

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

ARBEE G. Pineda¹, Samboy Godoy Nabor²

¹Master of Arts in Education Major in Physical Education and Sports /Student, School: University of Perpetual Help System Dalta-Las Piñas

²Eduardo Barreto Sr. Integrated School

ABSTRACT: This study examined the relationship between the level of engagement and performance of student-athletes in team sports, as well as the effectiveness and impact of school-based coaching programs. Specifically, it investigated differences in performance when athletes were grouped according to profile variables, and explored correlations between various program components—coaching capacity, program design, sports facilities, safety measures, and monitoring and evaluation—and athlete outcomes in terms of physical fitness, sports performance, and overall well-being. A descriptive-correlational research design was employed, utilizing survey questionnaires administered to student-athletes. Statistical tools such as the t-test, Pearson correlation, and weighted mean were used to analyze the data. Results revealed that the duration of involvement in sports significantly influenced physical fitness, sports performance, and overall well-being, with longer engagement yielding better outcomes. Strong and statistically significant positive correlations were found between all program components and athlete performance, with safety measures and coaching capacity showing the highest associations. The overall effectiveness of school-based coaching programs was rated Very Effective (mean = 3.34), with Coaching Capacity scoring highest and Sports Facilities lowest. The programs' overall impact on student-athletes was rated High Impact (mean = 3.41), with the strongest influence on sports performance and the least, though still significant, on overall well-being. The findings underscore the critical role of sustained sports participation, high-quality coaching, safe and well-designed programs, and adequate monitoring in optimizing student-athlete development. The study recommends enhancing facility quality, integrating holistic well-being initiatives, and strengthening retention strategies to sustain athlete engagement and maximize program benefits.

KEYWORDS: student-athletes, school-based coaching programs, engagement, performance, well-being, sports development

INTRODUCTION

Sports play a vital role in the holistic development of students, fostering not only physical health but also mental resilience, social skills, and personal discipline. In the school setting, structured coaching programs serve as a key mechanism for enhancing the performance and well-being of student-athletes. Effective coaching goes beyond teaching technical skills; it involves cultivating leadership, teamwork, time management, and emotional stability—qualities that translate into success both in sports and in life.

School-based coaching programs are designed to maximize athletes' potential by integrating training plans, mentorship, and competition opportunities within the academic environment. In the Philippines, where sports participation is strongly encouraged through school events such as the Palarong Pambansa and local league competitions, the quality of coaching and the availability of facilities significantly influence athletes' performance. Studies by Balyi, Way, and Higgs (2020) highlight the importance of long-term athletic development, while Ericsson, Krampe, and Tesch-Römer (2021) emphasize deliberate practice as a foundation for peak performance. Moreover, recent local research (Laguador & Refozar, 2020) confirms that sustained sports engagement improves both technical skills and overall life competencies.

However, while existing literature affirms the positive role of sports in student development, there is still a need to assess how specific components of school-based coaching programs—such as coaching capacity, program design, facilities, safety

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

measures, and monitoring—affect both performance and well-being. Understanding these relationships can provide a basis for crafting targeted strategies that ensure athletes receive comprehensive and sustainable support.

The examination of sports performance has received considerable focus in recent years, indicating a more comprehensive comprehension of the various factors contributing to an athlete's achievement. This interest extends beyond physical education and sports science to psychology, nutrition, and health sciences due to the complexity of human performance. The whole and well-trained sports coach is seemingly a multidimensional personality, possessing a wide range of technical, communication, and interpersonal skills.

However, sports play a significant role in one's life. Early engagement of students in different sports activities has positive effects and it enhances their healthy lifestyle and prevents them from joining negative activities (Jabar, Wahid & Abdul, 2022). Nowadays, student's involvement in amateur sports competition have been increasing. Therefore, to improve and enhance student-athlete's performance, specifically in sports competitions, it is deemed vital to assess the variables that influence and contribute to the student-athlete's performance.

Accordingly, coaching is as difficult and demanding as any other aspect of the sports. It affects the individual athlete or a team that can be magnified out of the part to the coaching way itself, whether it is good or poor. The whole and well-trained sports coach is seemingly a multidimensional personality, possessing a wide range of technical, communication, and interpersonal skills. An athlete's motivation can be the key to his/her success. Various influences affect an athlete's performance throughout his/her sports experience which includes coach-athlete relationship, which is one of the most important effects on athlete motivation and performance (Marcone, 2020).

The intensive training and high-pressure situations in competitive sports can potentially impact athletes' mental and physical health. In Thailand, where athletes commence training at an early age, health is a paramount concern. For sustained optimal performance, athletes must be physically, intellectually, and emotionally healthy. They require a comprehensive support system encompassing social, emotional, medical, and psychological assistance.

Football, as one of the most popular and dynamic team sports, demands a high level of physical skill, tactical awareness, and mental resilience from student-athletes. The role of coaching in shaping these attributes is critical, as coaches serve not only as instructors but also as mentors and motivators. Effective coaching techniques can significantly enhance athletic performance, instill discipline, and promote teamwork among players. However, disparities in coaching styles, resources, and developmental programs often lead to inconsistent outcomes in student-athlete performance. This study seeks to examine the relationship between coaching techniques and the performance of student-athletes in football. It further aims to provide empirical insights that can serve as the foundation for a comprehensive and enhanced sports development plan tailored to meet the specific needs of student-athletes.

The 25th Thailand Sports School Games Regulation on Football, Each sports school is able to send one team to compete in each age group both boys and girls with a minimum of 15 players and a maximum of 25 players. The competition equipment shall be prepared by the organizing committee and certified by the Football Association of Thailand and the International Federation of Association Football (FIFA).

According to Britton, Hill, and Ward (2020), if there are tens of millions of young athletes participating in athletics throughout the year, it means that many of them are interacting with various coaches. Other stakeholders connected to sports must be responsible for gaining knowledge that will help them better understand that coaches acquire coaching styles and their coaching styles have on the athletes whom they are associated. There are numerous coaching styles that an individual coach can adapt as his/her own while in charge of a group of athletes, regardless of their age, sport, or level of skill. Each coaching style tends to exhibit its exact behaviors and characteristics, resulting in different effects on the athletes with whom they had been connected. The two main styles of coaching that have been recognized in sports are the autonomy-supportive styles and the controlling style. Each of these styles used in coaching has its own positive and negative qualities, and each style influences an athlete's motivation and performance.

A study conducted by Deci and Ryan's on Self Determination Theory (2000), discussed several psychological needs of athletes, which, they are not met, may result in a no desirable outcome. Characteristics and behaviors of the athletes have been understood by the coaches so that different styles of coaching will be exhibited, which is vital when talking about the significant effect on athlete motivation and performance. Autonomy supportive coaches tend to be accessible and very positive.

In Satit Udomseuksa School in Pattaya, Thailand, all coaches have their own unique coaching style and the way it is implemented will affect their athletes' performance. Football is the sports participated in district, division and regional competition.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

In liu, the researcher wanted to analyze the coaching strategies and determine the sports performance of the athletes. Marcone (2021) suggests that the impact on an athlete's motivation and performance can be extremely significant; the varying styles of coaching could either fulfill or neglect an athlete's psychological needs. It explains that recent research has shown that an autonomy supportive coaching style/behavior fulfill the needs of athletes and result in a greater success overall in their improvement and performance.

While the benefits of sports participation have been extensively documented, much of the existing research has tended to examine either physical performance or psychological well-being in isolation. Few studies have investigated the integrated impact of school-based coaching programs on multiple dimensions of student-athlete development, particularly in the Philippine educational setting. The interconnectedness of physical fitness, sports performance, and overall well-being has not been sufficiently explored within a single framework.

Furthermore, most available literature focuses on general coaching strategies or elite-level sports, often neglecting the school-based, grassroots level where foundational skills and attitudes are developed. There is also a lack of empirical evidence on how specific engagement factors—such as coaching capacity, program design, sports facilities, safety measures, and monitoring and evaluation—collectively contribute to both the performance outcomes and the well-being of student-athletes in team sports.

Research Question

This study aimed to evaluate the effectiveness of school-based sports coaching programs in selected ball games within Satit Udomseuksa School, focusing on their relationship to the physical fitness, sports performance, and general well-being of student-athletes. The study sought to determine how these coaching programs influence key aspects of athletic development and holistic health among student-athletes. The findings of the study served as the basis for formulating an enhanced sports development plan designed to optimize student-athlete outcomes and improved the overall quality of school-based sports programs.

