



Exploring methods to strengthen sportmanship through value based learning media (PEACEMAP)

Explorando métodos para fortalecer el espíritu deportivo a través de medios de aprendizaje basados en valores (PEACEMAP)

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Abstract

Introduction: This study explores strategies to strengthen the spirit of sportsmanship through value-based learning media. Sportsmanship is closely related to tolerance, fairness, and ethical behavior in sports and daily life.

Objective: The research aims to develop an effective learning media model that fosters sportsmanship by integrating sports science, learning science, and media innovation.

Methodology: A systematic approach is employed through two primary methods. First, an exploratory study is conducted using bibliometric analysis tools to review existing literature on sportsmanship and value-based learning media. The findings from this analysis serve as the foundation for designing an ideal learning media model. The proposed model, called PEACEMAP, is developed to incorporate values that encourage sportsmanship and tolerance.

Results: The study identifies three key findings. First, the concept of sportsmanship is increasingly linked to an attitude of tolerance, reinforcing the need for holistic learning methods. Second, there is strong potential for value-based learning media, specifically PEACEMAP, to significantly enhance sportsmanship. Third, PEACEMAP is effective in fostering tolerance and internalizing the values of sportsmanship through innovative learning approaches.

Conclusions: This study highlights the importance of integrating game-based learning, sports science, and media innovation to strengthen sportsmanship. The findings suggest that PEACEMAP can be a valuable tool in promoting ethical behavior and tolerance in sports and broader social contexts.

Keywords

Bibliometric analysis; board games; sports sciences; sportsmanship; value-based education.

Resumen

Introducción: Este estudio explora estrategias para fortalecer el espíritu deportivo a través de medios de aprendizaje basados en valores. El espíritu deportivo está estrechamente relacionado con la tolerancia, la justicia y el comportamiento ético en el deporte y la vida diaria.

Objetivo: La investigación tiene como objetivo desarrollar un modelo de medios de aprendizaje eficaz que fomente el espíritu deportivo mediante la integración de la ciencia del deporte, la ciencia del aprendizaje y la innovación en los medios.

Metodología: Se emplea un enfoque sistemático a través de dos métodos principales. En primer lugar, se lleva a cabo un estudio exploratorio utilizando herramientas de análisis bibliométrico para revisar la literatura existente sobre el espíritu deportivo y los medios de aprendizaje basados en valores. Los hallazgos de este análisis sirven como base para diseñar un modelo de medios de aprendizaje ideal. El modelo propuesto, llamado PEACEMAP, se desarrolla para incorporar valores que fomenten el espíritu deportivo y la tolerancia.

Resultados: El estudio identifica tres hallazgos clave. En primer lugar, el concepto de espíritu deportivo está cada vez más vinculado a una actitud de tolerancia, lo que refuerza la necesidad de métodos de aprendizaje holísticos. En segundo lugar, existe un gran potencial para que los medios de aprendizaje basados en valores, específicamente PEACEMAP, mejoren significativamente el espíritu deportivo. En tercer lugar, PEACEMAP es eficaz para fomentar la tolerancia y la internalización de los valores del espíritu deportivo a través de enfoques de aprendizaje innovadores.

Conclusiones: Este estudio destaca la importancia de integrar el aprendizaje basado en el juego, la ciencia del deporte y la innovación en los medios para fortalecer el espíritu deportivo. Los hallazgos sugieren que PEACEMAP puede ser una herramienta valiosa para promover el comportamiento ético y la tolerancia en los deportes y en contextos sociales más amplios.

Palabras clave

Análisis bibliométrico; ciencia del deporte; deportividad; educación basada en valores; juegos de mesa.



Introduction

Modern sports have a fairly high tendency towards sportsmanship capital. However, every physical activity needs to refer to a certain attitude's meaning. The spirit of sportsmanship is the most universal concept always to be a reference requirement for any sport (Purnomo et al., 2024). Sports are essentially one of the instruments to integrate social values (Gorgut & Tutkun, 2023; Purnomo et al., 2024). In a sociological review, such a thing is one of the proofs that an activity can form social ties. Conceptually, sportsmanship on a practical scale is an action that tends towards sensitivity to submit acceptance to parties outside of oneself. Of course, in this meaning, several experts, for example Koc (2017) further propose the meaning of sportsmanship which turns out to contain various dimensions.

This study does not only look at the essence of sportsmanship as a single concept. More than that, we believe that sportsmanship is a priority orientation that requires considering methods to achieve this spirit of sportsmanship. For this reason, researchers are trying to connect the study of the spirit of sportsmanship with the study of learning media. To make it easier to read, researchers will justify the meaning of the learning media concept that we are studying. Of course, many issues and studies define learning media. We take good identification Bourdeau & Tony Bates (2013) which explains in-depth instructional design as a concept that needs to be considered in the learning process.

