

Assessing The level of Tactical Coaching Skills Among Student-Athletes in Panabo City National High School

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Abstract

This study aims to describe the level of Tactical Coaching Skills among athletes in Panabo City National High School. A descriptive-comparative research design was used; data was gathered from 80 student-athletes through an adapted Tactical Skills Questionnaire. Also, Mean, Frequency and ANOVA were used for statistical tools. The findings indicate that athletes demonstrate high levels of tactical skills, particularly in game intelligence and adaptability, while decision-making scored the lowest. Thus, the analysis revealed showed no significant differences in tactical coaching skills based on the demographic profile of the respondents. It is recommended that coaches include structured tactical training programs and scenario-based drills to enhance athletes' decision-making under pressure was formulated based on the result of the study.

Keywords: tactical coaching skills; anticipation; decision-making; game intelligence

Introduction

Athletes often face difficulties making optimal decisions in high-pressure situations (Gaviria Alzate, et al., 2024). From the study of Mitchell, et al., (2020), stated that skills have usually been taught in isolation where technical skills are often practiced without considering the tactical context. It was also described in the study of Kolman, et al., (2018) that there was weak evidence for greater accuracy of ball placement among advanced players.

A Practitioner in America claimed that she taught technical skills alone and detached from the game or activity, such as forearm passing. In addition, her study revealed that the skill-development students had difficulty maintaining possessions and moving to support the player with the ball (Berkowitz, 1996). It has been said that “experience is knowledge acquired too late”. According to (Wrisberg, 2007), coaches can do all they can to improve athletes' learning tactical skills rather than to wait for them to learn through experience, therefore, it is best by exposing athletes to information and experiences that will enhance their decision-

making capabilities.

According to (Hawkins, et, al., 2015), newly athletes often struggle with decision-making skills when faced with real-world situations. As a result, when placed in high-pressure scenarios, they may find it difficult to make effective clinical judgements to their performance. Technical skills are foundational in sports and training, however, they become useless and boring without the tactical ability of applying those skills. Tactical approaches teach students-athlete to read a situation, acquire knowledge that they need to perform tactical decisions, and apply decision-making skills to the problem.

Moreover, there must be a scenario on the court that requires players to use their technical skills in a game-like situation, forcing them to make decisions that simulate the choices that they will perform in a game, and these skills called tactical skills (McGee, K., 2007). Thus, although mastering technical skills is very important, it is not enough to succeed in the game knowing how to play technically, athletes also need to know how to play the game tactically. These skills refer to the decision and actions of players in the contest to gain advantage and get points over the opposing team or players, (Martens and Vealey, 2024).

In the Philippines, many athletes encounter challenges in developing their tactical skills, such as decision—making, adaptability, and game awareness. In the study of Fernandez (2021) it was observed that tactical skills are the only factor that needs more improvement and should be given attention by the coaches to the skills of student-athletes. It is important to possess knowledge related to tactical problems in sports to enable student-athletes to use this knowledge better during game play. It is also suggested that the tactical skills of student-athletes require a knowledgeable and well-trained coach.

The researcher did not find any study that specifically investigates how tactical coaching adaptability affects the student-athletes performance among secondary schools of Panabo City. This study is necessary to address the gap in existing literature by determining how tactical coaching strategies influence athletes' decision-making, game awareness, and overall skills. A better understanding of this could lead to coaches refine their methods, creating more efficient training programs and plans. Furthermore, this research is relevant as it can offer insights into schools and sports organizations in Panabo City to enhance their tactical coaching approaches.

Research Objectives

1. Describe the profile of respondent in terms of:

1.1 age;

1.2 grade level;

- 1.3 sex; and
- 1.4 sports played (individual, dual or team sports)
2. Determine the level of Tactical Coaching Skills in terms of:
 - 2.1 Anticipation and Positioning
 - 2.2 Game Intelligence and adaptability
 - 2.3 Decision-making
 - 2.4 Recognizing game situations
3. Analyze the significant difference in the level of Tactical Coaching Skills among the respondents.
4. Propose interventions based on the results of the study.

Theoretical Framework

This study anchored on the Ecological Dynamics Theory by Karl Newell (1986), emphasizes that the continuous interplay between the individual, the task, and the environment provide a system-oriented approach to understand athlete's performance and serves as the foundation for this study. This theory highlights the importance of the athlete-environment relationship in the context of tactical coaching skills where athletes must continuously perceive, adjust and react to changing game scenarios. Tactical coaching based on ecological dynamics encourages the use of scenario-based drills and real-game simulations that mimic the real-world playing conditions rather than fixed tactics. This improves players' decision-making, flexibility, and overall effectiveness during games.

