroom.

2.4 Constructivist Strategy

Constructivist Strategies Focus: Emphasizes learning through active participation and experiential engagement rather than passive reception.		**Mean**	**Interpretation**
Item	**Statement Indicators**		
1.	I allow learners to refine their techniques through self-assessment.	4.64	Always
2.	I assist learners in creating personalized fitness plans based on their goals and progress.	4.57	Always
3.	I encourage learners to analyze how social and environmental factors influence their physical activity choices.	4.54	Always
4.	I design lessons where learners actively design and test new movement sequences in games or fitness activities.	4.50	Always
5.	I encourage learners to experiment with different gameplay tactics and evaluate their effectiveness.	4.50	Always
6.	I integrate project-based learning where learners develop and present solutions for improving community fitness.	4.50	Always
7.	I design problem-based activities where learners identify and address barriers to achieving physical fitness goals.	4.36	Always
8.	I use gamified lessons to allow learners to practice decision-making in real-time game scenarios.	4.36	Always
9.	I provide opportunities for learners to create inclusive activities that represent diverse cultures and abilities.	4.32	Always
	Over-all Mean	**4.48**	**Always**

Table 6. Extent of Implementation of Constructivist Strategy

Table 6 brings attention to how Physical Education teachers apply constructivist strategies in their classes, in line with the 2C-2I-1R pedagogical approach. These strategies focus on learning through active participation and real-life experiences rather than simply receiving information. The overall mean score is 4.48, with all items described as "Always," showing that teachers regularly use constructivist methods in their lessons. One of the highest-rated practices is allowing learners to

refine their techniques through self-assessment, with a mean score of 4.64. This shows that teachers encourage students to reflect on their own performance and take responsibility for improving their skills. Another commonly used approach is helping students create personalized fitness plans based on their goals and progress, which received a mean of 4.57. This allows students to take an active role in their fitness journey. Teachers also design lessons where learners test new movement sequences and experiment with different gameplay tactics, both with mean scores of 4.50. These strategies promote creativity and decision-making, helping students build confidence as they try out new approaches.

Likewise, project-based learning, where students develop and present solutions for improving community fitness, also received a 4.50, showing how teachers connect classroom learning to real-world situations. Though slightly lower, activities like identifying barriers to physical fitness (mean of 4.36), using gamified decision-making lessons (4.36), and creating inclusive activities that reflect diverse cultures and abilities (4.32) are still consistently implemented. Encouraging students to explore how social and environmental factors affect their physical activity choices also scored highly at 4.54, implying that teachers promote a deeper understanding of the world beyond the gym. Based on the results, it is evident that Physical Education teachers often take a hands-on, student-focused approach that gets learners thinking, exploring, and solving real-life problems. Instead of just teaching physical skills, they help students grow in other important ways like building critical thinking, showing empathy, and becoming more connected to their communities. This approach fits well with the 2C-2I-R1 framework, which believes that the best learning comes from meaningful, real-world experiences both inside and outside the classroom.

2.5 Reflective Strategy

Reflective Strategies Focus: Supports teachers and students in evaluating practices to enhance teaching effectiveness and learning outcomes.		**Mean**	**Interpretation**
Item	**Statement Indicators**		
1.	I regularly reflect on my teaching practices to identify strengths and areas of improvement.	4.75	Always
2.	I create lessons where learners evaluate their physical activity routines and propose strategies for self-improvement.	4.68	Always
3.	I guide learners to identify specific habits or behaviors they can change to improve their participation in physical activities.	4.68	Always
4.	I ask learners to reflect on the social dynamics of team-based activities and how they contributed to group success or cohesion.	4.64	Always
5.	I facilitate group reflections where learners discuss what they learned from participating in cooperative or competitive activities.	4.64	Always
6.	I provide opportunities for learners to journal their reflections on how physical activities contribute to their overall well-being.	4.61	Always
7.	I guide learners to assess their actions in group sports reflect inclusivity and respect for diversity.	4.61	Always
8.	I design reflective activities where learners evaluate the effectiveness of their decisions in small-sided games.	4.57	Always
9.	I design activities that require learners to compare their initial skill levels with their current abilities and identify factors that contributed to their growth.	4.57	Always
	Over-all Mean	**4.64**	**Always**