There are various kinds of research from researchers that define the relationship between modern sports and sportsmanship. First, explaining physical education as a uniqueness that must be considered in terms of interpersonal and social interactions between students in open spaces (Purnomo et al., 2021). Thus, an educational process needs to provide an optimal context for the development of values (Burgueño & Medina-casabón, 2020; Hafiar et al., 2024). Second, explaining the correlation between sportsmanship and learning media as a framework used to study motivation is Self-Determination Theory (SDT), which assumes that motivation influences the fulfillment of three basic psychological needs (autonomy, competence, and relatedness) (Méndez-Giménez et al., 2015). In another study, it was identified that there was a significant influence of physical education in presenting a mental attitude, including sportsmanship (Marheni et al., 2024; TAŞTAN, 2023).

The explanation as explained above strengthens the situation that the study between sportsmanship and learning media has the potential for correlation that can be explored more deeply to present a positive correlation solution between the two relationships. Thus, sportsmanship must be built in a systematic methodology building with measurable interventions in complete learning. To achieve this, functional learning media is needed in presenting the process of strengthening the spirit of sportsmanship for the subjects of education themselves. This study is here to present a solution that learning media has a great opportunity to contribute to strengthening the spirit of sportsmanship as one of the orientations in certain sports activities.

Not all learning media have a positive correlation in improving a particular learning objective. In other words, it is not certain that one learning media can be functional in presenting objectives in other orientations. The conclusion of this meaning refers to the description that learning media is an incidental thing that is greatly influenced by factors in the process of fulfilling learning objectives. This article makes 'sportsmanship' a priority objective in the learning program. Thus, every function of learning media will lead to the ease of the learning process that can present competence and a spirit of sportsmanship.

Literature Review

In the review process, researchers analyzed several concepts and their correlations using research data collectors on the description of the concepts of sportmanship, instructional media, and value-based learning. At least researchers will explore 11 articles that have a strong correlation between the three concepts. In general, researchers conclude that there is a positive correlation between learning media and sportmanship. The general conclusion obtained is that learning media has an ideal contribution to help strengthen sportsmanship. As a character, the assumption that value-based education has a positive contribution is correct. The spirit of sportsmanship is not only achieved through habituation but can also be formed through conditioning situations. The conditioning method is also called the 'learning process'.



A precise view was conveyed by The Last Supper (2023) identifying sports as a concept that needs to pay attention to affective values in its activities. In this study, sports are not only viewed in a behavioristic approach, but also a concept that is influenced by the existence of affective values embedded in certain individuals, such as mental attitudes, responsibility, psychology, and other related values. Sports cannot be separated from concepts that encompass positive emotions such as responsibility, tolerance, joy, love, virtue, discipline, excitement, as well as negative emotions such as sadness, fear, and stress, in addition to physical development (Tiryaki, 2023). In other studies, sports also need to be reviewed as physical activities that can create superior interest and motivation from students in meeting certain learning goals. Thus, other studies even identify opportunities for developing sports learning models to be developed with the help of media tools that are close and used daily by students (Swadesi & Kanca, 2019).

The two perceptions explained above at least provide the conclusion that sport in the latest developments in literature is often associated with non-physical motivation (Swadesi and Kanca 2019; TIRYAKI2023). Physical fitness is one of the concrete orientations in fulfilling the goals of sports activities. However, the program should not reduce the essence of sports to continue to involve the spirit of sportsmanship as a process and goal of a sports activity. The next study to be considered is to answer the basic question of what is the spirit of sportsmanship.

Experts have formulated many classifications and definitions to limit the meaning and standardize the understanding of the meaning of sportsmanship. The concept of sportsmanship in general perception can be interpreted as an indicator in expressing ethics in sports programs, where the indicator often involves various points of view (Gumus et al., 2020). The definition provides the meaning that sportsmanship is often related to a person's steadfastness in upholding certain values or norms. This is also practically recognized more deeply by other researchers. Sportsmanship is often also related to efforts to blockade certain values to maintain sports programs and activities in their determination to positive values (Zakaria et al., 2022). More broadly, research in the realm of psychology examines sportsmanship, ethics, and morality in terms of developing moral attitudes in the sports process (Goldstein & Iso-Ahola, 2006). The author sees the position of the perception of psychology as giving a tendency for sportsmanship to becomes a concept that continues to be monitored in its development as a concept. In a more general behavioral review, the ethics of sportsmanship become the foundation for determining an attitude. With the spirit of sportsmanship, it will reduce the potential for cases of injustice in sports activity programs. More than that, sports with the perception of sportsmanship will lead to a situation that supports each other (Koç & Tamer, 2016). Courel-Ibáñez et al., (2019) concludes that the spirit of sportsmanship is an ethic in sports programs that will significantly help in contributing to personal development and social responsibility.

Not enough to discuss sportsmanship as a singular concept, this study attempts to come up with an ideal methodology in viewing sportsmanship as an orientation. In other words, this study requires an ideal method to make sportsmanship a goal in sports activities. For that, this literature will then discuss how previous research reviews the success of the method towards the realization of sportsmanship.

