

PERCEIVED BENEFITS OF GAME-BASED ACTIVITIES FOR MEANINGFUL EXPERIENCES IN SPORTS STRATEGY IN LEARNING BASKETBALL SKILLS: BASIS FOR ENHANCING CURRICULUM INSTRUCTION

JANINA M. BASSIG, VEL CHRISTIAN L. CASTILLO*, EDESEL T. DURAN, JULIE MAE O. FLOTILDES, JERALD ANGELO R. SALINAS

Department of University of La Salette Incorporated High School, Malvar, Santiago City, PHILIPPINES.

*Email: velcher32@gmail.com

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ABSTRACT

Sport is viewed by many as a source of enjoyment. However, it is common to see sports participants focus on being competitive rather than developing values. With the return of face-to-face classes and advancement of technology, participation of students in sports have been decreased. This study assesses the possible benefits of the G.A.M.E.S strategy in learning the different skills in basketball. This study addressed the following questions: (1) What is the profile of respondents in terms of sex? (2) What is the common game-based activities participated by the students? (3) What are the benefits gained by the students in G.A.M.E.S. strategy in terms of cognitive skill, psychological skill and social skill? (4) Is there a significant difference between the perception of the boys and girls about the G.A.M.E.S strategy? (5) Is there a difference in the perception of the students before and after the conduct of G.A.M.E.S strategy in terms of difficulty in learning the team sports skills? The study employed a quantitative research design in identifying the benefits of the students regarding the use of G.A.M.E.S strategy in teaching team sports particularly basketball. The total population was composed of three hundred twenty-six (326) grade 8 students down to 22 students each section with the total of 176 sample respondents determined by raosoft. The study used a survey questionnaire as the main gathering data tool that will be administered to the respondents. A 5-point Likert Scale was used to find out the benefits of the students about the G.A.M.E.S strategy used in learning the different team sports skills. The perceptions of the students about the benefits of G.A.M.E.S strategy showed a very positive response. The participation of boys is higher than female but there is no significant difference in learning the basic skills through the G.A.M.E.S intervention made by the researcher. It implies that the game-based strategy impacts the students' perceptions in a good way affecting their cognitive, psychological, and social skills. The G.A.M.E.S strategy changed the perception of the majority of the students about the difficulty of learning sports skills with the help of the strategy. It also implies that the strategy helped the students overcome their negative notion with regard to learning a sports skill. Based on the research results, the researchers also recommend to adopt the strategy of G.A.M.E.S in teaching sports among students, and integrate it in their curriculum instruction.

Keywords: Basketball skills, game-based activity, team sports, PE curriculum.

1. INTRODUCTION

Facilitating learning in Physical Education classes face a great challenge of advancing academic achievement and holistic learner development, most especially that face-to-face instruction is back and there is a need for timely and appropriate instruction. One of the major

Correspondence: Vel Christian L Castillo, Department of University of La Salette Incorporated High School, Malvar, Santiago City, PHILIPPINES, Email: velcher32@gmail.com

topics in Physical Education is Sports. In the Physical Education curriculum, learners from grades 7 to 10 are expected to try different sports from individual to team sports.

Sport is frequently viewed as a source of fun and happiness. However, it is common to see sports participants focus on winning rather than developing values which according to Carron and Brawly (2008), because of the teaching method or strategy used. Moreover, studies state that the methodologies and strategies used in teaching sports influence not only the technical side of the lesson but also the psychological and social dimensions of an individual.

There are several advantages to participating actively in organized sport and leisure activities in school sport programs. Therefore, it is crucial that students consistently participate in and follow through with physical education and sports programs. However, in the study of Munyua (2019), there is a decline in secondary school students' participation in sports and physical education. Related studies have discussed participation of students in competitive sports, recreational sports, and even factors affecting undergraduates' sports participation. Moreover, it is suggested to also to investigate students' participation on sports activities not just only focusing on competitive sports.

Along with children's and young people's growing interest in sports, numerous studies have been conducted on various aspects of sports psychology, including young athletes' personal traits and competition anxiety, coaches' attitudes and behaviors, and the definition and classification of various factors influencing young people's participation in sports and physical activities (Yildirim, 2021). The very first studies on motivation for sports participation revealed that skill development and learning, fun, physical fitness, making friends and success were the most significant factors affecting an individual's motivation for sports participation.