Table 7. Extent of Implementation of Reflective Strategy

Table 7 provides an overview of the extent to which Physical Education teachers implement reflective strategies in their classes, in alignment with the 2C-2I-R1 pedagogical framework. These strategies aim to enhance both teaching effectiveness and learning outcomes by encouraging regular self-evaluation and meaningful reflection among students. The computed mean was 4.64, which falls under the qualitative description "Always," the data shows that reflective practice is a consistent and intentional part of Physical Education instruction. The most highly rated indicator, with a mean of 4.75, is "I regularly reflect on my teaching practices to identify strengths and areas of improvement." This shows that teachers truly care about growing in their profession. They regularly take time to reflect on how they teach so they can improve their methods and better support their students' learning.

Students are also engaged in reflective learning. For instance, the item "I create lessons where learners evaluate their physical activity routines and propose strategies for self-improvement" received a high mean score of 4.68, suggesting that teachers always provide students opportunities to assess their fitness habits and set personal goals. Correspondingly, "I guide learners to identify specific habits or behaviors they can change to improve their participation in physical activities" also scored 4.68, showing that reflection helps students make better choices and grow more confident and capable in how they take part in physical activities. Items related to social awareness and collaboration also scored high. "I ask learners to reflect on the social dynamics of team-based activities and how they contributed to group success or cohesion" had a mean of 4.64, while "I facilitate group reflections where learners discuss what they learned from participating in cooperative or competitive activities" also received a 4.64. These results show that teachers go beyond teaching physical skills where they also help students understand the importance of teamwork, how they communicate with others, and how they contribute to the group's success.

Other consistently implemented strategies include "I provide opportunities for learners to journal their reflections on how physical activities contribute to their overall well-being" (4.61) and "I guide learners to assess their actions in group sports reflect inclusivity and respect for diversity" (4.61). The analysis suggest that PE teachers are helping learners connect physical activity to broader themes such as mental health, wellness, respect, and empathy. On the other hand, designing reflective activities where learners evaluate their decisions in games scored 4.57, and guiding them to compare initial and current skill levels received a similar score of 4.57, indicating that teachers also support students in recognizing progress and analyzing the results of their choices. The statements, "I design problem-based activities where learners identify and address barriers to achieving physical fitness goals" and "I use gamified lessons to allow learners to practice decision-making in real-time game scenarios" both received a slightly lower but still strong score of 4.36. This means that teachers still use these strategies regularly, but not quite as often as the other ones. To put it simply, the data clearly shows that Physical Education teachers truly value reflection and make it a regular part of their teaching. They are not just helping students improve their physical skills but also guiding them to become more self-aware, set goals, think critically, and understand their role in a team or community. These efforts mirror the heart of the 2C-2I-1R teaching approach, which focuses on learning through real-life experiences and constantly finding ways to grow, both as teachers and as learners.

Part 3. Least Employed Innovative Teaching Strategies in Teaching Physical Education Competencies

2C-2I-1R Strategy	Mean	Interpretation
Inquiry-Based Strategies	4.64	Always
Reflective Strategies	4.64	Always
Collaborative Strategies	4.59	Always
Integrative Strategies	4.58	Always
Constructivist Strategies	4.48	Always
Over-all Mean	**4.59**	**Always**

Table 8. Least Employed Strategy by Physical Education Subject Teachers

The overall mean score of 4.59 in Table 8 suggests that Physical Education teachers consistently and actively use innovative teaching strategies when delivering learning competencies for the subject Physical Education, in alignment with the 2C-2I-R1 pedagogical approach. Each of the five strategies listed was rated within the "Always" range, showing that teachers are not only familiar with these approaches but also regularly apply them in their classrooms. However, among the five, the Constructivist Strategy stands out as the least employed, with a mean score of 4.48 slightly lower compared to the others. While still within the "Always" range, this score suggests a marginally reduced frequency or confidence in applying constructivist methods relative to Inquiry-Based (4.64), Reflective (4.64), Collaborative (4.59), and Integrative Strategies (4.58). This small drop in the score suggests that while teachers truly value hands-on, student-centered learning, they might find it a bit more challenging to fully carry out activities where students are expected to explore, learn through experience, and make their own decisions. Even though constructivist strategies were used slightly less than the others, their consistent presence shows that teachers are still making a strong effort to help students think critically, understand their own experiences, and use what they learn in real life. All five strategies are clearly important to teachers, but giving a bit more focus to constructivist teaching could help even more in guiding students to become thoughtful, independent, and engaged learners in Physical Education.