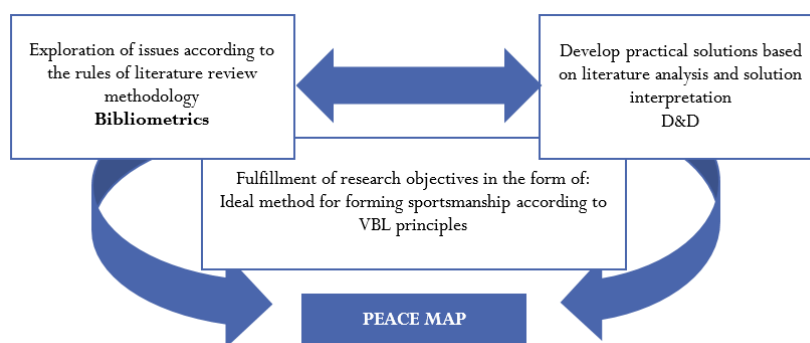
We will start the answer to this question with a response Petrov (2021) that explains that digital transformation in the national physical education and sports sector shows that education services, retraining, and advanced training of physical education and sports specialists are one of the most promising trends in digital transformation progress. This decision shows the researcher's bias that digitalization needs to be reviewed as one of the possible solution models that may be useful in strengthening the character of sportsmanship. More specifically, other studies even boldly offer practical solutions in character formation as an orientation to sports activities. The gamification approach presented in this work is an innovative resource for teaching values in the field of sports. The development of gamification methods can also be a solution in developing children's character so that they can behave well. The review as explained above actually shows the tendency of the two studies towards the hope of developing sports teaching methods according to the principles of digitalization and gamification as one of the solutions.

Method

For exploration purposes, this study examines the issue in depth. This effort is made by reviewing previous research and seeing the trend of the results according to bibliometric analysis. Practically, this method attempts to analyze data collected from the analysis of the conclusions of previous studies. In addition to showing the identification of research trends, this method can also measure the relationship between the impact of research that has been conducted on another research. Thus, data visualization will be borne by showing the mode and vocabulary that are used as the main spirit in determining research trends. Not only seeing data as passive evidence, this method also allows data to be reviewed as facts that are bound by the quality of the source. In its bibliometry, the author of a scientific document is regulated as a manifestation of collaboration that can be measured between investigators, institutions, and institutions (Echavarría & C, 2019). In addition, this method is also quite effective in deciding a classification of a certain type of data as has been done Li & Bi (2019) in his research.

The results of the data analysis obtained based on the data were then developed to become a foundation for achieving other research objectives, namely the preparation of an ideal methodology in the formation of a spirit of sportsmanship according to a value-based learning program. Although in the title the researcher has justified PEACEMAP as a solution, it should be noted that the presence of this solution emerged with the existence of systematic research logic in achieving a scientific solution. To obtain this conclusion, the researcher conducted research with a design and development (D&D) approach. This is in line with the perception of this research which includes pure and applied science. Most academics are encouraged to conduct research towards the 'pure' spectrum while practitioners/industrialists tend to do development work (Fellows & Liu, 2015). More deeply, methodically this research was also inspired by efforts to create learning media designs that had previously been carried out Mohanty, Alam, Sarkar, & Chaudhury (2021) which examines the formation of digital games as a design and development program. From this inspiration, at least the researcher will present a roadmap of the methods we use in the research program.

Figure 1. Stages of Data Retrieval and Analysis



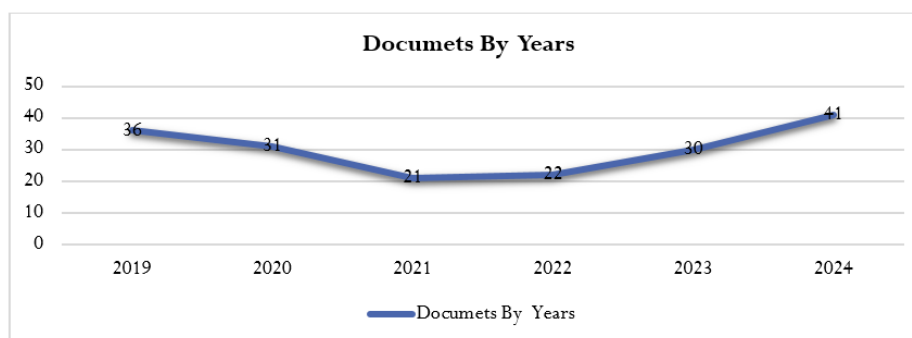
Source: Processed by Researcher

Results

In this initial stage, 310 documents accessed in September 2024 on sportsmanship were mapped and analyzed according to research trends from publication search results in the Scopus database. Each data or study is displayed, then identified and analyzed through analysis search results from scopus.com. Data is visualized based on: (1) Documents by year; (2) Documents by author; (3) Documents by country/region (4) Documents by affiliation; and (5) documents by field of study.

Over View based on the results of identification through the Scopus database from the last 5 years, namely from 2019 to 2024, the trend of sportsmanship research can be seen in Figure 2.