Over the years, it was examined by various theories and models such as the Attainment Goals Theory (Nicholls, 1989) together with the Self-Determination Theory (Deci & Ryan, 2000) and Vallerand's (2001) Hierarchical Motivation Model the motivational process of physical education students, stating that there is a great influence of the teacher/coach in terms of their interpersonal style of teaching. Sallis and McKenzie also studied that in the adolescence stage, there is a significant decrease in the motivation and participation of boys and girls in sports. This issue is important when boys and girls engaged in playing sports in their physical education classes. In action to these, it is imperative that boys and girls have fun practicing sports at this stage of training (Ortega et. al., 2014). Therefore, the teacher faces the challenge of getting their students to enjoy and have fun in physical education.

At University of La Salette Incorporated High School, it is found through a preliminary survey conducted by the Grade 8 MAPEH teachers at the beginning of the school year that team sports are one of the topics they find challenging and difficult to learn. It is also observed during the previous year that student's participation is not at a high level. Hence, the Grade 8 MAPEH teachers came up with G.A.M.E.S. (Game-based Activities for Meaningful Experiences in Sports), a strategy in teaching team sports skills to stimulate participation and positive perceptions of grade 8 learners which will also become a basis in enhancing the curriculum map for physical education particularly in sports topics.

Active engagement in organized competitive sports and physical activities programmes oh schools have numerous benefits such as health, psychological, cognitive and social development. Nevertheless, there has been a notable drop in student's adherence to competitive sports in the modern society as a result of rapid advancement in technology (Leek, Carlson, & Cain, 2011; National Federation of State High School Association, 2011). Engaging in physical activities and competitive sport in the USA, has continuously attracted high participation, due to advanced knowledge in physical education and sport (Richarson & Watt, 2005). However, a report by the Commonwealth of Australia (2010) advocates that

many secondary school students disengage from sport as a result of barriers to sport delivery experienced within and outside the school. In South Africa, decline in engagement in sporting activities is addressed by Department of Sport and Recreation South Africa (SRSA) by developing strategic policies specifically for sports in both primary and secondary schools (Department of Sport and Recreation, 2005).

1.1 Sports and Sex

Studies have shown that male adolescents are more active and interested in physical activity compared to their female counterparts, especially during their developmental years (Brake, 2010; Elright & O'Sullivan, 2010). These studies demonstrated that male athletes are more likely to engage in physical activities as compared to their female counterparts. The study of Deaner, et al. (2012), A sex difference in the predisposition for physical competition: Males play sports much more than females even in the contemporary U.S., revealed that males are more likely to engage in physical competition and sports compared to females. It highlights both biological and social factors contributing to these differences. Moreover, Hanrahan & Cerin (2009) states that males often have higher participation rates and different motivational orientations compared to females in terms of sports participation. Also, the study of Shachaf, Katz, & Shoval (2013). The unique trio: Academic achievement, sport, and sex., revealed that sports participation, self-efficacy, and academic achievement interact differently for boys and girls, emphasizing the varying impacts of sports engagement on academic outcomes based on sex.

1.2 Psychosocial Benefits of Team Sport Engagement

There is substantial evidence indicating that team sports positively impact both the social and cognitive aspects of individuals. A study by Reigal et al. (2020) explores how team sports enhance cognitive functioning. The research found that athletes often exhibit improved brain functions, including better executive functioning, attention, and cognitive processing speed. These cognitive benefits are attributed to the dynamic and demanding nature of team sports, which require constant decision-making, strategic planning, and quick responses to changing situations (Reigal et al., 2020).

Furthermore, participation in team sports also fosters significant social benefits. According to research published in Edutopia, team sports enhance communication skills, teamwork, and leadership abilities. Athletes learn to collaborate, communicate effectively, and develop a sense of responsibility towards their team. These social skills are crucial for building positive relationships and can translate into improved academic and professional success (Edutopia, 2020).

Additionally, a study published in BMC Public Health emphasizes the role of sports in the development of self-regulation skills among socially vulnerable youth. The study highlights that engaging in sports helps these youths improve their behavior, school performance, subjective health, and overall well-being. The structured environment of team sports provides a supportive community, fostering a sense of belonging and self-esteem (BMC Public Health, 2020).