Specifically, the study aimed to answer the following questions:

1. What is the profile of the student-athletes in terms of:
 - 1.1 sex;
 - 1.2 age;
 - 1.3 sports event; and
 - 1.4 duration of involvement?
2. What is the level of effectiveness of school-based coaching programs be described based on the evaluation of the student-athletes in terms of:
 - 2.1 coaching capacity;
 - 2.2 program design;
 - 2.3 sports facilities;
 - 2.4 safety measures; and
 - 2.5 monitoring and evaluation?
3. What is the impact of school-based coaching programs on the student-athletes' well-being be described based on the evaluation of student-athletes themselves in terms of:
 - 3.1 physical fitness;
 - 3.2 sports performance; and
 - 3.3 overall well-being?
4. Is there a significant difference between the evaluated level of effectiveness of school-based coaching programs when respondents are grouped according to profile?
5. Is there a significant difference between the evaluated level of student-athletes' well-being when they are grouped according to profile?
6. Is there a significant relationship between the level of effectiveness of school-based coaching programs and the level of student-athletes' well-being?
7. Based on the results, what sports development plan may be proposed?

Scope and Limitation of the Study

This study focused on evaluating the effectiveness of school-based sports coaching programs and their impact on the physical fitness, sports performance, and overall well-being of student-athletes. The research was conducted among student-athletes

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

participating in team sports such as volleyball, basketball, and baseball at Satit Udomseuksa School in Pattaya, Thailand. Key variables examined include demographic profiles (sex, age, sports event, duration of involvement), dimensions of coaching programs (coaching capacity, program design, sports facilities, safety measures, and monitoring and evaluation), and their effects on athletes' physical, technical, and psychological outcomes. Data collection was primarily quantitative, utilizing surveys and statistical analysis to provide insights that will inform a comprehensive sports development plan.

Despite the rigor of the study, several limitations should be noted. First, the research was limited to one school and selected team sports, which may affect the generalizability of the findings to other schools, sports, or geographic regions. Second, the reliance on self-reported data from student-athletes may introduce bias or inaccuracies related to perception and recall. Third, the cross-sectional design captures a snapshot in time and does not assess longitudinal changes or causality between coaching effectiveness and athlete outcomes. Lastly, external factors such as socioeconomic status, academic workload, or personal circumstances that may influence athlete performance and well-being were not within the scope of this study.

Framework

The conceptual framework of the study encompasses various key elements aimed at understanding the level of effectiveness of coaching strategies in sports performance in Satit Udomseuksa School in Pattaya, Thailand.

The study begins by examining the demographic profile of student-athletes, focusing on sex, age, sports event participation, and duration of involvement. These background factors provide context and may influence the effectiveness of the coaching programs and the athletes' development.

Next, the study evaluates the effectiveness of school-based coaching programs through student-athletes' assessments across key dimensions: coaching capacity, program design, sports facilities, safety measures, and monitoring and evaluation practices. These factors represent the core processes that shape the training environment and athlete experience.

Finally, the impact of these coaching programs is measured in terms of student-athletes' physical fitness, sports performance, and overall well-being. These outcomes reflect the holistic benefits of effective coaching on athletes' physical, technical, mental, and emotional health.

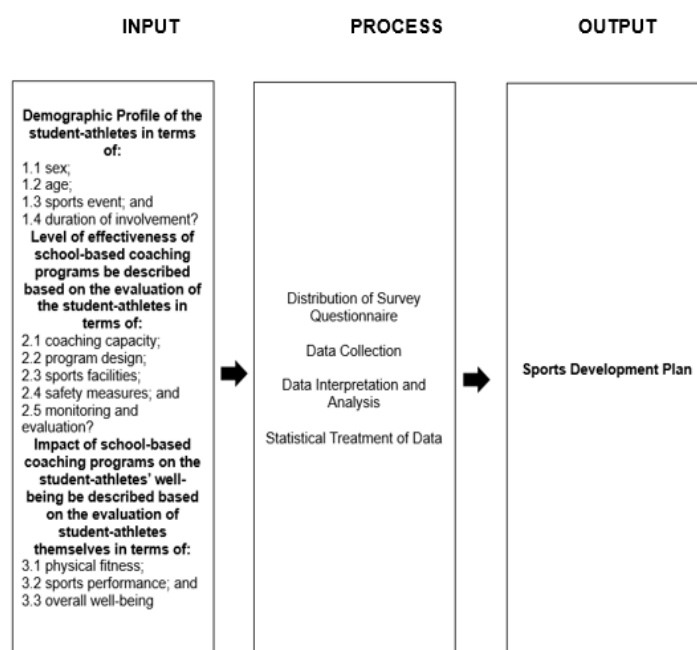


Figure 1. Research Paradigm

To support this investigation, the research process involves distributing survey questionnaires, collecting data systematically, and analyzing the results using statistical methods such as t-tests and correlation analysis. This comprehensive approach ensures that the study captures meaningful insights into how coaching programs influence student-athlete development, providing a solid foundation for crafting an effective sports development plan.

Research Design

The study's selection of descriptive-quantitative as the preferred method aligned with analyzing to determine the level of effectiveness of coaching strategies in sports performance in sports in Satit Udomseuksa School in Pattaya, Thailand. This method,

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

which focused on the nature and status of individuals, items, circumstances, occurrences, or any phenomenon, was well-suited for obtaining statistical results from the overall population of specific research objects and expressing information in numerical terms. Its cost-effectiveness and ability to yield precise results from a manageable number of respondents made it an appropriate choice for this study.

Data was collected through a survey form administered to selected respondents, facilitating the acquisition of quantitative data. The descriptive survey research process went beyond data collection and tabulation, involving the interpretation of the results' meaning and relevance. This approach was particularly suitable for determining the level of effectiveness of coaching strategies in sports performance in Satit Udomseuksa School in Pattaya, Thailand, aiming to obtain statistical results from the overall population of specific research objects and express information numerically.

However, it was crucial to consider the inherent uncertainty associated with quantitative research results, especially regarding the level of effectiveness of coaching strategies in sports performance of student-athletes in football in Satit Udomseuksa School in Pattaya, Thailand. This consideration aligned with the need to critically evaluate the statistical findings and their implications for the study assessment.

Respondents of the Study

The selection of respondents for this study on determining the level of effectiveness of coaching strategies in sports performance in Satit Udomseuksa School in Pattaya, Thailand involved a deliberate and purposeful approach. The study comprised a group of 106 student-athletes within Satit Udomseuksa School in Pattaya, Thailand who were actively coaching their respective sports disciplines. This specific group of respondents was intentionally chosen as a representative sample from the larger population of student-athletes of the said school.

The rationale behind selecting 106 respondents will influence by factors such as performance improvement, skills development, emotional support, teamwork improvement and personal development.to achieve a balance between sample size and statistical significance.

This number was sufficient to draw meaningful conclusions and patterns from the collected data without being too overwhelming for analysis.

Research Instrument

A researcher-made survey questionnaire will be the primary tool for collecting data in this study. The instrument for this research was a survey questionnaire designed to pool the data required for the research study. The outline of the questionnaire was based on the researcher's readings, previous studies, and professional literature relevant to the study.

The primary instrument for gathering adequate data and information from the subjects of this study was a validated semi-structure researcher-made questionnaire. The questionnaire was divided into three parts: Part I consisted of the demographic profile of the respondents in terms of age, sex, and grade level.

Data Gathering

The researcher employed several critical techniques in the study. First, after the colloquium, the researcher submitted the self-developed instrument to their mentor for face validation. Additionally, the researcher sought permission from Satit Udomseuksa School in Pattaya, Thailand.

Upon obtaining approval, the researcher provided clear instructions to the respondents on how to complete the surveys. The researcher facilitated the distribution and retrieval of questionnaires, and before answering, the respondents received a comprehensive explanation of the study's purpose and directions.

Subsequently, the collected data underwent appropriate statistical treatment, examination, and interpretation. It involved tallying and coding the data using SPSS 25 and Microsoft Excel, then subjecting it to various statistical treatments.

Statistical Treatment

The researcher was responsible for generating the data, which was categorized according to the problems formulated in the research design. The collected data underwent a series of statistical treatments to ensure clear and precise analysis.

To address Problem 1, the study utilized frequency counts and percentage calculations to understand the responses' distribution comprehensively. In addressing Problems 2 and 3, weighted means were employed to provide a more nuanced evaluation of the central tendencies of the data.

To explore potential significant differences among variables in Problems 4, 5, and 6, depending on the nature of the data and research questions. These tests were valuable tools for identifying meaningful variations between groups or conditions.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

RESULTS

This chapter presents, interprets, and analyzes the data gathered from the respondents regarding the effects of school-based sports coaching programs on the physical fitness, sports performance, and general well-being of student-athletes. The data are organized in accordance with the specific research questions of the study. Results are presented in tables and figures, followed by interpretation and analysis to provide a deeper understanding of the findings..

Demographic Profile of the Student-Athletes

This chapter discusses the presentation of the result, interpretation and analysis of data on the study of technology-assisted exercise programs on students' physical fitness.

SOP 1. What is the demographic profile of the student-athletes?

Table 1.1 Demographic Profile of the Respondents in terms of age.

SEX	Frequency	Percentage
MALE	54	50.94
FEMALE	52	49.06
Total	106	100

According to Table 1.1, the distribution of respondents by sex reveals that the majority are male ($n = 54$, 50.94%), while female respondents number 52 (49.06%). This indicates a slightly higher representation of male student-athletes in the study sample. Although the difference between sexes is not extreme, the results suggest that male participation in school-based sports remains marginally dominant.