Conceptual Framework

The Ecological Dynamics Theory focuses on assessing the level of Tactical Coaching Skills among selected secondary students. The research emphasizes how athletes interact with their environment to develop adaptable and effective tactical behaviours. This framework provides a structured basis for understanding and evaluating the tactical competencies of the athletes.

Research Variable

Tactical Coaching Skills

- Anticipation and Positioning
- Game Intelligence and adaptability
- Decision-making
- Recognizing game situations

Figure 1. The Tactical Coaching Skills of student-athletes in Panabo City National High School

Method

This study employs a quantitative research design, as defined by Sukamolson (2007), can be best applied in the research on Tactical Coaching Skills since the numerical data collected should be analyzed and this allows the researcher to determine the level of Tactical Coaching Skills among athletes. In addition, this method can help coaches and athletes to develop more targeted training programs by identifying areas where athletes' tactical coaching skills need improvement.

Secondly, this study utilized descriptive-comparative approach, this method is particularly useful in analysing Tactical Coaching Skills across different groups, such as grade levels, age, sex and sports played. According to Xuebao (2023), Descriptive Comparative helps researchers understand the degree and direction of a relationship between two or more variables. This approach is ideal for analyzing Tactical Coaching Skills among athletes because it allows the researcher to describe the coaching skills used and compare across different groups i.e. among grade levels, gender.

The study used adapted questionnaire consisted of 31 items on a 5-point Likert scale. To analyze the data, Frequency will be used to define the numbers of the respondents in terms of age, sex, grade level and sports played (individual, dual or team sports). The mean will be used to determine the level of Tactical Coaching Skills and lastly, to analyze the difference in the level of Tactical Coaching skills among the respondents, ANOVA will be used in data analysis.

Results and Discussion

This section outlines the discussion of the results and the analysis of the data. By employing suitable statistical methods, the gathered information was examined to address the issues outlined in the introduction of this study. The discussion is organized according to the order of the research objectives. Related literature is integrated to support and provide context to the findings.

Table 1 provides a detailed demographic profile of the athletes involved in the study. Outlined in the table are age distribution, sex, grade level and sports played of the students.

Table 1. Demographic Profile of the Athletes for Age, Sex, Grade Level and Sports Played
Frequency

Category	Frequency	Percent (%)
Age		
11-13	39	48.8
14-16	19	23.8
17-19	20	25.0
20-22	2	2.5
Total	80	100.0

Sex		
Male	50	62.5
Female	30	37.5
Total	80	100.0
Grade Level		
Grade 7	29	36.2
Grade 8	20	25.0
Grade 9	9	11.2
Grade 12	22	27.5
Total	80	100.0
Sports Played		
Individual Sports	29	36.2
Dual Sports	10	12.5
Team Sports	41	51.2
Total	80	100.0

The table highlights the demographic characteristics of the athletes, categorized by age, sex, grade level and sports played. The majority of the respondents belong to the 11-13-year-old age group, representing 48.8%, followed by 17-19 years old at 25%, 14-16 years old at 23.8%, and 20-22 years old at three percent with smaller proportions for other age groups. The sex distribution, there are more male athletes with 62.5% than female athletes with 37.5%, indicating a higher male participation rate. In terms of grade level, the largest group of respondents is from Grade 7 comprising 36.2%, followed by Grade 12 with 27.5%, while the Grade 8 comprising 25% and the remaining 11.2% are Grade 9 students. In sports participation, team sports are the most played with 51.2% of athletes engaged in them, followed by individual sports at 36.2% and dual sports at 12.5%. These findings suggests that team-based activities are more popular among the respondents, and the data reflects a higher involvement of younger male athletes in sports.

Level of Tactical Coaching Skills of Athletes

The Tactical Coaching Skills of Athletes are an essential result from the variable of this study.

Table 2. Level of Tactical Coaching Skills of the athletes.

Tactical Coaching Skills	SD	Mean	Interpretation
Anticipation and Positioning	0.235	3.62	High
Game Intelligence and Adaptability	0.224	3.74	High
Decision-making	0.104	3.56	High
Recognizing Game Situations	0.169	3.60	High
Overall Mean		3.63	High

Presented in table 2 are the descriptive statistics for the Tactical Coaching Skills, measured across four dimensions: anticipation and positioning, game intelligence and adaptability, decision-making, and recognizing game situations, as well as the overall mean.