Part 4. Action Plan for Enhancing the Use of the Least Employed Innovative Strategy in Physical Education

Constructivism is often considered the key to reforming contemporary education. Its central idea is that knowledge is not passively received but actively constructed by an individual while striving to make sense of the world based on personal filters, like prior knowledge, experiences, and beliefs (Karagiorgi and Symeou, 2005). In the context of Physical Education

(PE), this philosophy encourages learners to engage in meaningful movement experiences, solve problems, and reflect on their learning process thus promoting deeper understanding and long-term physical literacy. Seeing the powerful impact that constructivist strategies can have on Physical Education, this action plan titled "Project PEAK: Physical Education Advancement through Knowledge-based 2C-2I-1R Strategies" will focus on its pilot implementation on the "Constructivist Physical Education Teaching Enhancement Plan" which was thoughtfully created for Cauayan City National High School. Since the findings show that constructivism is the least applied approach, the initial focus of the PEAK project will be to strengthen constructivist teaching practices in Physical Education. It responds to the observed challenge that many of the school's 28 PE teachers are not yet fully using these student-centered approaches in their classes. The plan outlines a structured twelve-week implementation period composed of four interrelated phases - Orientation and Modelling, Collaborative Lesson Designing, Classroom Implementation, and Reflection and Mentoring. The next part presents the plan titled: "Constructivist Physical Education Teaching Enhancement Plan".

Writing Discussion

I. Demographic Characteristics of Physical Education Teachers

The demographic profile reveals that most of the Physical Education teachers in the study hold a master's degree and are relatively early in their teaching careers, with one to five years of experience being the most common. The majority of respondents specialize in MAPEH, while only a small portion come from Social Science and Math. In terms of professional development, training attendance varied, but many have participated in multiple sessions, indicating active engagement in continuous learning. This composition suggests a professionally qualified yet developing group of educators with a strong representation from the field most aligned with Physical Education. The demographic profile of the present study supports the findings of Carag (2020), who also noted that teachers were academically qualified and actively involved in professional development. While Carag's respondents were mostly experienced educators, this study presents a younger group of Physical Education teachers who, despite having fewer years of experience, similarly hold master's degrees and show strong engagement in training. This shows a shared dedication among teachers in both studies to being well-prepared and continuously improving in their profession. Moreover, it aligns with Cuntapay's (2020) emphasis on continuous learning as essential to implementing innovative strategies in education.

II. Extent of Implementation of Innovative Teaching Strategies Based on the 2C-2I-1R Pedagogical Approach

The findings reveal that Physical Education teachers strongly implement all components of the 2C-2I-1R pedagogical approach such as the Collaborative, Constructivist, Integrative, Inquiry-Based, and Reflective strategies. Every strategy was rated under the "Always" category, indicating high levels of consistent and meaningful application. Among these strategies, reflective and inquiry-based methods stood out the most. The literature reviewed supports these findings which indicate a high level of implementation of innovative teaching strategies constructivist, inquiry-based, reflective, collaborative, and integrative by Physical Education teachers. These strategies, collectively known under the 2C-2I-1R framework, are aligned with the mandates of the Republic Act No. 10533 or the Enhanced Basic Education Act of 2013, which stipulates the use of pedagogical approaches that are learner-centered and inquiry-driven (RA 10533, Sec. 5). These legal provisions are operationalized in DepEd Order No. 21, s. 2019, which further reinforces the application of such innovative strategies to enhance the delivery of the K to 12 curriculum (SEAMEO INNOTECH, 2022).

The study's findings reveal that reflective and inquiry-based strategies were implemented most strongly by PE teachers. This is consistent with the educational value of reflective teaching, which emphasizes critical thinking and self-assessment through experience-based learning (Boyd & Fales, 1983; Sheninger, 2018; Hellberg & Fauskanger, 2023). Reflective learning transforms surface learning into deep learning, a quality that PE educators appear to prioritize.