1.3 Game-based Learning

Game-based learning (GBL) has emerged as a promising approach in education, incorporating the allure of games into the learning process. This review explores the impact of game-based strategies on student learning outcomes, focusing on both cognitive and affective domains. Studies by Khairuddin and Mailok (2019) suggest that GBL fosters active participation and makes learning more enjoyable, leading to deeper comprehension. As for Assemblr (2024), game-based activities have proven to be highly beneficial in learning, particularly in sports, by promoting the acquisition of basic skills before engaging in the proper game. One significant advantage of this approach is that it enhances motivation and engagement among learners. When students are introduced to skills through fun and interactive games, they are more likely to remain interested and motivated. The enjoyable

nature of games generates positive emotions and a conducive learning environment, which in turn fosters better retention and understanding of the skills being taught. This method contrasts with traditional drills that can often be monotonous and less engaging.

Moreover, game-based learning supports the development of crucial cognitive and social skills. Through these activities, students improve their memory and alertness as they are required to think quickly and pay attention to details. This active involvement helps solidify the learning of basic skills. Additionally, games often involve teamwork and collaboration, which are essential for effective learning in sports. By participating in team-based games, students learn to communicate, cooperate, and develop a sense of belonging. These social interactions are vital for building a supportive learning community and enhancing overall learning outcomes (MomsTeam, 2024).

In addition, game-based learning supports the development of cognitive skills by providing a hands-on, experiential learning environment. Whitton (2012) explains that through interactive and immersive activities, students can better understand and retain information, which is particularly beneficial in the context of sports education. This method not only helps in skill acquisition but also enhances problem-solving abilities and strategic thinking, which are vital components of sports and physical education.

2. METHODS AND MATERIALS

2.1 Research Design

The study employed a quantitative research design in identifying the benefits of the students regarding the use of G.A.M.E.S strategy in teaching team sports particularly basketball. Descriptive design was used to understand students' perceptions.

2.2 Locale of the Study

The study will be conducted solely at the University of La Salette Incorporated High School. A level II accredited school by PAASCU. It is a school situated in Santiago City particularly at Barangay Malvar. It has more than 1000 enrollees in the Junior High School alone from Grade 7 to Grade 10.

2.3. Respondents of the Study

The participants were the grade 8 junior high school students of University of La Salette Incorporated High School of the academic year 2023-2024. To be eligible as subjects, the respondents should meet the following standards: (a) enrolled as grade 8 junior high school student of ULSHS, and (b) must be enrolled in physical education subject of the school. The grade 8 level has 8 sections. The respondents were selected through a purposive random sampling wherein 22 students in each sections had the chance to participate in the study with a total of 176 sample size from 326 total number of population. The sample size was computed by RAOSOFT.

2.4 Instrument

The study used a survey questionnaire as the main gathering data tool that will be administered to the respondents. A 5-point Likert Scale was used to find out the benefits of the students about the G.A.M.E.S strategy used in learning the different team sports skills. In order to ensure that the items of the questionnaire are reliable, the instrument underwent pilot testing with total sample size of 40 respondents which turned out to have 0.987 Cronbach's alpha. This shows that the questionnaire is highly reliable.

2.5 Data Gathering Procedure

A preliminary profile survey was done to identify the number of respondents who will participate in the study. For each of the 8 sections, there were 22 students who became our respondents. Second, the researcher introduced themselves and their topic to the respondents through a cover letter before the actual questionnaire. A consent was also employed to protect the privacy and confidentiality of the respondents. After getting their consent, the questionnaire was administered along with the instructions through a google form. The participation of the learners was voluntary. The respondents were permitted to decline should they wish not to participate.

2.6 Data Analysis

The study employed the descriptive statistics to summarize the data in identifying the benefits of G.A.M.E.S strategy in learning the basketball skills. Specifically, the frequency count and percentage distribution, and weighted mean were used to interpret and analyze the data. In analyzing the perceived benefits of the students regarding G.A.M.E.S, the researchers used a 5-point Liker scale from very highly beneficial to not beneficial. 4.21-5.00 for highly beneficial, 3.21-4.20 for beneficial, 2.61-3.20 for moderately beneficial, 1.81-2.60 for slightly beneficial, and 1.00-1.80 for not beneficial. The researchers also used T-test Independent in finding the significant difference between the perception of male and female students.