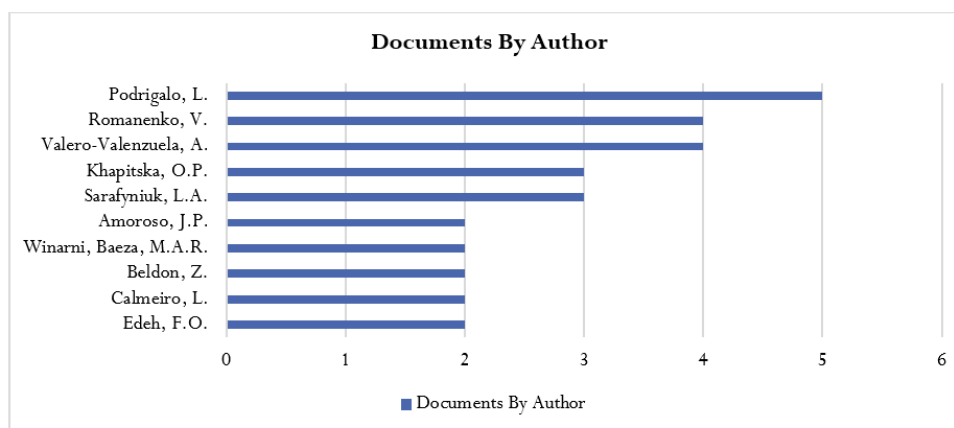
Figure 2. Documents by Years Research



Source: Processed via Scopus, 2024

Based on Figure 4. The increasing number of publications on Sportsmanship, and value-based learning shows the increasing attention and recognition of the importance of research related to the importance of Sportsmanship in various parts of the world. Based on this, there is a significant increase in the quantity of research from 2019 to 2024. Starting in 2019 there were 36 documents, in 2020 there were 31 documents, in 2021 there were 21 documents, in 2022 there were 22 documents, in 2023 there were 30 documents and an increase in 2024 there were 41 documents. With the increasing number of publications on Sportsmanship from 2019 to 2024, this shows that there is increasing attention to issues related to Sportsmanship. Furthermore, the analysis of the authors who contributed the most to Sportsmanship research can be seen in the figure below.

Figure 3. Documents By Author



Source: Processed via Scopus, 2024

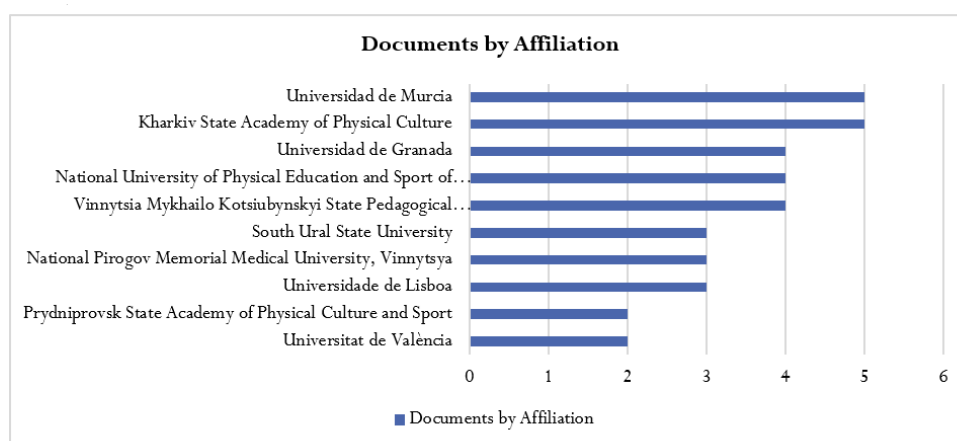
Based on Figure 3. Shows the 10 authors with the largest number of documents discussing Sportsmanship, namely: (1) Podrigalo, Leonid V. (5 Documents), (2) Romanenko, Vyacheslav (4 Documents), (3) Valero-Valenzuela, Alfonso (4 documents), (4) Khapitska, Olga P. (3 documents), (5) Sarafyniuk, Larysa A. (3 documents), (6) Amoroso, José Pedro (2 documents), (7) Baeza, Miguel A. (2 documents), (8) Beldon, Zachary (2 documents), (9) Calmeiro, Luis (2 Documents), (10) Edeh, Friday Ogbu (2 documents). From the data above, it can be seen that from several authors who contributed a lot to research related to Sportsmanship, Podrigalo, Leonid V, ranks first and second as the author who published the most articles on Sportsmanship with the affiliation of Kharkiv State Academy of Physical Culture The institution will open in a new tab, Kharkiv, Ukraine with 441 citations with 42 Scopus documents and 13 H-index Scopus. Furthermore, the researcher analyzed articles related to the affiliation of the authors who contributed the most to the topic of sportsmanship, which can be seen in Table 1.