Similarly, inquiry-based learning (IBL), grounded in curiosity and student-driven questioning (Gholam, 2019; Silm, 2017), was rated highly in terms of implementation. Despite documented challenges in classroom integration, such as unclear assessment structures and issues in group dynamics (Dobber et al., 2017; Victoria, 2021), the high frequency of IBL usage suggests that PE teachers have developed adaptive strategies to address these barriers, possibly through structured guidance, formative assessments, and collaborative scaffolding.

Constructivist teaching, another core approach mandated by law, was also frequently used. Its foundation lies in theories by Piaget and Bruner, pointing out that knowledge is actively built upon prior knowledge and social context (Gupta & Gupta, 2020; Fernando & Marikar, 2017; Tiilikainen et al., 2019). In the PE setting, this may manifest in student-led activities, project-based assessments, and real-world performance tasks strategies that resonate with the experiential nature of the discipline.

The high implementation of collaborative strategies also aligns with literature stressing the importance of teamwork, shared learning, and mutual support among learners (Mustak, 2021; Ghavifekr, 2020). In PE classes, this is evident in

cooperative games, group skill development, and peer assessments, all of which nurture empathy, communication, and conflict resolution.

Interestingly, integrative strategy which connects academic concepts with real-life experiences was likewise consistently applied. The concept of integrative learning, whether through interdisciplinary or transdisciplinary approaches, supports the goal of producing well-rounded learners with transferable skills (Top Hat, 2022; Matinho, 2022). In PE, this might involve linking movement education with health, environment, and societal issues to make learning more relevant and meaningful.

III. Least Employed Innovative Teaching Strategy in Teaching Physical Education Competencies

While all five innovative teaching strategies were consistently applied by Physical Education teachers, constructivist strategies emerged as the least employed, with a slightly lower mean score compared to the others. This suggests that although teachers recognize the importance of hands-on, student-driven learning, there may be some limitations in fully implementing activities that require learners to explore concepts, solve problems independently, and learn through real-life experiences. These findings present a notable disconnect between theory and practice. According to Seong et al. (2026), constructivist theory is predicated on the belief that learners construct knowledge rather than passively receiving information; it treats learning as an active process where students build understanding through environmental interaction. A key bridge to this approach is gamified learning, which Mee et al. (2020) argue enables students to become active participants by providing rich, interactive environments. In such settings, students must actively explore, make decisions, and solve problems through tasks and challenges actions that are fundamentally consistent with the constructivist concept of knowledge construction.

The slightly reduced use of constructivist methods may point to challenges such as limited time, resources, or confidence in facilitating open-ended tasks. A review of existing literature revealed a lack of studies specifically addressing the least employed innovative teaching strategies in teaching Physical Education competencies, particularly the constructivist approach. While related studies discuss general pedagogical practices or innovation in education, there is minimal focused research that examines why constructivist strategies are underutilized in the Physical Education context.

IV. Action Plan for Enhancing the Use of the Least Employed Innovative Strategy in Physical Education

An action plan aims to improve the implementation of constructivist strategies, identified as the least employed among the 28 PE teachers at Cauayan City National High School. Structured over 12 weeks, it follows four key phases: Orientation, Collaborative Lesson Design, Implementation, and Reflection. Activities include workshops, peer teaching, mentoring, and reflective journaling. Monitoring will be done through lesson observations, self-assessment tools, feedback sessions, and teacher journals. Sustainability is supported through monthly professional learning communities, digital resource sharing, INSET integration, and peer mentorship.

The plan helps teachers shift toward student-centered, reflective, and inquiry-based instruction by combining theory with practice. Mid-career teachers, who already demonstrate strong reflective habits, are positioned to lead this change. The ultimate goal is to promote a more engaging, inclusive, and learner-driven Physical Education environment through sustained professional growth.

Conclusion and Recommendations

The study brings to light the promising adoption of the 2C-2I-1R framework which include the Collaborative, Constructivist, Inquiry-Based, Integrative, and Reflective strategies by Physical Education teachers.