3. RESULTS AND DISCUSSION

Table 1: Students' demographic in terms of Sex

| Characteristic in terms of Sex (n=176) | n | Percent |
|--|-----|---------|
| Male | 72 | 40.91 |
| Female | 104 | 59.09 |

The Table 1 shows the demographic profile of the students in terms of sex. The number of female students is greater than male taking up 59.09% of the total number of respondents while male students take up 40.91%. This basis was used to answer if there is a significant difference between the perception of male and female students about G.A.M.E.S strategy.

Table 2: Percentage of students' participation in the different game-based activities

| Activities | Frequency n= 176 | Percent | Description |
|------------------------|------------------|---------|-------------|
| 1. Ball Handling Relay | 155 | 88.07 | Very High |
| 2. Wiggle Dribble | 159 | 90.34 | Very High |
| 3. Pass it on | 165 | 93.75 | Very High |
| 4. Shoot A Point | 163 | 92.61 | Very High |

Table 2 shows the percentage of participation of students in the different game-based activities used in teaching sports skills in basketball. It is found out that there is a very high percentage of participation of the students in the different activities. The activity Pass to "Pass" got the highest percentage of participation with 93.41% while the activity 2 got the lowest percentage of participation with 88.06%. This is a good indication that a high number of students participated in the different game-based activities.

Sanmiguel-Rodríguez et al., 2022 and Sotos-Martínez et al., 2023 mentioned in their studies that game-based activities in basketball significantly enhance student participation in physical education by making the learning process more engaging and enjoyable. These activities not only boost physical skills but also increase motivation and participation among

students, creating a dynamic and enjoyable learning atmosphere in physical education settings.

Table 3: Level of benefits perceived by students

Table 3.1: Cognitive Skills

| Items | Mean | Description |
|--|------|-------------------|
| I find it easier to learn the basic skills in Basketball through game-based activities. | 4.34 | Highly Beneficial |
| Game-based activities improve my understanding about the skill involved in Basketball. | 4.42 | Highly Beneficial |
| I can describe the nature of the basketball skills easily through game-based activities. | 4.35 | Highly Beneficial |
| Weighted Mean | 4.37 | Highly Beneficial |

The table shows the level of benefits perceived by the students in terms of their cognitive skills. It is manifested that in the three items, the students rated “highly beneficial” in terms of their cognitive skills. It means that the game-based strategy helped them learn, understand, and describe the nature and skills of Basketball. It is also found in the studies of Khairuddin & Mailok (2019) that game-based learning leads to deeper understanding of the lesson. Whitton (2012) also explains that through interactive and immersive activities, students can better understand and retain information, which is particularly beneficial in the context of sports education. It implies that G.A.M.E.S strategy can be a factor in improving their knowledge in sports.

Table 3.2: Psychological Skills

| Items | Mean | Description |
|--|-------|-------------------|
| I feel more confident in learning the basic skills in basketball through game-based activities. | 4.472 | Highly Beneficial |
| I am motivated to participate in learning basketball skills through game-based activities. | 4.341 | Highly Beneficial |
| I enjoy doing the basic skills of basketball through the game-based activities. | 4.42 | Highly Beneficial |
| I do not feel much pressure while doing the basic skills in basketball because of the game-based activities. | 4.114 | Beneficial |
| I find it more interesting to learn the basic skills of basketball through game-based activities. | 4.369 | Highly Beneficial |
| I feel competent while playing the game-based activities | 4.318 | Highly Beneficial |
| Weighted Mean | 4.339 | Highly Beneficial |

The table shows the result of perceived benefits of students on the game-based activities used in learning the skills needed in their team sports topic in relation to their psychological skills. As gleaned on the table, item number 1 “I feel more confident in learning the basic skills in sports through games” got the highest mean with 4.472 with a description of “highly beneficial” followed by Item number 7 “I enjoy doing the basic skills of basketball and volleyball through the game-based activities” with the mean of 4.42 which is still under the description of “highly beneficial.” Third on the rank is item number 13 “I find it more interesting to learn the basic skills of team sports through game-based activities” with the mean of 4.369, highly beneficial. Item number 4 “I am motivated to participate in learning sport skills through game-based activities” is on the fourth rank with the mean of 4.341 which is also equivalent to “highly beneficial.” The last two items, item 14 “I feel competent while playing the games” with the mean of 4.318 which is equivalent to “highly beneficial” and item number 10 “I do not feel much pressure while doing the basic skills because of the game-

based activities” with 4.114 as mean and described as beneficial falls under the fifth and sixth rank respectively. Overall, the impact of the game-based activities in the psychological aspect of the respondents gained an overall weighted mean of 4.339 which is described as Highly Beneficial.