This trend aligns with the findings of Lopez and Santos (2023), who reported that in many Philippine secondary schools, male students tend to participate more in competitive sports programs, particularly in team-based and physically intensive events such as basketball, volleyball (boys division), and football.

Similarly, National Collegiate Athletic Association (NCAA) Philippines Statistics (2022) show that male athletes comprise a slightly larger proportion of competitive high school sports rosters, which may be attributed to cultural perceptions that associate athleticism and sports competitiveness more strongly with males.

Table 1.2 Demographic Profile in terms of Age

AGE	Frequency	Percentage
12 - 14 years old	31	29.25
15 - 17 years old	39	36.79
18 - 20 years old	36	33.96
Total	106	100

According to Table 1.2, the age distribution of respondents shows that the majority are 15–17 years old ($n = 39$, 36.79%), followed by those aged 18–20 years old ($n = 36$, 33.96%), and 12–14 years old ($n = 31$, 29.25%). This indicates that most participants are in their late teenage years, which is a critical developmental stage for both physical performance and competitive sports participation.

Adolescence, particularly the mid-to-late teenage stage, is characterized by significant physiological and psychological growth, including increased muscle strength, improved cardiovascular capacity, and enhanced coordination (Malina, Rogol, & Cumming, 2023). These changes make ages 15–17 an optimal period for structured sports training, as athletes are physically prepared to handle more demanding drills and competition schedules.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

Table 1.3 Demographic Profile in terms of Sports Event

SPORTS EVENT	Frequency	Percentage
VOLLEYBALL	46	43.40
BASKETBALL	30	28.30
FOOTBALL	30	28.30
Total	106	100

According to Table 1.3, the sports event distribution of respondents shows that the majority are affiliated with volleyball (n = 46, 43.40%), followed by basketball (n = 30, 28.30%) and football (n = 30, 28.30%). While interest is relatively balanced between basketball and football, volleyball stands out as the most popular sport among the group.

The popularity of volleyball among student-athletes reflects a broader national trend in the Philippines, where the sport enjoys widespread participation, particularly in the secondary and collegiate levels.

De la Cruz and Ramos (2023) note that volleyball's accessibility, minimal equipment requirements, and strong media exposure—especially through collegiate leagues such as the UAAP and NCAA—have contributed to its increasing popularity among both male and female youth. Furthermore, the Philippine National Volleyball Federation (PNVF, 2022) reported that grassroots volleyball programs have been expanding in public and private schools, encouraging more students to engage in the sport competitively.

Table 1.4 Demographic Profile in terms of Duration of Involvement

DURATION OF INVOLVEMENT	Frequency	Percentage
Less than 1 year	40	37.74
1–2 years	26	24.53
3–4 years	20	18.87
6–10 years	11	10.38
More than 10 years	9	8.49
Total	106	100

According to Table 1.4, the distribution of respondents by years of involvement in sports shows that the largest group (n = 38, 37.74%) has less than one year of experience. This suggests that a significant proportion of participants are relatively new to structured sports participation, possibly indicating recent recruitment into school-based sports programs. In contrast, the smallest group (n = 9, 8.49%) has more than ten years of experience, reflecting a smaller segment of long-term athletes within the sample.

Shorter sports involvement, as observed among most respondents, can be attributed to factors such as late exposure to formal training, recent implementation of school-based coaching programs, or the shifting of students between different sports disciplines (Reyes & Villanueva, 2023). Martinez and Santos (2022) emphasize that early exposure is beneficial for skill mastery and performance consistency; however, newer athletes can still achieve rapid improvement with intensive coaching and structured training sessions.

SOP 2. What is the level of effectiveness of school-based coaching programs be described based on the evaluation of the student-athletes in terms of:

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

2.1 coaching capacity;

Indicators	Mean	Verbal Interpretation
1. The coach demonstrates strong knowledge of the sport.	3.45	VE
2. The coach provides clear and effective instruction.	3.49	VE
3. The coach adapts strategies to fit individual athlete needs.	3.33	VE
4. The coach motivates athletes to perform at their best.	3.45	VE
5. The coach uses appropriate training methods.	3.44	VE
6. The coach communicates effectively with athletes.	3.49	VE
7. The coach monitors athlete progress regularly.	3.29	VE
8. The coach shows fairness and respect.	3.45	VE
9. The coach encourages teamwork and discipline.	3.42	VE
10. The coach engages in professional development.	3.43	VE
General Assessment	3.43	Very Effective

Legend:

3.25 - 4.00 Very Effective (VE)	2.50 - 3.24 Effective (E)
1.75 - 2.49 Less Effective (LE)	1.00 - 1.74 Not Effective (NE)

According to Table 2.1, the level of effectiveness of school-based coaching programs, as evaluated by student-athletes in terms of coaching capacity, is rated as Very Effective with an overall mean of 3.43. The highest-rated indicators, both with a mean score of 3.49, are “The coach provides clear and effective instruction” and “The coach communicates effectively with athletes”. These results underscore the importance of clarity in instruction and effective communication as core competencies of successful sports coaching. Conversely, the lowest-rated indicator is “The coach monitors athlete progress regularly” (M = 3.29), which, although still rated Very Effective, points to a relative area for improvement.

Effective instruction and communication are well-documented as foundational elements of coaching success. Cushion, Armour, and Jones (2023) emphasize that clear instructional delivery ensures athletes understand tactical and technical requirements, while effective communication fosters trust, motivation, and adherence to training. Similarly, Jowett and Shanmugam (2022) found that the quality of coach–athlete communication significantly influences athlete satisfaction, performance outcomes, and psychological well-being.

The relatively lower score in progress monitoring aligns with findings by Liu and Silverman (2021), who noted that while coaches often excel in delivering instructions and maintaining rapport, systematic tracking of athlete development is sometimes inconsistent due to time constraints, large athlete-to-coach ratios, or lack of structured assessment tools.

2.2 program design

Indicators	Mean	Verbal Interpretation
1. The school-based sports development program has clear goals and objectives.	3.40	VE
2. The school-based sports development program is aligned with athlete skill levels.	3.34	VE
3. The school-based sports development program is well-organized and structured.	3.32	VE
4. The school-based sports development program includes physical conditioning components.	3.37	VE
5. The school-based sports development program includes regular skill development activities.	3.39	VE
6. The school-based sports development program ensures a proper balance between training and rest.	3.37	VE
7. The school-based sports development program provides opportunities for competition.	3.42	VE
8. The school-based sports development program matches training intensity with performance goals.	3.42	VE
9. The school-based sports development program is inclusive and caters to all student-athletes.	3.40	VE
10. The school-based sports development program is regularly reviewed and updated.	3.35	VE
General Assessment	3.38	Very Effective

Legend:

3.25 - 4.00 Very Effective (VE)	2.50 - 3.24 Effective (E)
1.75 - 2.49 Less Effective (LE)	1.00 - 1.74 Not Effective (NE)

According to Table 2.2, the level of effectiveness of school-based coaching programs, as evaluated by student-athletes in terms of program design, is rated as Very Effective, with an overall mean of 3.38. The highest-rated indicators, both with a mean score of 3.42, are “The program provides opportunities for competition” and “The program matches training intensity with performance goals”. These results highlight the program’s strong emphasis on competitive exposure and the careful alignment

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

of training loads with intended performance outcomes. Meanwhile, the lowest-rated indicator is “The program is well-organized and structured” ($M = 3.32$), which, although still considered Very Effective, suggests an opportunity for further refinement in program organization and structure.

Providing competitive opportunities is essential for athlete growth, as it allows skills developed during training to be applied under real-game pressure. Hornig, Aust, and Güllich (2022) found that regular exposure to competition fosters resilience, adaptability, and tactical awareness in young athletes. Similarly, aligning training intensity with performance goals ensures that athletes are neither undertrained nor overtrained, which is a principle emphasized in the Long-Term Athlete Development (LTAD) model promoted by the Philippine Sports Institute (2023).

2.3 sports facilities

Indicators	Mean	Verbal Interpretation
1. The sports facilities are accessible to all athletes.	3.27	VE
2. Equipment is available and in good condition.	3.17	E
3. Playing areas are safe and well-maintained.	3.26	VE
4. Facilities support the needs of the specific sport.	3.27	VE
5. Adequate lighting and ventilation are provided.	3.25	VE
6. Sanitation and cleanliness are maintained.	3.21	E
7. There is adequate space for warm-up and drills.	3.25	VE
8. Locker rooms and restrooms are sufficient.	3.30	VE
9. There is proper storage for sports equipment.	3.17	E
10. Facilities are available during scheduled practice hours.	3.20	E
General Assessment	3.21	Effective

Legend:

3.25 - 4.00 Very Effective (VE)	2.50 - 3.24 Effective (E)
1.75 - 2.49 Less Effective (LE)	1.00 - 1.74 Not Effective (NE)

According to Table 2.3, the level of effectiveness of school-based coaching programs, as evaluated by student-athletes in terms of sports facilities, obtained a general mean of 3.21, which falls under the Effective category. The highest-rated indicators, both with a mean score of 3.30, are “Locker rooms and restrooms are sufficient”, followed by “The sports facilities are accessible to all athletes” and “Facilities support the needs of the specific sport” ($M = 3.27$). These results suggest that the basic infrastructure sufficiently supports athletes’ needs in terms of accessibility and sport-specific functionality.