Table 1. Author Data and Affiliations

Name	Affiliation	Citations	Documents in Scopus	H-index
Podrigalo, Leonid V.	Kharkiv State Academy of Physical Culture The institution will open in a new tab, Kharkiv, Ukraine	441	42	13
Romanenko, Vyacheslav	Kharkiv State Academy of Physical Culture The institution will open in a new tab, Kharkiv, Ukraine	192	20	7
Valero-Valenzuela, Alfonso	Universidad de Murcia The institution will open in a new tab, Murcia, Spain	995	92	19
Khapitska, Olga P.	National Pirogov Memorial Medical University, VinnytsyaThe institution will open in a new tab, Vinnytsia, Ukraine	8	10	2
Sarafyniuk, Larysa A.	National Pirogov Memorial Medical University, VinnytsyaThe institution will open in a new tab, Vinnytsia, Ukraine	14	12	2
Amoroso, Jose Pedro	Polytechnic Institute of Leiria The institution will open in a new tab, Leiria, Portugal	16	6	2
Baeza, Miguel A.	Tarleton State University The institution will open in a new tab, Stephenville, United States	72	8	4
Beldon, Zachary	Missouri Southern State University The institution will open in a new tab, Joplin, United States	16	9	2
Calmeiro, Luis	National Institute of Education The institution will open in a new tab, Singapore City, Singapore	682	34	16

Source: Scopus.com

Figure 4. Documents by Affiliations

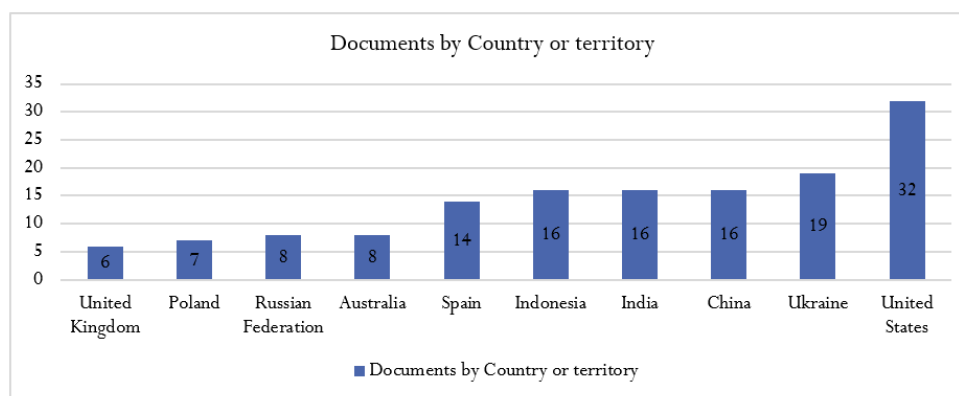


Source: Processed via Scopus, 2024

Based on Figure 4. It can be analyzed that 10 affiliates provide the largest contribution to research publications on the topic of "Sportsmanship" in various parts of the world, including (1) Universidad de Murcia and Kharkiv State Academy of Physical Culture contributing the most with the number of publications each (5 documents), (2) Universidad de Granada (4 documents), (3) National University of Physical Education and Sport of Ukraine (4 documents), (4) Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University (4 documents), (5) South Ural State University (3 documents), (6) National Pirogov Memorial Medical University, Vinnytsya (3 documents), (7) Universidade de Lisboa (3 documents), (8) Prydniprovsk State Academy of Physical Culture and Sport (2 documents), (9) Universitat de València (2 documents). Based on the list of 10 affiliates above that contributed to research on the issue of Sportsmanship, Universidad de Murcia is in first place with a total of 5 documents published with a total of 37,923 Documents in the Scopus journal and 8,212 Documents in the Medicine field with a total of 8,471 authors. Furthermore, this research in various countries in the world in the study of Sportsmanship can be seen in the picture below.

Based on Figure 5, it is analyzed that 10 countries contribute to research related to sportsmanship, including, in 1st place the United States with a total of 32 publication documents, (2) Ukraine (19 documents), (3) China (16 documents), (4) India (16 documents), (5) Indonesia (16 documents), (6) Spain (14 documents), (7) Australia (8 documents), (8) Russian Federation (8 documents), and Poland (9) and (10) there is the United Kingdom with the number of publication documents each having 7 and 6 documents. These data show that the topic of sportsmanship has attracted the attention of researchers in various parts of the world, with significant contributions, especially from large countries such as the United States and Ukraine. Although there are differences in numbers, this graph indicates that sportsmanship is a topic that is quite relevant in the global scope.