1. The findings indicate that the Physical Education teachers are academically qualified, mostly early in their teaching careers, and actively engaged in professional development. Despite having fewer years of experience, their attainment of master's degrees and participation in trainings reflect a strong commitment to continuous learning and professional growth, consistent with previous studies emphasizing the importance of ongoing development in effective teaching.
2. Among the five strategies, Inquiry-Based and Reflective methods were used the most which draw attention to teachers' focus on student curiosity, critical thinking, and self-awareness. Teachers also made it a point to regularly use Collaborative and Integrative strategies, showing that they truly value working together and connecting PE lessons with other subjects to make learning more meaningful for students.
3. However, Constructivist strategies, those that encourage students to build their own understanding through real-life experiences, were used the least. This could mean that while teachers appreciate the importance of student-centered learning, they may need more support or confidence in applying constructivist methods effectively.
4. To enhance the implementation of constructivist strategies, the study proposes the "Constructivist Physical Education Teaching Enhancement Plan"- Phase 1 of Project P.E.A.K. (Physical Education Advancement through

Knowledge-based 2C-21-1R Strategies). It is a well-structured, 12-week program that offers guidance, collaboration, practice, and mentorship. The researcher believes that this action plan is a practical step toward helping teachers adopt more student-centered approaches with confidence and clarity.

In a nutshell, Physical Education teachers at Cauayan City National High School are progressively integrating modern and student-focused strategies as revealed by the findings. With continued support and access to appropriate instructional resources, teachers from this school are well-prepared to sustain the delivery of engaging, reflective, and pedagogically impactful learning experiences for their students.

Recommendations

Based on the findings and conclusions of the study, the following recommendations are proposed to further enhance the use of innovative teaching strategies, particularly the constructivist approach, in Physical Education.

Cauayan City National High School's administration may:

1. Offer training programs that help teachers better understand and use constructivist strategies, focusing on real-life, hands-on learning that puts students at the center of PE lessons;
2. Launch the Project P.E.A.K. with a focus for a while on a "Constructivist Physical Education Teaching Enhancement Plan", a 12-week enhancement program that includes guided practice, peer collaboration, and mentorship to build teachers' confidence in using constructivist methods effectively,
3. Support and motivate teachers especially those early in their careers to attend more specialized training and workshops in MAPEH relative to innovative pedagogy;
4. Encourage teachers to blend constructivist techniques into commonly used strategies like inquiry-based and collaborative learning;
5. Provide equal access to teaching resources and support mechanisms to all PE teachers, including those teaching outside their field, to maintain consistent strategy application; and,
6. Actively support innovation by providing time, materials, and recognition for teachers who are committed to adopting the 2C-I2-1R strategy.

For future researchers, they may:

1. Consider involving a larger and more diverse sample of schools, including private institutions or schools from different regions, to gain more representative insights into the implementation of the 2C-2I-1R approach;
2. Investigate how the 2C-2I-1R framework can be applied in other subject areas beyond Physical Education, such as Science, Mathematics, or Social Science, to examine its versatility across the curriculum offered by the Department of Education; and,
3. Design and validate more specific tools or rubrics to measure the depth and quality of each strategy's implementation in the field of Physical Education.

Acknowledgement

The researcher would like to extend her heartfelt thanks, gratitude and sincere appreciation to the following individuals who extended their effort and support for the completion this research task:

Dr. Herminio C. Orpricio Jr., her thesis adviser, for his patience in giving words of encouragement, valuable ideas and suggestions, unselfish support and genuine concern to finish this study. His companionship and guidance made the researcher to become a more enthusiastic person;

Dr. Madeilyn B. Estacio**,** Dean of Graduate School, for sharing scholarly pieces of advice and brilliant suggestions for the improvement of this study

Dr. Edilberto M. Andres Jr. and Dr. Dionito F. Dancel, member of the Panel Examiners, for their insights and recommendations which helped the researcher attain the research objectives and made the research paper valuable.

Her husband Dann Nixon D. Pascua, for being her companion every time she needed an errand to do things. His boundless moral support, financial and spiritual help means a lot to her;

Above all, to the Lord Jesus Christ, her ultimate inspiration, source of protection and abundant blessings, who provided all the needed wisdom and strength that led the researcher to successfully pursue and finish her master's degree.

Funding

This research received no external funding from any public, commercial, or not-for-profit funding agency, and no organization provided financial support for the conduct of the study, authorship or publication of this article.