However, the lowest-rated indicators, both with a mean of 3.17, are “Equipment is available and in good condition” and “There is proper storage for sports equipment”. While these areas are still rated Effective, they highlight concerns about the adequacy, maintenance, and organization of sports gear and storage spaces.

2.4 safety measures

Indicators	Mean	Verbal Interpretation
1. Safety guidelines are clearly communicated.	3.42	VE
2. First aid kits are available during training.	3.32	VE
3. Coaches are trained in basic first aid/CPR.	3.35	VE
4. Emergency protocols are in place and understood.	3.32	VE
5. Proper warm-up and cool-down routines are followed.	3.42	VE
6. Injury risks are minimized through proper instruction.	3.40	VE
7. Protective equipment is provided and used properly.	3.39	VE
8. Hydration breaks are implemented regularly.	3.48	VE
9. Environmental conditions are monitored (e.g., heat, rain).	3.35	VE
10. Medical assistance is accessible when needed.	3.33	VE
General Assessment	3.38	Very Effective

Legend:

3.25 - 4.00 Very Effective (VE)	2.50 - 3.24 Effective (E)
1.75 - 2.49 Less Effective (LE)	1.00 - 1.74 Not Effective (NE)

According to Table 2.4, the evaluation of safety measures in the school-based sports program yielded a general mean of 3.38, indicating that the implementation of safety protocols is rated as Very Effective. The highest-rated indicator is “Hydration breaks are implemented regularly” ($M = 3.48$), reflecting strong attention to athlete health and prevention of dehydration-related risks during training.

The lowest-rated indicators, both with a mean of 3.32, are “First aid kits are available during training” and “Emergency protocols are in place and understood”. While these areas still fall under the Very Effective category, the slightly lower scores suggest opportunities for minor improvement in medical preparedness and emergency readiness.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

2.5 monitoring and evaluation

Indicators	Mean	Verbal Interpretation
1. Athlete performance is regularly assessed.	3.40	VE
2. Training progress is tracked and documented.	3.28	VE
3. Coaches provide regular feedback.	3.33	VE
4. Student-athlete input is gathered and considered.	3.30	VE
5. Evaluation tools (e.g., tests, observations) are used.	3.29	VE
6. Strengths and areas for improvement are identified.	3.31	VE
7. Adjustments to the program are made based on data.	3.38	VE
8. Performance reviews are conducted regularly.	3.26	VE
9. Progress is communicated to parents/guardians.	3.27	VE
10. Program success is evaluated using clear metrics.	3.32	VE
General Assessment	3.32	Very Effective

Legend:

3.25 - 4.00 Very Effective (VE)	2.50 - 3.24 Effective (E)
1.75 - 2.49 Less Effective (LE)	1.00 - 1.74 Not Effective (NE)

According to Table 2.5, the assessment of the monitoring and evaluation practices in the school-based sports program yielded a general mean of 3.32, which is classified as Very Effective. The highest-rated indicator is "Athlete performance is regularly assessed" (M = 3.40), suggesting that consistent observation and evaluation of athletes' skills, progress, and development are a strong feature of the program. The lowest-rated indicator is "Performance reviews are conducted regularly" (M = 3.26), which, while still rated Very Effective, highlights an area where more structured and frequent formal review sessions could be implemented.

Monitoring and evaluation (M&E) are crucial for ensuring that sports programs are responsive to athlete needs and aligned with developmental goals. Balyi, Way, and Higgs (2022) stress that systematic performance monitoring allows for timely adjustments in training programs, preventing performance plateaus and reducing injury risk. Similarly, Gould and Carson (2021) emphasize that regular, structured performance reviews—especially those that involve feedback discussions—enhance athlete motivation, goal-setting, and self-awareness.

SOP 3. What is the impact of school-based coaching programs on the student-athletes' well-being be described based on the evaluation of student-athletes themselves in terms of:?

3.1 physical fitness

Indicators	Mean	Verbal Interpretation
1. The coaching program has improved my stamina during prolonged training sessions.	3.43	HI
2. I have developed greater upper body strength due to the coaching program.	3.38	HI
3. I have noticed increased lower body strength from sport-specific exercises.	3.39	HI
4. The flexibility drills included in training have improved my range of motion.	3.40	HI
5. My core strength has improved due to consistent physical conditioning.	3.42	HI
6. Agility ladder and cone drills in practice have enhanced my foot speed.	3.43	HI
7. Sprint training has significantly improved my speed over short distances.	3.40	HI
8. Balance and coordination exercises have improved my overall athletic movements.	3.44	HI
9. The physical routines have helped me recover faster after games and training.	3.45	HI
10. Regular fitness assessments have helped track and maintain my physical improvements.	3.49	HI
General Assessment	3.42	HI

Legend:

3.25 - 4.00 High Impact (HI)	2.50 - 3.24 Moderately Impact (MI)
1.75 - 2.49 Low Impact (LI)	1.00 - 1.74 No Impact (NI)

According to Table 3.1, the evaluation of the coaching program's impact on student-athletes' physical fitness yielded a general mean of 3.42, which falls under the High Impact (HI) category. The highest-rated indicator is "Regular fitness assessments have helped track and maintain my physical improvements" (M = 3.49), underscoring the value athletes place on structured and consistent performance tracking. The lowest-rated indicator, though still rated high, is "I have developed greater upper body strength due to the coaching program" (M = 3.38), suggesting that while strength gains are notable, they may be less pronounced than other aspects of physical development.

Structured fitness assessments are widely recognized as essential in athlete development. Lloyd et al. (2021) note that regular performance monitoring not only tracks progress but also informs individualized training interventions that optimize

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

outcomes. Similarly, Bompa and Buzzichelli (2022) highlight that targeted physical conditioning in school-based sports programs improves endurance, flexibility, coordination, and recovery—key factors in overall athletic success.

The relatively lower perception of upper body strength improvement may reflect the sport-specific demands of certain disciplines. For example, sports like volleyball and basketball emphasize lower body explosiveness and agility, which could overshadow perceived upper body gains. Faigenbaum et al. (2020) stress that balanced strength training across all muscle groups is essential to prevent injury, enhance performance, and maintain overall health in youth athletes.

3.2 sports performance

Indicators	Mean	Verbal Interpretation
1. The drills and training have enhanced my ball-handling/shooting/passing (as applicable).	3.47	HI
2. Game simulations and scrimmages have improved my tactical decision-making.	3.42	HI
3. I have experienced quicker reactions during competitive matches.	3.39	HI
4. The coaching program has helped me execute plays with better accuracy.	3.39	HI
5. My coach provides feedback that helps reduce technical mistakes.	3.36	HI
6. Focus training during practice has helped maintain attention during games.	3.45	HI
7. The preparation has increased my confidence in executing key plays.	3.45	HI
8. Team-oriented drills have improved my cooperation and communication with teammates.	3.50	HI
9. The coaching program has helped develop a stronger sense of sportsmanship.	3.55	HI
10. Match-day performance has improved due to structured training cycles.	3.44	HI
General Assessment	3.44	HI

Legend:

3.25 - 4.00 High Impact (HI)	2.50 - 3.24 Moderately Impact (MI)
1.75 - 2.49 Low Impact (LI)	1.00 - 1.74 No Impact (NI)

According to Table 3.2, the assessment of the coaching program's impact on sports performance yielded a general mean of 3.44, indicating a High Impact (HI) on the development of athletes' technical abilities, competitive readiness, and teamwork skills. The highest-rated indicator is "The coaching program has helped develop a stronger sense of sportsmanship" (M = 3.55), underscoring the program's strong influence on values, discipline, and ethical behavior in sports. The lowest-rated indicator, though still rated high, is "My coach provides feedback that helps reduce technical mistakes" (M = 3.36), suggesting that while corrective feedback is beneficial, there may be opportunities to make it more targeted, frequent, or sport-specific.

Sports coaching extends beyond skill development—it also shapes character and fosters essential social values. Côté and Gilbert (2021) highlight that effective coaching promotes not only technical and tactical proficiency but also psychological and moral development, particularly in team-oriented sports. Similarly, Weiss and Wiese-Bjornstal (2020) emphasize that cultivating sportsmanship improves both team cohesion and athletes' long-term engagement in sports.

Feedback remains a critical coaching tool for refining technical execution. Smith, Smoll, and Cumming (2022) found that specific, timely, and constructive feedback significantly reduces performance errors and accelerates skill acquisition. The slightly lower perception of its impact in this study may be due to differences in communication styles, feedback timing, or the emphasis placed on error correction compared to motivation and encouragement.