Several studies have specified that game-based learning activities in team sports can positively affect students' psychological aspects, including their motivation, outlook, and perception of the game. For instance, Liu and Lipowski (2021) found that sports gamification significantly improved the intrinsic motivation and learning performance of students in physical education courses. Their study revealed that incorporating game elements in sports activities can enhance students' engagement and motivation, leading to better learning outcomes.

Also, Luo et al. (2020) demonstrated that team-game tournaments (TGTs) in physical education not only improved students' motor skills but also significantly boosted their learning motivation. The study highlighted that game-based learning encourages positive interdependence, social skills, and individual accountability, which contribute to a more engaging and motivating learning environment.

Moreover, a systematic review by Bessa et al. (2021) demonstrated that employing the Sport Education model significantly improved students' self-confidence and empowerment compared to traditional teaching methods. This model focuses on student-centered learning and active participation, which fosters a supportive environment where students feel more confident and motivated to engage in physical activities.

Table 3.3: Social Skills

| Items | Mean | Description |
|---|-------|-------------------|
| I enhance my collaboration skills through game-based activities. | 4.472 | Highly Beneficial |
| I establish good rapport with my groupmates in playing the game-based activities. | 4.358 | Highly Beneficial |
| I feel sense of belongingness in playing the game-based activities. | 4.381 | Highly Beneficial |
| I improve my communication skills among my groupmates. | 4.329 | Highly Beneficial |
| I enhance my participation in playing basketball through game-based activities. | 4.352 | Highly Beneficial |
| I feel sense of support among my groupmates in playing the game-based activities. | 4.329 | Highly Beneficial |
| Weighted Mean | 4.37 | Highly Beneficial |

Table 3.3 presents the perceived benefits of the students on the game-based activities used in teaching team sports skills in relation to their social skills.

In the first item of the social domain, which is “I enhance my collaboration skills through game-based activities,” the respondents rated it as highly beneficial, with the highest mean of 4.472. This is followed by item 8, “I feel a sense of belongingness in playing the game-based activities,” which still accumulated a mean of 4.381, also interpreted in its description as highly beneficial. The rest also have a mean higher than 4.20, resulting in the weighted mean of the social dimension being 4.370167 and interpreted as strongly agree.

The application of the game-based activities has been shown to significantly enhance collaboration, a sense of belonging, and communication skills which emphasize by social domain. Research from Sprint Active Education highlights that participation in team sports develops essential teamwork skills such as communication, cooperation, and problem-solving. These skills are cultivated through activities that require children to work together to achieve common goals, promoting trust and mutual support among teammates. This sense of unity extends beyond the sports field, positively impacting social interactions in other areas of life (Sprint Active Education, 2024).

Table 4: Significant difference between the perception of students in comparison to their sex

| Item | Sex Male-n=72 Female-n=104 | Mean | Sig. | Interpretation |
|--|----------------------------------|------------------|------|------------------------|
| I feel more confident in learning the basic skills in basketball through game-based activities. | Male Female | 4.5417 4.4231 | .065 | <i>Not Significant</i> |
| I enhance my collaboration skills through game-based activities. | Male Female | 4.4861 4.4615 | .389 | <i>Not Significant</i> |
| I find it easier to learn the basic skills in basketball through game-based activities. | Male Female | 4.4583 4.2596 | .063 | <i>Not Significant</i> |
| I am motivated to participate in learning basketball skills through game-based activities. | Male Female | 4.4722 4.2500 | .016 | <i>Significant</i> |
| I establish good rapport with my groupmates in playing the game-based activities. | Male Female | 4.5139 4.2500 | .109 | <i>Not Significant</i> |
| Game-based activities improve my understanding about the skill involved in Basketball. | Male Female | 4.4861 4.3750 | .031 | <i>Significant</i> |
| I enjoy doing the basic skills of basketball through the game-based activities. | Male Female | 4.4306 4.4135 | .176 | <i>Not Significant</i> |
| I feel sense of belongingness in playing the game-based activities. | Male Female | 4.4444 4.3365 | .036 | <i>Significant</i> |
| I can describe the nature of Basketball easily through game-based activities. | Male Female | 4.3472 4.3462 | .613 | <i>Not Significant</i> |
| I do not feel much pressure while doing the basic skills in Basketball because of the game-based activities. | Male Female | 4.3333 3.9615 | .630 | <i>Not Significant</i> |
| I improve my communication skills among my groupmates. | Male Female | 4.4167 4.2692 | .066 | <i>Not Significant</i> |
| I enhance my participation in playing basketball through game-based activities. | Male Female | 4.3472 4.3558 | .083 | <i>Not Significant</i> |
| I find it more interesting to learn the basic skills of basketball through game-based activities. | Male Female | 4.3889 4.3558 | .881 | <i>Not Significant</i> |
| I feel competent while playing the game-based activities. | Male Female | 4.3889 4.2692 | .769 | <i>Not Significant</i> |
| I feel more confident in learning the basic skills in basketball through game-based activities. | Male | 4.3056 | .727 | <i>Not Significant</i> |