Competing Interests Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

Almusawi, H. A., Durugbo, C. M., & Bugawa, A. M. (2021). Innovation in physical education: Teachers' perspectives on readiness for wearable technology integration. *Computers & Education*, 167, 104185.

Arufe-Giráldez, V., Sanmiguel-Rodríguez, A., Ramos-Álvarez, O., & Navarro Patón, R. (2023). News of the pedagogical models in physical education A quick review. *International Journal of Environmental Research and Public Health*, 20(3), 2586.

Atmowardoyo, H. (2018). Research methods in TEFL studies: Descriptive research, case study, error analysis, and R & D. *Journal of Language Teaching and Research*, *9* (1), 197-204.

Bada, S. O., & Olusegun, S. (2015). Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education*, 5(6), 66-70.

Boyd, E. M., & Fales, A. W. (1983). Reflective learning: Key to learning from experience. *Journal of humanistic psychology*, 23(2), 99-117.

Bugwak, E. (2021). Travails of out-of-field teachers: A qualitative Inquiry. Journal of World Englishes and Educational Practices, 3(2), 10-32996.

Bunker, D. & Thorpe, R. (1986). The curriculum model. In R. Thorpe, D. Bunker, & L. Almond (Eds.), Rethinking games teaching (pp. 7-10). Loughborough, *UK: University of Technology, Loughborough*.

Carag, E. A. (2020). Pedagogical approaches used by teachers in teaching MAPEH in the Division of Tuguegarao City, Philippines. *International Journal of Psychosocial Rehabilitation,* 24(08).

CHANG, D., Jorrín Abellán, I. M., Wright, J., Kim, J., & Gaines, R. E. (2020). Do advanced degrees matter? A multiphase mixed-methods study to examine teachers' obtainment of advanced degrees and the impact on student and school growth. *Georgia Educational Researcher*, 17(1), 62.

de Greeff, J.W., Bosker, R.J., Oosterlaan, J., Visscher, C. & Hartman, E. (2018). Effects of physical activity on executive functions, attention and academic performance in preadolescent children: a meta-analysis. *Journal of Science and Medicine in Sport 21*(5): 501–507.

Department Order No. 010, Series of 2024. Policy Guidelines of the Implementation of the MATATAG Curriculum, dated July 23, 2024.

Department Order No. 043, Series of 2013. Implementing Rules and Regulations (IRR) of Republic Act No. 10533 Otherwise Known as the Enhanced Basic Education Act of 2013, dated September 24, 2013.

Du Plessis, A., & McDonagh, K. (2021). The out-of-field phenomenon and leadership for wellbeing: Understanding concerns for teachers, students and education partnerships. International Journal of Educational Research, 106, 101724.

Dobber, M., Zwart, R., Tanis, M., & van Oers, B. (2017). Literature review: The role of the teacher in inquiry-based education. Educational Research Review, 22, 194-214.

EdTech Books. (n.d.). https://edtechbooks.org/studentguide/constructivism

Fernandes, S., Araújo, A. M., Miguel, I., & Abelha, M. (2023). Teacher professional development in higher education: The impact of pedagogical training perceived by teachers. Education Sciences, 13(3), 309.

Fernando, S. Y., & Marikar, F. M. (2017). Constructivist teaching/learning theory and participatory teaching methods. *Journal of Curriculum and Teaching*, 6(1), 110-122.

Ghavifekr, S. (2020). Collaborative learning: a key to enhance students'social interaction skills. Mojes: *Malaysian Online Journal of Educational Sciences*, 8(4), 9-21.

Gholam, A. P. (2019). Inquiry-Based Learning: Student Teachers' Challenges and Perceptions. *Journal of Inquiry and Action in Education,* 10 (2). Retrieved from https://digitalcommons.buffalostate.edu/jiae/vol10/iss2/6

Gore, J., Rosser, B., Jaremus, F., Miller, A., & Harris, J. (2024). Fresh evidence on the relationship between years of experience and teaching quality. *The Australian educational researcher*, 51(2), 547-570.

Graham, L. J., White, S. L., Cologon, K., & Pianta, R. C. (2020). Do teachers' years of experience make a difference in the quality of teaching?. *Teaching and teacher education*, 96, 103190.