The overall tactical coaching skill has a mean of 3.63, which is interpreted as *high*, means that the

tactical coaching skills of the athlete are often evident. This suggests that the athletes demonstrate strong tactical skills in their respective sports.

The result of this study supports the result of Aquino & Jolo (2024), which indicates that athletes were highly observed tactical coaching skill consistently demonstrate strong tactical skills in their respective sports highlighting the influence of coaching strategies on their development. Similarly, Elferink-Gemser et, al. (2004) emphasized the significance of tactical skills in sports performance, claimed that athletes with higher tactical awareness tend to outperform their peers in in-game situations.

In this variable, the indicator game intelligence and adaptability achieved the highest mean score of 3.74, categorized as *High* which means that the tactical coaching skills of the athletes is often evident. This suggests that athletes effectively analyze in-game situations, make strategic decisions and quickly adjust their tactics dynamically based on changing game scenarios to improve sports performance.

In this study of McPherson and Vickers (2004), stated that athletes with higher game intelligence and adaptability tend to make faster and more accurate decisions during gameplay, leading to superior performance outcomes. In the same way, athletes can read and understand the flow of the game, assess opponents' strategies and plans and make proactive decisions that contribute to the teams' success.

Further, anticipation and positioning, with a mean score of 3.62, is also interpreted as *High* that means that the tactical coaching skills are often evident. This highlights that the athletes can be able to predict the movement of the ball, opponents, and teammates based on game patters and situational awareness, allowing them to position themselves strategically to maximize offensive or defensive effectiveness.

Similarly, the study revealed that the athletes possessed anticipation and positioning while in an in-game environment. These findings suggest that athletes rely in recognizing the pattern and their past experiences to predict opponents' movements, allowing them to have a competitive advantage in positioning and anticipating the actual situation in a game (Ward et al., 2002).

Additionally, recognizing game situations has a mean score 3.60, that is also interpreted as *High* that means the tactical coaching skills of the athletes are often evident. This implies that athletes are highly capable of analyzing and assessing game dynamics. In this proficiency it will allows them to react efficiently to changing in-game situations.

Athletes with a high ability to recognize game situations can quickly assess the flow of play, recognize opportunities or threats and make informed tactical decisions that will help them to enhance their overall performance. These results suggest that integrating tactical awareness drills into training plan and programs can further refine athletes' situational recognition and improve their competitive edge (Gabbett et al., 2011).

Lastly, decision-making registered the lowest mean score at 3.56, still interpreted as *High* that means tactical coaching skills of the athletes are often evident as well. This implies that athletes demonstrate a strong ability to evaluate and assess game situations, weight possible options and execute the appropriate and effective action under pressure.

Finally, in the study of Bosch et al., (2002) suggests that athletes who experienced structured tactical trainings develop stronger decision-making abilities, allow them to adapt effectively and execute appropriate actions and responses under game pressure. In connection to this, statements such as "*I generally make well-calculated and effective decisions about my next move*" and "*I make smart and effective decisions when I am under pressure from my opponent*" reinforce the idea that athletes demonstrated strong decision-making while in an in-game situation.

Significant Difference of the level of tactical coaching skill of athletes when analyzed according to profile

Table 3. The Difference in the Level of Tactical Coaching Skills of athletes when analyzed according to Demographic Profile.

Tactical Coaching Skills of athletes				
Demographic Profile	F-value	P-value	Decision @ 0.05 Alpha Level	Interpretation
Age	1.361	0.261	Accept null hypothesis	There is no significant difference.
Sex	1.176	0.244	Accept null hypothesis	There is no significant difference.
Grade Level	0.675	0.570	Accept null hypothesis	There is no significant difference.
Sports Played	0.900	0.411	Accept null hypothesis	There is no significant difference

Presented in Table 3 are the results of the tactical coaching skills of the athletes. The ANOVA was used to assess differences in tactical coaching skills based on age, while the T-test was applied to examine differences between sexes, grade levels, and sports played.

The analysis revealed that the p-value for age is 0.26, which is greater than the significance level of 0.05 accepting the null hypothesis. This result indicates that age does not have a significant difference on the tactical coaching skills of the respondents. Regardless of whether the participants are younger or older, their tactical coaching skills responses to the variables examined in the study appear consistent, suggesting that age is not a determining factor in shaping these outcomes.

In terms of sex, the result revealed a p-value 0.24, which also exceeds the threshold of 0.05 thus accept the null hypothesis. This implies that there is no significant difference in tactical coaching skills between male and female respondents. The findings suggest that gender does not play a significant role in affecting the differences in how participants experience the tactical coaching skills under study, indicating a uniformity in responses across sexes.