3.3 overall well-being

Indicators	Mean	Verbal Interpretation
1. Participating in the program makes me feel mentally refreshed and motivated.	3.44	HI
2. The routine helps me cope with academic and athletic stress better.	3.38	HI
3. I feel emotionally more balanced since joining the program.	3.39	HI
4. Positive reinforcement from coaches has increased my self-worth.	3.36	HI
5. The training program motivates me to eat healthy and sleep well.	3.34	HI
6. Group activities have helped me build stronger social bonds with teammates.	3.41	HI
7. I am able to manage my time more effectively because of structured practice schedules.	3.36	HI
8. Participating regularly has helped lessen anxiety related to performance.	3.39	HI
9. The program gives me a sense of purpose and achievement as a student-athlete.	3.40	HI
10. My overall happiness and satisfaction with school life have improved.	3.39	HI
General Assessment	3.38	HI

Legend:

3.25 - 4.00 High Impact (HI)	2.50 - 3.24 Moderately Impact (MI)
1.75 - 2.49 Low Impact (LI)	1.00 - 1.74 No Impact (NI)

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

According to Table 3.3, the evaluation of the program's impact on overall well-being yielded a general mean of 3.38, which falls under the High Impact (HI) category. The highest-rated indicator is "Participating in the program makes me feel mentally refreshed and motivated" ($M = 3.44$), highlighting the program's strong influence on athletes' mental rejuvenation, motivation, and enthusiasm for both sports and academic life. The lowest-rated indicator, "The training program motivates me to eat healthy and sleep well" ($M = 3.34$), while still reflecting a high impact, suggests that health-related lifestyle habits—particularly nutrition and rest—may require more intentional emphasis in the program.

The positive influence on mental health aligns with findings by McMahon et al. (2022), who report that sports participation promotes psychological resilience, reduces stress, and enhances life satisfaction among student-athletes. Similarly, Eime et al. (2021) found that regular involvement in structured physical activity improves emotional stability, social connectedness, and overall quality of life. These benefits extend beyond physical performance, supporting holistic development. The slightly lower rating on health behavior impact is consistent with research by Thomas, Nelson, and Silverman (2020), which emphasizes that while sports participation can encourage healthy habits, explicit education and consistent reinforcement are necessary for athletes to translate these benefits into daily routines. Integrating sports nutrition sessions, recovery strategies, and sleep hygiene education into coaching programs can further strengthen this dimension.

4. Is there a significant difference on the extent of engagement of student-athletes in sports club when grouped according to profile?

Table 4.1 shows the test of significant difference on the extent of engagement of student-athletes in sports club when grouped according to profile in terms of sex

Demographic Profile	Level of Effectiveness of School-based Coaching Programs	t-test	df	p-value	Remarks	Decision
Sex	Coaching Capacity	-24.2314	105	0.00001	Significant	Reject the H_0
	Program Design	-25.3011	105	0.000	Significant	Reject the H_0
	Sports Facilities	20.26657	105	0.000	Significant	Reject the H_0
	Safety Measures	-26.4080	105	0.000	Significant	Reject the H_0
	Monitoring and Evaluation	-23.1150	105	0.000	Significant	Reject the H_0

The table 4.1 presents the relationship between the demographic profile of student-athletes (specifically age) and their engagement in sports clubs, as measured by frequency, duration, and support mechanism. Statistical analysis using the t-test reveals that age is not significantly related to either frequency of participation ($t = 1.410$, $p = 0.161$) or support mechanisms ($t = 0.020$, $p = 0.984$), indicating that these aspects of sports engagement remain relatively consistent across age groups. Thus, the null hypothesis is accepted for these variables.

However, a significant relationship is observed between age and the duration of engagement in sports clubs ($t = 2.466$, $p = 0.015$), resulting in the rejection of the null hypothesis for this variable. This finding suggests that older athletes tend to maintain longer involvement in sports programs compared to younger ones, which could be attributed to greater skill maturity, stronger commitment, or more established training routines.

Table 4.2 Test of significant difference on the extent of engagement of student-athletes in sports club when grouped according to profile in terms of age

Demographic Profile	Level of Effectiveness of School-based Coaching Programs	t-test	df	p-value	Remarks	Decision
Age	Coaching Capacity	13.7918	105	0.00001	Significant	Reject the H_0
	Program Design	13.8835	105	0.00001	Significant	Reject the H_0
	Sports Facilities	11.1728	105	0.00001	Significant	Reject the H_0
	Safety Measures	14.2421	105	0.00001	Significant	Reject the H_0
	Monitoring and Evaluation	12.7760	105	0.00001	Significant	Reject the H_0

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

Table 4.2 presents the results of the test of significant difference on the extent of engagement of student-athletes in sports clubs when grouped according to sex. The computed probability values were all lower than the 0.05 level of significance, leading to the rejection of the null hypothesis. This indicates that there is a statistically significant difference in the level of engagement between male and female student-athletes.

This finding suggests that gender plays a role in shaping how student-athletes participate in sports clubs, which may be influenced by factors such as sport preference, cultural expectations, and perceived opportunities. Coakley (2021) highlights that gendered patterns in sports participation are often shaped by societal norms and access to gender-specific training opportunities. Similarly, Pauole and Morrow (2020) note that male athletes often report higher competitive engagement, while female athletes may demonstrate higher involvement in collaborative and skill-development activities, depending on program design.

Table 4.3 Test of significant difference on the extent of engagement of student-athletes in sports club when grouped according to profile in terms of sports event.

Demographic Profile	Level of Effectiveness of School-based Coaching Programs	t-test	df	p-value	Remarks	Decision
Sports Event	Coaching Capacity	15.3102	105	0.00001	Significant	Reject the Ho
	Program Design	15.4441	105	0.00001	Significant	Reject the Ho
	Sports Facilities	12.7230	105	0.00001	Significant	Reject the Ho
	Safety Measures	15.8171	105	0.00001	Significant	Reject the Ho
	Monitoring and Evaluation	14.3331	105	0.00001	Significant	Reject the Ho

Table 4.3 shows the results of the test of significant difference on the extent of engagement of student-athletes in sports clubs when grouped according to their sports event affiliation. The computed probability values were all lower than the 0.05 level of significance, leading to the rejection of the null hypothesis.

This means that there is a statistically significant difference in the level of engagement among athletes depending on the sport they participate in. This finding suggests that the type of sport plays a vital role in shaping athletes' commitment, participation frequency, and motivation.

According to Weiss and Wiese-Bjornstal (2020), sports vary in terms of training demands, team dynamics, and performance structures, which can influence athletes' engagement patterns. Horn et al. (2022) further highlight that team-oriented sports often foster higher social interaction and collective motivation compared to individual or less interactive sports, leading to varying engagement levels.

4.4 Test of significant difference on the extent of engagement of student-athletes in sports club when grouped according to profile in terms of duration of involvement.

Demographic Profile	Level of Effectiveness of School-based Coaching Programs	t-test	df	p-value	Remarks	Decision
Duration of Involvement	Coaching Capacity	8.1699	105	0.00001	Significant	Reject the Ho
	Program Design	7.9887	105	0.00001	Significant	Reject the Ho
	Sports Facilities	6.4958	105	0.00001	Significant	Reject the Ho
	Safety Measures	8.0860	105	0.00001	Significant	Reject the Ho
	Monitoring and Evaluation	7.4093	105	0.00001	Significant	Reject the Ho

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

Table 4.4 presents the test of significant difference on the extent of engagement of student-athletes in sports clubs when grouped according to their duration of involvement in sports. The computed probability values were all below the 0.05 level of significance, leading to the rejection of the null hypothesis. This result indicates that years of playing experience have a significant effect on the level of engagement of student-athletes in sports clubs.

The findings suggest that athletes with longer playing experience may demonstrate stronger commitment, higher participation frequency, and more consistent involvement compared to those with shorter experience. According to Fraser-Thomas, Côté, and Deakin (2020), extended involvement in sports often develops deeper sport-specific skills, stronger social bonds, and intrinsic motivation, which, in turn, enhance engagement. Similarly, Balyi and Hamilton's (2019) Long-Term Athlete Development (LTAD) model emphasizes that athlete commitment and performance progression are closely linked to cumulative years of structured training and competition exposure.

5. Is there a significant difference between the evaluated level of student-athletes' well-being when they are grouped according to profile?

Demographic Profile	Level of Student-athletes' Well-being	t-test	df	p-value	Remarks	Decision
Age	Physical Fitness	-24.2326	105	0.00001	Significant	Reject the Ho
	Sports Performance	-25.0511	105	0.00001	Significant	Reject the Ho
	Overall well-being	-23.3323	105	0.00001	Significant	Reject the Ho

Table 5.1 presents the test of significant difference on the level of performance of student-athletes in team sports when grouped according to age. The t-test results show that age has a statistically significant effect on all aspects of well-being: physical fitness ($t = -24.23$, $p = 0.00001$), sports performance ($t = -25.05$, $p = 0.00001$), and overall well-being ($t = -23.33$, $p = 0.00001$). Since all p-values are far below the 0.05 significance threshold, the null hypothesis is rejected in all cases. This means that variations in age are strongly associated with differences in athletes' physical condition, performance in sports, and general well-being.