Gupta, R. A. J. N. I., & Gupta, V. E. E. N. U. (2017). Constructivist approach in teaching. *International Journal of Humanities and Social Sciences,* 6(5), 77 88.

Hellberg, R., & Fauskanger, E. (2023). Learning of quality improvement theory experiences with reflective learning from a student perspective. *International Journal of Lean Six Sigma,* 14(6), 1207-1226.

Hobbs, L., & Porsch, R. (2021). Teaching out-of-field: challenges for teacher education. European Journal of Teacher Education, 44(5), 601-610.

Kennedy. D., Hyland, A. & Ryan, N. (n.d.) Writing and Using Learning Outcomes: a practical guide. https://sss.dcu.ie/afi/docs/bologna/writing_and_using_learning_outcomes.pdf

Khatoon, U. T., Bakreen, M. R. A. M., & Masri, M. R. (2023). Implementing Innovative Teaching and Learning Strategies. *Saudi Journal of Business and Management Studies*, 8(1), 10-12.

Khurshid, F., & Ansari, U. (2012). Effects of innovative teaching strategies on students' performance. *Global Journal of Human Social Science Linguistics & Education*, 12(10), 47-54.

Ladd, H. F., & Sorensen, L. C. (2015). Do master's degrees matter? Advanced degrees, career paths, and the effectiveness of teachers. National Center for Analysis of Longitudinal Data in Education Research. https://caldercenter.org/sites/default/files/WP% 20136_0. pdf.

Langton, T. W. (2007). Applying Laban's movement framework in elementary physical education. *Journal of Physical Education, Recreation & Dance*, 78(1), 17-53.

Lee, S. W., & Lee, E. A. (2020). Teacher qualification matters: The association between cumulative teacher qualification and students' educational attainment. *International Journal of Educational Development*, 77, 102218.

Macphail, D. K. A. Teaching Games for Understanding and Situated Learning: *Rethinking the Bunker-Thorpe Model*.

Matinho, D., Pietrandrea, M., Echeverria, C., Helderman, R., Masters, M., Regan, D., ... & McHugh, D. (2022). A systematic review of integrated learning definitions, frameworks, and practices in recent health professions education literature. *Education Sciences*, 12(3), 165.

Mee Mee, R. W., Shahdan, T. S. T., Ismail, M. R., Ghani, K. A., Pek, L. S., Von, W. Y., ... & Rao, Y. S. (2020). Role of gamification in classroom teaching: Pre-service teachers' view. *International Journal of Evaluation and Research in Education*, 9(3), 684-690. https://doi.org/10.11591/ijere.v9i3.20622

Modebelu, M. N., & Duvie, A. N. (2012). Innovative methods and strategies for effective teaching and learning. *Mediterranean Journal of Social Sciences*, 3(13), 145-154.

Murray, J. (2021). Good teachers are always learning. International Journal of Early Years Education, 29(3), 229-235.

Narayan, R., Rodriguez, C., Araujo, J., Shaqlaih, A., & Moss, G. (2013). Constructivism—Constructivist learning theory. Oliver, L. E., & Nieves, A. M. TEACHING GAMES FOR UNDERSTANDING MODEL.

Ningthoujam, R., Nongthombam, B., & Sunderchand, M. (2017). Innovative teaching methods in physical education for better learning. *International Journal of Community Current Research and Review*, 9(16), 6-11.

Onyema, E. M., Ogechukwu, U., Anthonia, E. C. D., & Deborah, E. (2019). Potentials of mobile technologies in enhancing the effectiveness of inquiry based learning approach. *International Journal of Education* (IJE), 2(01), 1 22.

Perry, E., Halliday, J., Higginson, J., & Patel, S. (2022). Meeting the challenge of providing high-quality continuing professional development for teachers: *The Wellcome CPD Challenge Pilot Delivery Report.*

Puranik, S. (2020). Innovative teaching methods in higher education. *BSSS Journal of Education*, 9(1), 67-75.

Santos, J., Figueiredo, A. S., & Vieira, M. (2019). Innovative pedagogical practices in higher education: An integrative literature review. *Nurse education today*, 72, 12-17.