Figure 5. Documents by Country or Territory

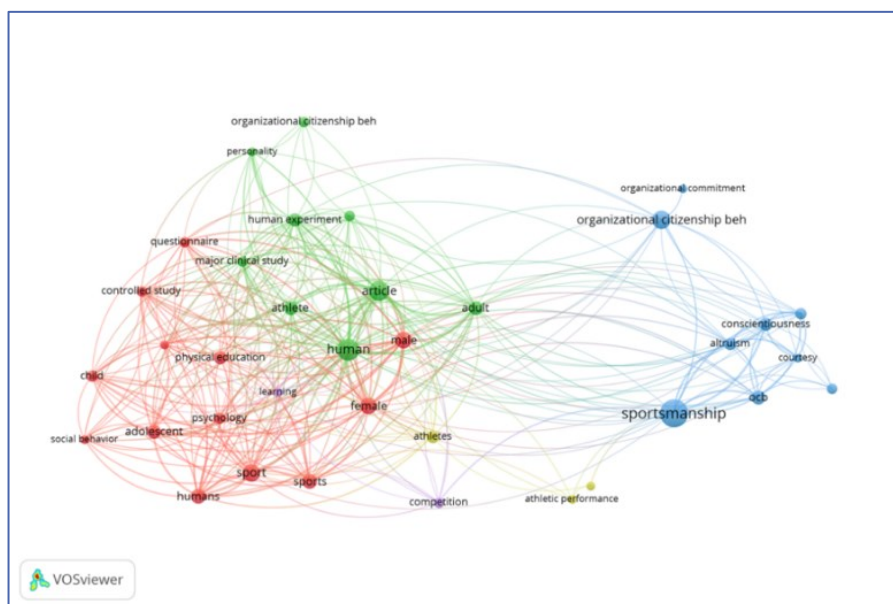


Source: Processed via Scopus, 2024

Discussion

From the data above, all subjects related to the topic of sportsmanship with the subject of Social Sciences are ranked first with a total of 26%, namely 79 documents, and Health Professions in second place with a total of 18% with 53 publication documents. So, from the data above, it can be concluded that in the study of sportsmanship, the most discussed are the fields of Social Sciences and Health Professions in people's lives. Scale and Cluster of Research on the Topic of Sportsmanship from 2019 to 2024: In this section, we will explore the cluster and scale of research on the study of sportsmanship through the VOSviewers tool in the following visualization:

Figure 6. Network Visualization of "Sportsmanship"



Source: Processed via Vosviewer, 2024

Using the Vosviewer tool, we present the research cluster data, as shown in Figure 6. By retrieving from various papers available in the Scopus Database from 181 documents, the following list of research subjects has been identified as closely related to sportsmanship. The Vosviewer results in Nodes (circles) are grouped into several clusters marked with different colors, where each cluster represents a theme or topic that is interrelated. The red cluster focuses on terms such as "child," "adolescent," "sports," "psychology," and "social behavior," indicating research related to the young population and the psy-

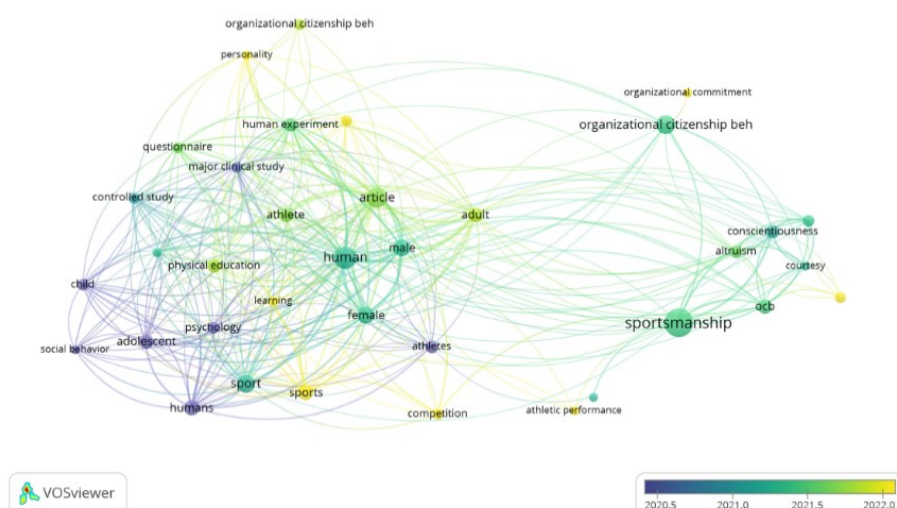
chological aspects of sports. The green cluster includes terms such as "human," "athlete," "male," "female," and "article," indicating research on demographic differences and sports in general. Meanwhile, the blue cluster centers on terms such as "sportsmanship," "organizational citizenship behavior (OCB)," "altruism," and "conscientiousness," indicating the relationship between sports and ethical or organizational behavior. The lines connecting the nodes reflect the strength of the relationship between the terms, with thicker lines indicating stronger relationships. Some terms such as "article," "human," and "adult" are in central positions with extensive connections, indicating that these terms are key concepts that appear frequently across clusters. The map as a whole provides an overview of the main research themes and how these terms are related to each other.