The table shows the significant difference of the perceptions of male and female about the G.A.M.E.S. strategy. Means of the male and female were computed separately for every item followed by the employment of T-test independent to measure the significant difference of both sexes. It clearly presents that almost all of the items have no significant difference. Items 1,2,3,5,7,9,10,11,12,13,14, and 15 have no significant difference in terms of the perceptions of male and female students. Meaning, they have almost the same perceptions about these items. On the other hand, items 4, 6, and 8, resulted to have significant differences. For item 4, it was found out that boys are more motivated to participate in the game-based activities than girls. Also, for item 6, it was found out that boys again have better understanding about the skills involve in the sport than girls. Lastly in item 8, it is found out that male have felt sense of belongingness while playing the game-based activities than girls.

The study of Deaner, et al. (2012) revealed that males are more likely to be motivated in physical competition and sports compared to females. It highlights both biological and social factors contributing to these differences. Also, the study of Brake, 2010; Elright & O'Sullivan, 2010 stated that male athletes are more likely to engage in physical activities as compared to their female counterparts. Moreover, Hanrahan & Cerin (2009) states that males often have higher participation rates and different motivational orientations compared to females in terms of sports participation.

Table 5: Students perception on the difficulty of learning team sports skills

| Statement | Frequency n=176 | Percentage |
|--|--------------------|------------|
| Percentage of students who find difficulty in learning the team sports skills before the conduct of the GBS. | 111 | 63. 06 % |
| Percentage of students who find difficulty in learning the team sports skills after the conduct of the GBS | 46 | 26.70% |

The table shows the difference of the students' perception about the difficulty of learning team sports skills. It is shown in the result based on percentage that there is a change between the perception of the students before and after the conduct of the G.A.M.E.S. strategy. 63.6% of the students or more than half of them find it difficult to learn the team sports skills of basketball without the use of the game-based strategy. With the use of the strategy, there is a good decrease in number of students who find difficulty in learning team sports skills from 63.6% to 26.5% with a decrease of 37.1%.

4. CONCLUSION

Based on the result of the study, the following statements are concluded:

- There is a very high number of participations in the different game-based activities among the grade 8 students. It means that the game-based activities attract students to join and participate in learning the basic skills in Basketball.
- The perceptions of the students about the benefits of G.A.M.E.S. strategy showed a very positive response. It implies that the game-based strategy impacts the students' perceptions in a good way affecting their cognitive, psychological, and social skills.
- There is almost no significant difference in terms of the perception of male and female students about the game-based strategy. It can be said that both male and female have the same level of acceptance of the strategy.
- There is a major decrease in the percentage of students who find difficulty in learning sports skills after the conduct of the strategy. The G.A.M.E.S. strategy changed the perception of the majority of the students about the difficulty of learning sports skills with the help of the strategy. It also implies that the strategy helped the students overcome their negative notion with regard to learning a sports skill.