Sarsale, J. S., & Langub, M. K. C. (2023). Effects of student-centered learning approaches towards interest in science. *Journal of Research, Policy & Practice of Teachers and Teacher Education*, 13(2), 73-85.

SEAMEO INNOTECH (2022). Pedagogical Approaches in Education: Theories, Practices, and Applications in the Classrooms. A compilation of online presentations delivered during the webinar on "The Making of Teacher Experts in the New Normal: Deepening the Understanding of Pedagogical Approaches". Retrieved from https://www.seameo-innotech.org/wpcontent/uploads/2022/12/WPA-Special-Publication-2022-October.pdf

Seong, L., Ling, T., & Cheng, Z. (2023). The effect of game-based learning on performance and motivation of university students: An exploratory study. *University Tunku Abdul Rahman*.

Shah, M. A., Hafeez, N., & Idrees, J. (2019). Plight of physical education in secondary schools of Punjab; Pakistan. Int J Educ Res, 10(3), 11-25.

Sheninger, E. (2018, June 10). Reflective learning as the new normal. https://esheninger.blogspot.com/2018/06/reflective-learning-as_new-normal.html

Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. *Clinical Nurse Specialist*, *34*(1), 8-12.

Silm, G., Tiitsaar, K., Pedaste, M., Zacharia, Z. C., & Papaevripidou, M. (2017). Teachers' Readiness to Use Inquiry-Based Learning: An Investigation of Teachers' Sense of Efficacy and Attitudes toward Inquiry-Based Learning. *Science Education International, 28*(4), 315-325.

Si, Z., Song, H., & Xia, R. (2024). Innovative teaching methods and practice in physical education curriculum in primary and secondary schools. *Social Medicine and Health Management*, 5(1), 70-76.

Singha, R., & Singha, S. (2024). Application of Experiential, Inquiry-Based, Problem-Based, and Project-Based Learning in Sustainable Education. In Teaching and Learning for a Sustainable Future: Innovative Strategies and Best Practices (pp. 109-128). IGI Global.

Sumathi, D. (2022). Innovative teaching strategies. Psycho-technological approaches in heutagogy, 25.

Tiilikainen, M., Karjalainen, J., Toom, A., Lepola, J., & Husu, J. (2019). The complex zone of constructivist teaching: a multi-case exploration in primary classrooms. *Research Papers in Education*, 34(1), 38-60.

Top Hat. (2022, October 18). Integrative Learning Definition and Meaning | Top hat. https://tophat.com/glossary/i/integrative-learning/

Varea, V., Gonzalez-Calvo, G., & García-Monge, A. (2022). Exploring the changes of physical education in the age of Covid-19. *Physical Education and Sport Pedagogy,* 27(1), 32-42.

Victoria. (2021, June 16). 4 Of rhe Most Common Problems with Inquiry-Based Learning and How to Solve Them. Learning by Inquiry. https://www.learningbyinquiry.com/4-of-the-most-common problems-with-inquiry-based-learning-and-how-to-solve-them/

Xu, Z., & Shi, Y. (2018). Application of constructivist theory in flipped classroom take college English teaching as a case study. *Theory and Practice in Language Studies,* 8(7), 880-887.

Yaakop[1], N., Koh[1], D., & Yasin[1], R. (2022). The Recent Trends on Physical Education Subject with the Issues and Strategies. International Journal of Special Education, 37(3s).

Yawman, M., & Appiah-Kubi, J. (2018). Innovative teaching strategies and students' achievement. Available at SSRN 3161988.

Zalun, J. G. (2023). The teachers' utilization of the most essential learning competencies (MELCS) and its relation to the learning development of grade six pupils in a public school in the philippines: Basis for a proposed program. International Journal of Multidisciplinary: Applied Business and Education Research, 4(6), 1888-1903.

Zhang, H. (2016). Research on innovation of physical education teaching method based on inquiry teaching: A survey based on online questionnaire. International Journal of Future Generation Communication and Networking, 9(2), 37-48.

https://www.philippinesbasiceducation.us/2015/12/learner-centered education.html

https://study.com/academy/lesson/what-is-reflective-teaching-definition-methods quiz.html

https://www.iitms.co.in/blog/what-is-collaborative-learning.html

Appendices

No appendices are attached to this study.