Table 2. Analysis via Vosviewer

Keyword in the Scopus Database: "Sportsmanship"	
Cluster 1 (Red) 12 Items	Adolescent, child, controlled study, education, female, humans, male, physical education, questionnaire, social behavior, sports
Cluster 2 (Green) 9 items	Adult, athlete, gender, human, human experiment, major clinical study, organizational citizen, personality.
Cluster 3 (Blue) 8 items	Altruism, civic virtue, conscientiousness, courtesy, OCB, organizational citizenship behavior, organizational commitment, sportsmanship.
Cluster 4 (Yellow) 4 items	Athletes, athletic performance, martial arts
Cluster 5 (Orange) 2 items	Competition, learning

Source: Processed via Vosviewer, 2024

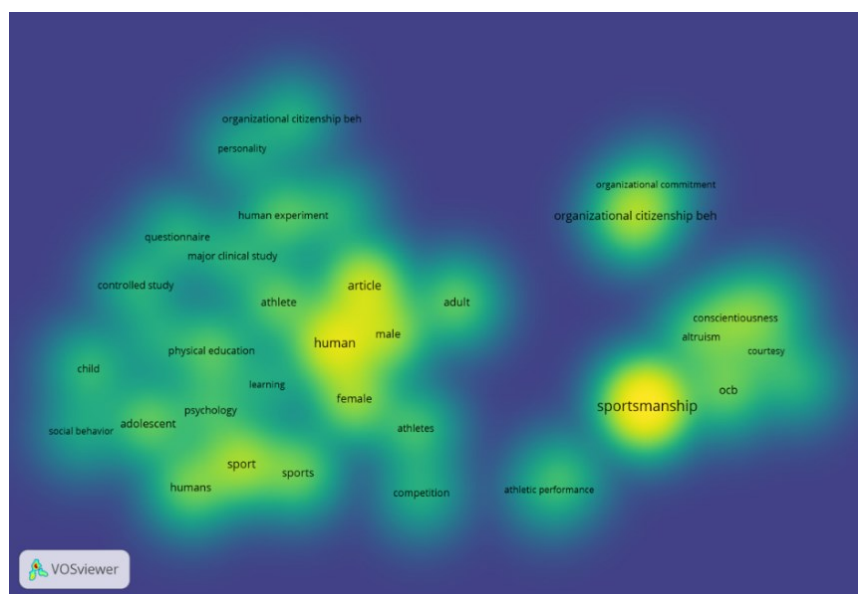
Figure 7. Overlay Visualization of "Sportsmanship"



Source: Processed via Scopus, 2024

Figure 7. illustrates the density visualization, which explains that the darker the yellow color and the larger the diameter of the circle, the denser the keyword is, meaning that the keyword is more frequently researched. If the color fades and blends more with the green background color, then this indicates less research (Nandiyanto & Al Husaeni, 2021). The VOSviewer overlay visualization shows that the keyword "sportsmanship" is closely related to terms such as organizational citizenship behavior (OCB), "altruism, conscientiousness," and "courtesy." In terms of time, the visualization shows that research on sportsmanship and related terms has become more focused in recent years (2021–2022), as indicated by the yellow color of the connections and nodes. Previous research (2020–2021) tended to focus more on the relationship of sportsmanship to terms such as "athletic performance" and "competition," underscoring its relevance in sports competition and performance. Overall, this visualization reflects a shift in focus from sportsmanship in the context of sports to broader applications in ethics, organizations, and positive character development in everyday life.

Figure 8. Analysis via VOSviewer (Type of Analysis: Co-occurrence (All Keywords))