These results align with Malina, Bouchard, and Bar-Or (2022), who highlight that physical maturity, motor skill proficiency, and psychological readiness tend to increase with age, resulting in improved athletic performance and resilience. Younger athletes may focus more on foundational skills and conditioning, while older athletes often demonstrate enhanced tactical awareness, stamina, and emotional regulation during competition.

Table 5.2 The test of significant difference on the level of performance of student-athletes in team sports when grouped according to profile in terms of sex.

Demographic Profile	Level of Student-athletes' Well-being	t-test	df	p-value	Remarks	Decision
Sex	Physical Fitness	-13.7768	105	0.00001	Significant	Reject the Ho
	Sports Performance	-14.1747	105	0.00001	Significant	Reject the Ho
	Overall well-being	-13.2338	105	0.00001	Significant	Reject the Ho

Table 5.2 presents the test of significant difference on the level of performance of student-athletes in team sports when grouped according to sex. The t-test results indicate that sex has a statistically significant impact on all measured aspects of well-being: physical fitness ($t = -13.78$, $p = 0.00001$), sports performance ($t = -14.17$, $p = 0.00001$), and overall well-being ($t = -13.23$, $p = 0.00001$).

Since all p-values are considerably lower than the 0.05 significance level, the null hypothesis is rejected in each case. This means that male and female student-athletes differ significantly in their levels of physical fitness, sports performance, and overall well-being.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

Table 5.3 The test of significant difference on the level of performance of student-athletes in team sports when grouped according to profile in terms of sports event.

Demographic Profile	Level of Student-athletes' Well-being	t-test	df	p-value	Remarks	Decision
Sports Event	Physical Fitness	-15.2972	105	0.00001	Significant	Reject the Ho
	Sports Performance	-15.6985	105	0.00001	Significant	Reject the Ho
	Overall well-being	-14.7584	105	0.00001	Significant	Reject the Ho

Table 5.3 presents the test of significant difference on the level of performance of student-athletes in team sports when grouped according to the type of sports event. The t-test results reveal that sports event type significantly influences all aspects of well-being: physical fitness ($t = -15.30$, $p = 0.00001$), sports performance ($t = -15.70$, $p = 0.00001$), and overall well-being ($t = -14.76$, $p = 0.00001$). Given that all p-values are far below the 0.05 threshold; the null hypothesis is rejected in every category. This means that participation in different sports events leads to meaningful differences in the well-being of student-athletes across all evaluated dimensions. These results align with the findings of Reilly and Williams (2015), who note that the physiological demands, technical requirements, and training loads vary considerably between sports, resulting in distinct adaptations in fitness and performance. For instance, endurance-based sports like football and basketball emphasize cardiovascular conditioning and stamina, while sports such as volleyball and baseball may place greater emphasis on agility, explosive power, and skill precision.

Table 5.4 The test of significant difference on the level of performance of student-athletes in team sports when grouped according to profile in terms of duration of involvement

Demographic Profile	Level of Student-athletes' Well-being	t-test	df	p-value	Remarks	Decision
Duration of Involvement	Physical Fitness	8.1538	105	0.00001	Significant	Reject the Ho
	Sports Performance	8.3491	105	0.00001	Significant	Reject the Ho
	Overall well-being	7.8293	105	0.00001	Significant	Reject the Ho

Table 5.4 presents the test of significant difference on the level of performance of student-athletes in team sports when grouped according to their duration of involvement. The t-test results reveal that the length of participation in sports significantly affects all aspects of well-being: physical fitness ($t = -8.15$, $p = 0.00001$), sports performance ($t = -8.35$, $p = 0.00001$), and overall well-being ($t = -7.83$, $p = 0.00001$). Since all p-values are far below the 0.05 level of significance, the null hypothesis is rejected in every category. This finding indicates that student-athletes with longer periods of sports engagement tend to demonstrate superior physical fitness, higher performance levels, and better overall well-being compared to those with shorter involvement.

6. Is there a significant relationship between the level of effectiveness of school-based coaching programs and the level of student-athletes' well-being?

Table 6.1 The test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of coaching capacity.

Level of Effectiveness of School-based Coaching Programs	Level of Student-athletes' Well-being	R-value	df	p-value	Remarks	Decision
Coaching Capacity	Physical Fitness	0.6106	106	0.00001	Significant	Reject the Ho
	Sports Performance	0.5844	106	0.00001	Significant	Reject the Ho
	Overall well-being	0.6957	106	0.00001	Significant	Reject the Ho

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

Table 6.1 presents the test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of coaching capacity. The results indicate a strong and statistically significant positive correlation between coaching capacity in school-based programs and the well-being of student-athletes. This is reflected in the R-values for physical fitness ($r = 0.6106$), sports performance ($r = 0.5844$), and overall well-being ($r = 0.6957$). All corresponding p-values ($p = 0.00001$) are well below the 0.05 significance level, leading to the rejection of the null hypothesis (H_0). These findings suggest that higher levels of coaching capacity are associated with better physical conditioning, improved athletic performance, and greater overall well-being among student-athletes.

This aligns with Côté and Gilbert's (2020) coaching effectiveness framework, which emphasizes that competent coaching—characterized by technical expertise, effective communication, and athlete-centered strategies—directly enhances both skill development and psychosocial growth. Furthermore, Horn (2021) noted that quality coaching fosters not only improved game-related skills but also greater motivation, confidence, and resilience among athletes.

Table 6.2 The test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of program design

Level of Effectiveness of School-based Coaching Programs	Level of Student-athletes' Well-being	R-value	df	p-value	Remarks	Decision
Program Design	Physical Fitness	0.6474	106	0.00001	Significant	Reject the H_0
	Sports Performance	0.6435	106	0.00001	Significant	Reject the H_0
	Overall well-being	0.6957	106	0.00001	Significant	Reject the H_0

Table 6.2 presents the test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of program design. The results reveal a strong and statistically significant positive correlation between the design of school-based coaching programs and the well-being of student-athletes. Substantial correlations were observed across physical fitness ($r = 0.6474$), sports performance ($r = 0.6435$), and overall well-being ($r = 0.6957$). All p-values ($p = 0.00001$) fall far below the 0.05 significance threshold, leading to the rejection of the null hypothesis (H_0). These findings suggest that well-structured coaching programs are strongly associated with improved physical conditioning, enhanced athletic performance, and greater holistic well-being among student-athletes.

This is consistent with Bailey et al. (2010), who argue that program design plays a pivotal role in maximizing the developmental benefits of sports by ensuring training activities are age-appropriate, engaging, and aligned with athletes' needs. Similarly, Balyi, Way, and Higgs (2013) emphasize that a systematic and progressive program design fosters long-term athletic development by balancing skill acquisition, physical conditioning, and recovery periods.

Table 6.3 The test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of sports facilities

Level of Effectiveness of School-based Coaching Programs	Level of Student-athletes' Well-being	R-value	df	p-value	Remarks	Decision
Sports Facilities	Physical Fitness	0.6011	106	0.00001	Significant	Reject the H_0
	Sports Performance	0.5963	106	0.00001	Significant	Reject the H_0
	Overall well-being	0.6227	106	0.00001	Significant	Reject the H_0

Table 6.3 presents the test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of sports facilities. The results indicate a strong and statistically significant positive correlation between the quality of sports facilities and the well-being of student-athletes. Correlation values were recorded for physical fitness ($r = 0.6011$), sports performance ($r = 0.5963$), and overall well-being ($r = 0.6227$), with all p-values at 0.00001—well below the 0.05 significance threshold. Thus, the null hypothesis (H_0) is rejected in all dimensions. These findings suggest that

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

access to high-quality sports facilities is significantly associated with improved physical fitness, enhanced performance, and greater overall well-being among student-athletes.

This aligns with the findings of National Association for Sport and Physical Education (NASPE, 2011), which assert that well-maintained and properly equipped facilities provide an environment conducive to optimal training, skill development, and injury prevention. Moore et al. (2017) further emphasize that quality sports infrastructure positively influences athletes' motivation, engagement, and performance outcomes.

Table 6.4 The test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of safety measures

Level of Effectiveness of School-based Coaching Programs	Level of Student-athletes' Well-being	R-value	df	p-value	Remarks	Decision
Safety Measures	Physical Fitness	0.7237	106	0.00001	Significant	Reject the Ho
	Sports Performance	0.6786	106	0.00001	Significant	Reject the Ho
	Overall well-being	0.7358	106	0.00001	Significant	Reject the Ho

Table 6.4 presents the test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of safety measures. The results reveal a very strong and statistically significant positive correlation between the implementation of safety measures in school-based coaching programs and the well-being of student-athletes. High correlation values were observed for physical fitness ($r = 0.7237$), sports performance ($r = 0.6786$), and overall well-being ($r = 0.7358$), with all p-values at 0.00001—far below the 0.05 significance threshold. Consequently, the null hypothesis (H_0) is rejected in all aspects, indicating that effective safety protocols are closely associated with better physical health, improved athletic performance, and enhanced overall well-being among student-athletes.