5. REFERENCES

- Argagok, S. (2021). The impact of game-based teaching practices in different curricula on academic achievement. *International Online Journal of Education and Teaching*, 8(2), 778-796.
- Baena-Extremera, A., Granero-Gallegos, A., & Ortiz-Camacho, M. (2012). Quasi experimental study of the effect of an adventure education programme on classroom satisfaction, physical self-concept and social goals in physical education. *Psychologica Belgica*, 52, 369-386.
- Bessa, C., Hastie, P., Rosado, A., & Mesquita, I. (2021). Sport education and traditional teaching: Influence on students' empowerment and self-confidence in high school physical education classes. *Sustainability*, 13(2), 578.
- Brake, M. (2010). Comparison of teenagers' early same-sex and heterosexual behavior: UK data from the SHARE and RIPPLE studies. *Journal of Adolescent Health*, 45(3), 123-130.
- Deaner, R. O., Geary, D. C., Puts, D. A., Ham, S. A., Kruger, J., Fles, E., Winegard, B., & Grandis, T. (2012). A sex difference in the predisposition for physical competition: Males play sports much more than females even in the contemporary U.S. *PLoS One*, 7(11), e49168.
- Edutopia. (2020). The social and academic benefits of team sports. Edutopia. Available online at: <https://www.edutopia.org/article/social-and-academic-benefits-team-s>.
- Garcia, A. (2015). Understanding high school students' sports participation. *Sports Science Review*, 24(3-4), 121-144.

- Hanrahan, S. J., & Cerin, E. (2009). Sex, level of participation, and type of sport: Differences in achievement goal orientation and attributional style. *Journal of Science and Medicine in Sport*, 12(4), 508-512.
- Hernández-Mendo, A., Reigal, R. E., López-Walle, J. M., Serpa, S., Samdal, O., Morales-Sánchez, V., Juárez-Ruiz de Mier, R., Tristán-Rodríguez, J. L., Rosado, A. F., & Falco, C. (2019). Physical Activity, Sports Practice, and Cognitive Functioning: The Current Research Status. *Frontiers in psychology*, 10, 2658.
- Jaakkola, T., Sami, Y. P., Vassilis, B., & Jarmo, L. (2017). Relationships among perceived motivational climate, motivational regulations, enjoyment, and PA participation among Finnish physical education students. *International Journal of Sport and Exercise Psychology*, 15(3), 273-290.
- Liu, T., & Lipowski, M. (2021). Sports gamification: Evaluation of its impact on learning motivation and performance in higher education. *International Journal of Environmental Research and Public Health*, 18(3), 1267.
- Luo, Y.-J., Lin, M.-L., Hsu, C.-H., & Kao, C.-C. (2020). The effects of team-game tournaments application towards learning motivation and motor skills in college physical education. *Sustainability*, 12(15), 6147.
- Munyua, J. G. (2019). Factors influencing secondary school students' participation in competitive sports- a case study of secondary schools in Westlands Sub-County, Nairobi County. Available online at: <http://erepository.uonbi.ac.ke/handle/11295/109479>.
- Ortega, G., Durán, L. J., Franco, J., Giménez, F. J., Jiménez, P. J., & Jiménez, A. C. (2014). Por una Educación REAL: Valores y deporte. Competir para compartir valores. Madrid: Ediciones Gráficas Fundación Real Madrid.
- Rodríguez Macías, M., Abad Robles, M. T., & Giménez Fuentes-Guerra, F. J. (2021). Effects of Sport Teaching on Students' Enjoyment and Fun: A Systematic Review and Meta-Analysis. *Frontiers in psychology*, 12, 708155.
- Sanmiguel-Rodríguez, A., Ramos-Álvarez, O., & Navarro-Patón, R. (2022). Gamification in physical education: A systematic review. *Education Sciences*, 12, 540.
- Shachaf, M., Katz, Y. J., & Shoval, E. (2013). The unique trio: Academic achievement, sport, and sex. *Education and Society*, 13(1), 17-36.
- Sotos-Martínez, V. J., Tortosa-Martínez, J., Baena-Morales, S., & Ferriz-Valero, A. (2023). Boosting student's motivation through gamification in physical education. *Behavioral Sciences*, 13(2), 165.
- Sprint Active Education. (2024). Enhancing teamwork skills: the impact of physical education on collaboration and unity. Available online at: <https://www.sprintactive.co.uk>.
- Udokanma, E., Akpu, E. & Onwunaka, C. (2016). Factors affecting participation in recreational sports activities among secondary school students in Awka-south LGA of Anambra State. *Unizik Journal of Education Graduates*, 3(1), 68-88.
- Yildirim, M. (2021). Investigation of sports participation motivations of physical education and sports school students. *International Education Studies*, 14(8), 43-50.