The p-value for grade level is 0.57, which similarly surpasses the 0.05 significance level accept the null hypothesis. This result demonstrates that the grade level of the respondents, whether they are Grade 7, Grade 8, Grade 9, or Grade 12, have no statistical difference on their tactical coaching skills. It reflects that the academic progression of the respondents does not contribute to notable variations in the tactical coaching skills being evaluated.

Finally, in terms of sports played, revealed a p-value of 0.41 which is similarly exceeds the

significance level of 0.05 accepting null hypothesis. This result indicates that it has no statistical difference on the tactical coaching skill whether the athlete's played individual, dual or team sports. Regardless of the nature of the sports played by the athletes, they demonstrate similar tactical coaching skill development, suggesting that the tactical coaching skills is not significantly influenced by the type of sport. Moreover, it highlighted that athletes acquire and apply tactical knowledge whether they compete in individual, dual, or team-based setting.

Based on the result of the study, particularly the lowest mean score from the indicator decision-making, an intervention plan should focus on improving athletes' decision-making skills under in-game pressure. To address this, a structured tactical training program should be implemented, allowing athletes to experience scenario-based drills that challenge them to make a quick and effective decisions. Coaches and other significant others must provide video analysis of game situations, situational drills that simulate real-game decision-making and a guided feedback sessions with coaches to reinforce strategic thinking. By incorporating these strategies in training and preparation of the athletes will help them to make a better decision during games and will elevate their overall tactical skills.

Conclusion

The study revealed that team sports are more popular among the respondents with higher involvement of younger male athletes in sports. Moreover, the study successfully determined the level of Tactical Coaching Skills revealing that athletes demonstrated a high level of anticipation and positioning, game intelligence and adaptability, decision-making, and recognizing game situations. Although decision-making got the lowest score mean, still it indicates that this skill is often evident as well. The findings affirm the Ecological Dynamics Theory by Karl Newell (1986), as the study supports the idea that athletes' tactical coaching skills develop through their interaction with the dynamic sports environment, reflecting the theory's emphasis on adaptability and real-game scenarios in skill acquisition.

This result aligns with the conclusion from the study Kannekens (2010), demonstrated that tactical skills are fundamental to high-level performance where ample, expert-led training and match experience during practices, high quality training programs, and starting at a young age are suggested as key ingredients for the development of a good tactical skills.

In summary, developing tactical coaching skills requires consistent practice and dynamic environment. Student-athletes enhance their adaptability, decision-making, and game intelligence through real game experiences during traing and drills, which are essential for skill improvement and overall performance

Recommendation

Based on the study's findings, it is recommended that coaches and trainers implement structured tactical training programs that incorporate scenario-based drills, real-game simulations, and video analysis to enhance athletes' tactical skills, with special emphasis on improving decision-making—the lowest-scoring area in the study. School administrators and sports program coordinators are also encouraged to invest in modern training resources such as video analysis tools, game-based modules, and performance tracking systems to support the integration of tactical coaching into regular training. Athletes, on the other hand, should consistently engage in self-directed learning and participate in competitive environments like scrimmages and game-based drills to improve their adaptability, situational awareness, and strategic decision-making. Regular feedback from coaches and self-assessment of game performance can further refine their tactical abilities. Lastly, future researchers are encouraged to explore the influence of different coaching styles on the development of tactical skills, particularly under pressure, to further enhance sports training programs and

athlete performance.

Acknowledgements

I would like to extend my deepest gratitude to the following individuals who have contributed and offered their unselfish support throughout the completion of this research paper.

First and foremost, I am immensely thankful to our Almighty God for all the blessings that he has bestowed in my life with good health, wisdom, and guidance throughout this study. I am also forever thankful to my parents Elmer and Rosa for their unwavering love and sacrifices; their constant support and encouragement have greatly influenced the completion of my work. Their valuable support and inspiration have been my source of strength to improve the quality of this project.

I extend my heartfelt appreciation to my research instructor Dr. Bryan L. Cancio of Teacher Education, HCDC, for his invaluable assistance, patience and guidance during the research process that I have used for my career development.

Lastly, I express my gratitude to all the respondents who willingly took part in this study. Their willingness to share their time and insights has been integral to the success of this project.

In conclusion, I am deeply grateful to everyone who contributed to the completion of this project. Your support, encouragement, and assistance have been truly invaluable, and I sincerely appreciate all that you have done.

Thank you and God bless.

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