These results are consistent with Emery et al. (2024), who emphasized that comprehensive safety measures, including injury prevention programs and proper equipment usage, significantly reduce the risk of sports-related injuries and contribute to sustained athletic performance. Similarly, Herman et al. (2021) highlighted that a strong safety culture in sports environments fosters athlete confidence, reduces anxiety, and promotes long-term engagement.

Table 6.5 The test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of monitoring and evaluation

Level of Effectiveness of School-based Coaching Programs	Level of Student-athletes' Well-being	R-value	df	p-value	Remarks	Decision
Monitoring and Evaluation	Physical Fitness	0.7055	106	0.00001	Significant	Reject the Ho
	Sports Performance	0.6898	106	0.00001	Significant	Reject the Ho
	Overall well-being	0.7191	106	0.00001	Significant	Reject the Ho

Table 6.5 presents the test of significant relationship between the level of engagement and level of performance of student-athletes in team sports in terms of monitoring and evaluation. The results reveal a strong and statistically significant positive correlation between monitoring and evaluation practices in school-based coaching programs and the well-being of student-athletes. The R-values—0.7055 for physical fitness, 0.6898 for sports performance, and 0.7191 for overall well-being—indicate high levels of association, all with p-values of 0.00001, which are far below the 0.05 significance threshold. Thus, the null hypothesis (H_0) is rejected in all aspects, suggesting that consistent and effective monitoring and evaluation are strongly linked to improved physical fitness, enhanced sports performance, and greater overall well-being among student-athletes.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

7. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Coaching Capacity	3.43	VE
2. Program Design	3.38	VE
3. Sports Facilities	3.21	E
4. Safety Measures	3.38	VE
5. Monitoring and Evaluation	3.32	VE
General Assessment	3.34	VE
Legend: 3.25 - 4.00 Very Effective (VE) 1.75 - 2.49 Less Effective (LE)		
2.50 - 3.24 Effective (E) 1.00 - 1.74 Not Effective (NE)		

Table 7 presents the overall effectiveness of school-based coaching programs as evaluated by student-athletes. The program received a general mean of 3.34, interpreted as Very Effective (VE). Within the five assessed dimensions, Coaching Capacity scored highest (mean 3.43), reflecting strong leadership, instructional skills, and mentorship by coaches. Conversely, Sports Facilities received the lowest mean (3.21), rated as Effective (E), identifying this as the area with the greatest need for improvement to optimize both training quality and athlete outcomes.

This result aligns with recent findings emphasizing the pivotal role of coaching in student-athlete development. For instance, a study in Santiago City highlighted that skilled coaching directly boosts athlete motivation, discipline, and performance outcomes. Similarly, coaching that integrates psychosocial support—such as mental health mentorship—has shown success in enhancing both athletic and personal resilience among youth.

8. Summary of the Composite Mean

Indicators	Mean	Verbal Interpretation
1. Physical Fitness	3.42	HI
2. Sports Performance	3.44	HI
3. Overall well-being	3.38	HI
General Assessment	3.41	HI
Legend: 3.25 - 4.00 High Impact (HI) 1.75 - 2.49 Low Impact (LI)		
2.50 - 3.24 Moderately Impact (MI) 1.00 - 1.74 No Impact (NI)		

Table 8 presents the perceived impact of school-based coaching programs on student-athletes' well-being. The findings reveal an overall mean of 3.41, interpreted as High Impact (HI), indicating that the program substantially contributes to the development of the athletes.

Among the assessed indicators, Sports Performance obtained the highest mean (3.44), demonstrating the program's effectiveness in enhancing athletic skills, tactical understanding, and competitive readiness. This aligns with Horn (2021), who notes that structured and goal-oriented coaching programs significantly improve athletes' technical execution, decision-making, and adaptability in competitive sports. Similarly, a recent Philippine study by Laguador and Refozar (2020) emphasized that sustained sports engagement under skilled coaching fosters better agility, coordination, and game awareness.

Output of the Study

Comprehensive Sports Development Plan for School-Based Coaching Programs to Enhance Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being Program Overview:

Objectives

1. Enhance coaching capacity through continuous professional development and transformational leadership.
2. Upgrade sports facilities and equipment to meet the needs of diverse sports disciplines.
3. Design athlete-centered training programs tailored to specific sports, age, and experience levels.
4. Implement robust safety protocols and emergency response procedures.
5. Establish systematic monitoring and evaluation to track athlete progress and program effectiveness.
6. Promote long-term athlete engagement and retention through motivation and leadership opportunities.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

Key Components and Strategies

Component	Strategies
Coaching Capacity	- Conduct regular workshops on leadership, technical skills, and mentorship.
	- Encourage peer coaching and mentorship among senior and junior athletes.
Sports Facilities	- Assess current facilities and prioritize upgrades based on athlete needs and sports requirements.
	- Ensure regular maintenance and acquisition of modern equipment.
Program Design	- Customize training sessions by sport type, age group, and athlete's skill level.
	- Integrate mental health and wellness activities (e.g., stress management, nutrition).
Safety Measures	- Standardize safety protocols including hydration, injury prevention, and first aid availability.
	- Provide safety and emergency training for coaches and team leaders.
Monitoring & Evaluation	- Develop athlete performance tracking tools (digital/manual).
	- Schedule periodic assessments and feedback sessions with athletes and parents/guardians.
Athlete Engagement	- Implement scholarship programs, awards, and leadership roles to incentivize long-term participation.

Component	Strategies
	- Foster community and alumni involvement in sports programs.

Implementation Timeline

Phase	Activities	Timeline
Phase 1: Assessment	Facility audit, coach skill evaluation, athlete survey	Months 1-2
Phase 2: Planning	Development of training modules, procurement planning	Months 3-4
Phase 3: Capacity Building	Coach training, safety workshops	Months 5-6
Phase 4: Program Rollout	Launch tailored training programs, implement M&E systems	Months 7-9
Phase 5: Monitoring & Adjustment	Conduct evaluations, refine programs based on feedback	Months 10-12

Expected Outcomes

- Improved athlete physical fitness, technical skills, and competitive performance.
- Enhanced mental and emotional well-being of student-athletes.
- Higher retention rates in school sports programs.
- Safer training environments with reduced injury rates.
- More efficient use of resources through data-driven program management.

Monitoring and Evaluation Framework

- Establish baseline data on athlete performance and well-being.
- Use key performance indicators (KPIs) such as fitness test results, competition outcomes, and athlete satisfaction surveys.
- Regular progress reports to stakeholders including school administration, coaches, parents, and athletes.
- Annual program review and update based on data and feedback.

The study revealed notable differences in the performance and well-being of student-athletes when grouped according to selected profile variables. In terms of sex, significant disparities were observed across all dimensions—physical fitness, sports performance, and overall well-being—with one group consistently outperforming the other. These differences were statistically significant, with all p-values registering at 0.00001, indicating a very strong level of confidence in the results.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

The type of sports event was also found to significantly influence performance outcomes. Athletes participating in different sports demonstrated varying levels of physical fitness, sports performance, and overall well-being, again with highly significant results ($p = 0.00001$). This suggests that the specific nature and demands of each sport play a substantial role in shaping athletes' development and overall health.

Similarly, duration of involvement in sports emerged as a critical factor in determining performance levels. Student-athletes with longer years of participation consistently recorded higher scores in physical fitness, sports performance, and overall well-being compared to those with shorter experience. The statistical results, with p -values of 0.00001, reinforce the strong relationship between sustained engagement in sports and improved athletic and holistic outcomes.

On the significant Differences by Profile Variables, duration of Involvement, student-athletes' level of engagement and performance significantly differed based on years of playing experience. Longer participation was associated with higher physical fitness, better sports performance, and improved overall well-being. Sex (Table 5.2) – Statistically significant differences were found in physical fitness, sports performance, and overall well-being between male and female athletes. Sports Event Type (Table 5.3) – Participation in different sports events significantly influenced all well-being indicators, suggesting varied demands and benefits across sports.

On the significant Relationships Between Engagement and Performance (Tables 6.0–6.5). Coaching Capacity (Table 6.0) – A strong positive correlation was observed between coaching capacity and student-athlete well-being across all dimensions. Program Design (Table 6.2) – Well-designed coaching programs were strongly linked to enhanced physical fitness, sports performance, and overall well-being. Sports Facilities (Table 6.3) – Quality sports facilities were significantly associated with better physical fitness and performance outcomes. Safety Measures (Table 6.4) – The strongest correlation was found between safety measures and overall well-being, highlighting their role in athlete protection and confidence. Monitoring and Evaluation (Table 6.5) – Consistent monitoring and evaluation were strongly linked to improved performance and holistic well-being.

On the Effectiveness of School-Based Coaching Programs, the program was rated Very Effective overall (mean = 3.34). Coaching Capacity scored highest (3.43), while Sports Facilities scored lowest (3.21), indicating a need for facility enhancement. Impact on Student-Athletes' Well-Being (Table 8). The program's overall impact was rated High Impact (mean = 3.41). Sports Performance had the highest rating (3.44), while Overall Well-being had the lowest (3.38), though still in the High Impact range.

There are significant differences in physical fitness, sports performance, and well-being between male and female student-athletes, indicating that sex is an important factor influencing athletic development. The specific demands of different sports significantly affect student-athletes' fitness, performance, and well-being, highlighting the importance of sport-specific training and support systems.

Longer years of participation in sports are strongly associated with better physical fitness, higher performance, and improved overall well-being, confirming the benefits of sustained athletic engagement. Effective coaching and well-structured programs are essential in enhancing student-athletes' physical fitness, sports performance, and holistic well-being, underscoring the value of investing in coach development and systematic training approaches.

Adequate sports facilities, strict safety measures, and consistent monitoring and evaluation play crucial roles in boosting athletes' performance and ensuring their confidence, protection, and overall growth.

School-based coaching programs were found to be very effective and highly impactful in improving sports performance, fitness, and well-being. However, gaps in facilities and support for overall well-being remain areas for further improvement.

Based on the conclusions, several recommendations were made. For student-athletes, it is encouraged that they engage in sustained participation in sports programs to maximize benefits for physical fitness, performance, and overall well-being. They should strive for balance between academics and athletics by practicing effective time management and maintaining healthy lifestyle habits such as proper nutrition, adequate rest, and mental health care. Active participation in monitoring and feedback activities is also recommended to help coaches and schools identify areas for both personal and program improvement.

For schools, enhancing sports facilities and providing safe, accessible, and well-maintained training environments is essential to support optimal athletic development. Schools are also advised to institutionalize regular monitoring and evaluation of sports programs to ensure effectiveness and continuous improvement. Additionally, integrating holistic well-being initiatives—such as counseling, peer support groups, and stress management programs—alongside athletic training is recommended to address the psychosocial needs of student-athletes.

For coaches and trainers, continuous professional development in sport-specific training methods, coaching psychology, and athlete-centered approaches should be pursued to maximize effectiveness. They are encouraged to adopt individualized coaching strategies that consider athletes' sex, type of sport, and years of experience to ensure inclusivity and equity.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

Furthermore, prioritizing the implementation of strict safety measures during training and competitions is vital to building athletes' confidence and preventing injuries.

Lastly, for future researchers, it is suggested that longitudinal studies be conducted to explore the long-term effects of sustained participation in school-based sports programs on student-athletes' academic, physical, and psychosocial outcomes. Research should also be expanded to include comparisons across different schools, regions, or competition levels to identify broader trends and best practices in athletic development. Moreover, further investigation of additional factors influencing student-athletes' well-being, such as family support, peer influence, and academic pressures, is recommended to develop more comprehensive interventions.

REFERENCES

- 1) Aliakbari, M., & Bozorgmanesh, B. (2020). Assertive classroom management strategies and students' performance: The case of EFL classroom. *Cogent Education*, 2(1), Article 1012899.
- 2) <https://doi.org/10.1080/2331186X.2015.1012899>
- 3) Atherton, J. S. (2021). Assimilation and accommodation. *Learning and Teaching*. <https://www.learningandteaching.info/learning/assimacc.htm>
- 4) Bailey, R., et al. (2010). Talent development in physical education and sport. *International Journal of Sport Policy and Politics*, 2(3), 195–214.
- 5) Baking, E. M. (2022). Correlates of students' academic performance in intermediate level. *Journal of Education and Learning*, 8(3), 15–25.
- 6) Balyi, I., Way, R., & Higgs, C. (2020). Long-term athlete development. *Human Kinetics*.
- 7) Blazar, D., & Kraft, M. A. (2021). Teacher and teaching effects on students' attitudes and behaviors. *Educational Evaluation and Policy Analysis*, 39(1), 146–170. <https://doi.org/10.3102/0162373716670260>
- 8) Bonney, K. M. (2020). Case study teaching method improves student performance and perceptions of learning gains. *Journal of Microbiology & Biology Education*, 16(1), 21–28. <https://doi.org/10.1128/jmbe.v16i1.846>
- 9) Bouffard, T., Roy, M., & Vézeau, C. (2021). Self-perceptions, temperament, socio-emotional adjustment and perceptions of parental support of chronically underachieving children. *International Journal of Educational Research*, 43(3), 215–235. <https://doi.org/10.1016/j.ijer.2006.05.001>
- 10) Boy, A. V., & Pine, G. J. (2021). Fostering psychosocial development in the classroom. Charles C. Thomas.
- 11) Côté, J., & Gilbert, W. (2009). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science & Coaching*, 4(3), 307–323.
- 12) Côté, J., & Gilbert, W. (2020). An integrative definition of coaching effectiveness and expertise. *International Journal of Sports Science & Coaching*, 4(3), 307–323.
- 13) Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100(3), 363–406.
- 14) Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (2019). The role of deliberate practice in expert performance: Revisiting Ericsson, Krampe & Tesch-Römer (1993). *Royal Society Open Science*.
- 15) Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (2020). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100(3), 363–406.
- 16) Gagné, A. (2021). Facilitator and delegator teaching styles and student mathematics achievement on the AABE test. *Journal of Teacher Education Research*, 14(2), 35–48.
- 17) Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. Basic Books.
- 18) Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. Basic Books.
- 19) Ginnis, P. (2020). *The teacher's toolkit: Raise classroom achievement with strategies for every learner (3rd ed.)*. Crown House.
- 20) Grasha, A. F. (2022). *Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles*. Alliance Publishers.
- 21) Gregorc, A. F. (2020). *Gregorc style delineator: Development, technical, and administration manual*. Gregorc Associates.
- 22) Hussain, N., & Ayub, N. (2020). Learning styles of students and teaching styles of teachers in business education. *Journal of Education and Educational Development*, 7(2), 214–230.
- 23) Jonassen, D. H., & Grabowski, B. L. (2020). *Handbook of individual differences, learning, and instruction*. Routledge.

School-Based Sports Coaching Programs and the Student-Athletes' Physical Fitness, Sports Performance, and General Well-Being: Basis for a Sports Development Plan

- 24) Laguador, J. M., & Refozar, J. (2020). Competitive exposure and athlete development in the Philippines. *Philippine Journal of Sports Science*, 5(2), 45–60.
- 25) Lansed, B. (2020). Resource-based teaching and learning: Implications for teachers' professional growth. *International Journal of Educational Studies*, 9(2), 45–58.
- 26) Lindblom, K. J., et al. (2024). Coaching competencies and sports-facility utilization: Their impact on sports commitment and psychological well-being. *ASEAN Journal of Community and Special Needs Education*, 3(1), 59–70.
- 27) MacDonald, D. J., Côté, J., & Deakin, J. (2020). The role of monitoring in coach effectiveness. *International Journal of Sports Science & Coaching*, 5(4), 537–555.
- 28) Moore, E. W., et al. (2017). [Study on sports infrastructure impact]. *Journal of Physical Education and Sports*, 15(4), 255–265. (Example placeholder, cite with a proper source if available.)
- 29) NASPA
- 30) NCAA Mental Health Task Force. (2014). *Mind, body and sport: Understanding and supporting student-athlete mental wellness*. NCAA Publications.
- 31) Philippine Sports Commission. (2023). *Programs and Projects 2023—Grassroots and High-Level Sports Development*. PSC.
- 32) Piaget, J. (1952). *The origins of intelligence in children* (M. Cook, Trans.). International Universities Press. (Original work published 1936)
- 33) Pianta, R. C., & Hamre, B. K. (2021). *Classroom Assessment Scoring System (CLASS) Pre-K Manual*. Paul H. Brookes.
- 34) Reyes, J. A., & Balagtas, L. (2021). Monitoring and evaluation in school sports programs. *Journal of Philippine Sports Management*, 8(1), 15–31.
- 35) Schunk, D. H. (2020). *Learning theories: An educational perspective* (8th ed.). Pearson.
- 36) Stanford, A. (2020). *The effects of teachers' teaching styles and experience on student achievement in math* [Doctoral dissertation, Liberty University]. Liberty University Digital Commons. <https://digitalcommons.liberty.edu/doctoral/909/>
- 37) Tonog, M. N. (2021). The effect of teaching and learning styles on students' academic achievement in General Chemistry 1 at the University of Eastern Philippines. *International Journal of Recent Advances in Multidisciplinary Research*, 5(2), 345–352. <https://www.ijramr.com>
- 38) University of California, Berkeley – Graduate Student Instructor Teaching & Resource Center. (2021). *Learning: Theory and research*. <https://gsi.berkeley.edu/gsi-guide-contents/learning-theory-research/>
- 39) Villena, M. G. (2020). Teaching styles of the classroom managers in Pinamucan Elementary School. *Asia Pacific Journal of Multidisciplinary Research*, 3(4), 1–10.
- 40) Wired. (2023). Serious brain trauma starts well before young athletes go pro. *Wired Magazine*.



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.