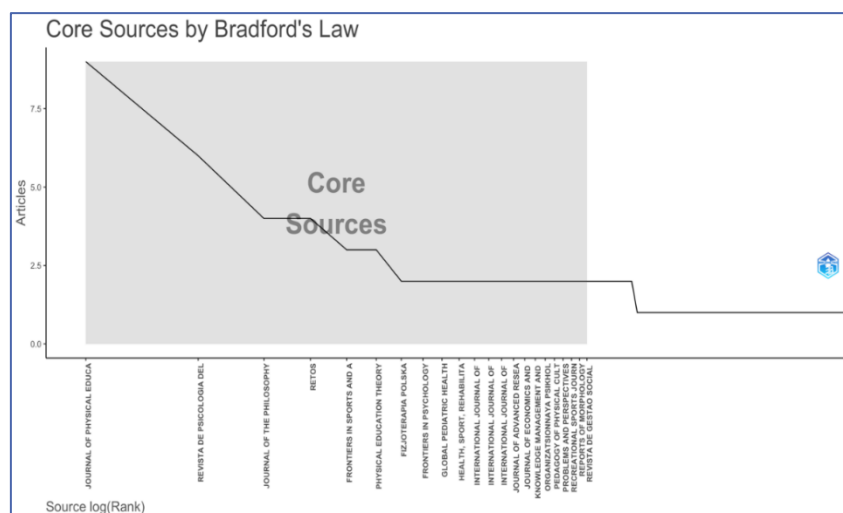


Source: Processed via VOSviewer, 2024

Not much has changed from what is depicted in Figure 8. The overlay visualization results show some tendencies in research that are closely related to sportsmanship from 2019 to 2024 (depicted in the figure with the "yellow" hue as the brightest). This trend is being investigated by international experts. Some of the research questions are: (1) how is Sportsmanship in the Context of Competition and Athletic Performance in various parts of the world? Figure 4 illustrates the density visualization, explaining that the darker the yellow color and the larger the diameter of the circle, the denser the keyword is, which means that the keyword is more frequently researched. If the color fades and blends more with the green background color, then this indicates less research (Husaeni, Nandiyanto & Maryanti, 2022). The VOSviewer Visualization Results of "sportsmanship" show that this topic has significant research concentration and broad relevance in various contexts. Sportsmanship is the main focus in two large clusters, namely the sports cluster and the organizational behavior cluster. This term is closely connected with concepts such as Organizational Citizenship Behavior (OCB), altruism, courtesy, and conscientiousness, which reflect the relationship between sportsmanship, moral character, and ethical behavior of individuals, both in the work environment and in everyday life. In addition, sportsmanship also shows its relevance in the context of "athletic performance" and "competition", which emphasize its role in improving performance and dynamics of sports competition.

In the center of the visualization, sportsmanship is associated with terms such as "human, male, female, athlete," and "sport," indicating that the research involved a diverse human population based on gender and sporting activity. Another prominent cluster is the relationship between sportsmanship and organizational behavior, where the concept is often associated with developing ethics and collaboration in the workplace. The bright yellow color of sportsmanship and related terms indicates significant research focus, while other terms such as "psychology, physical education," and "child" are in areas of lower intensity, reflecting the potential for further research. Overall, this visualization reveals that sportsmanship is an important cross-disciplinary topic, with a primary focus on ethics, performance, and moral behavior, both in the context of sports and organizations.

Figure 9. Core Sources by Bradford's La



Source: Biblioshiny by R Studio

Table 3. Top 10 Journals that Contribute the Most to the Theme of "Sportsmanship"

SO	Rank	Freq	CumFreq	Zone
Journal of Physical Education and Sport	1	9	9	Zone 1
Revista De Psicología Del Deporte	2	6	15	Zone 1
Journal of The Philosophy of Sport	3	4	19	Zone 1
Retos	4	4	23	Zone 1
Frontiers in Sports and Active Living	5	3	26	Zone 1
Physical Education Theory and Methodology	6	3	29	Zone 1
Physical Therapy Poland	7	2	31	Zone 1
Frontiers in Psychology	8	2	33	Zone 1
Global Pediatric Health	9	2	35	Zone 1
Health, Sport, Rehabilitation	10	2	37	Zone 1

Source: Biblioshiny by R Studio

Based on data analysis using Bradford's Law, it was found that 10 main journals were the dominant sources of publications related to the studies analyzed, producing a total of 37 articles in Zone 1. The journal with the largest contribution was the Journal of Physical Education and Sport with 9 articles, which contributed about 24% of the total publications in Zone 1. This journal was followed by Revista de Psicología del Deporte with 6 articles (16%), and the Journal of the Philosophy of Sport and Retos with 4 articles each, which together contributed 22% of the total publications. Other journals, such as Frontiers in Sports and Active Living, Physical Education Theory and Methodology, Fizjoterapia Polska, Frontiers in Psychology, Global Pediatric Health, and Health, Sport, Rehabilitation, each produced 2 articles, making smaller but still relevant contributions to this study.

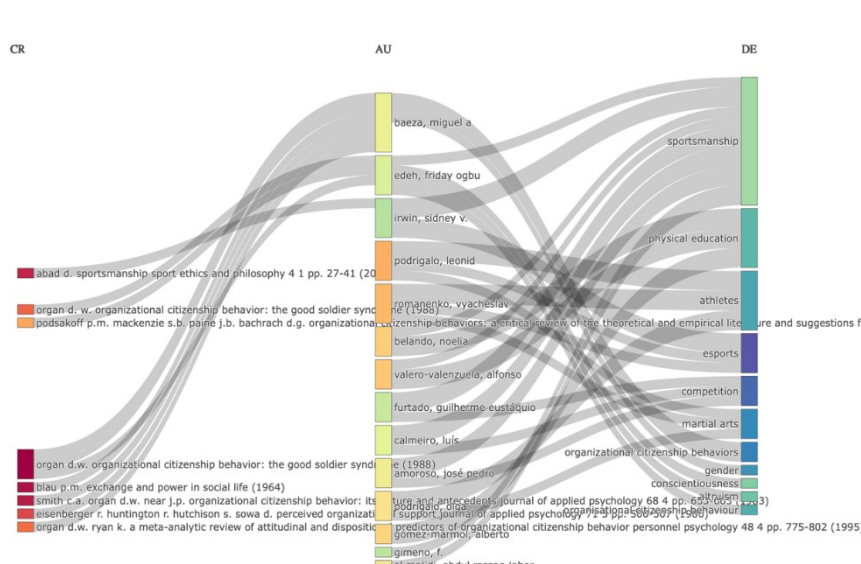
This publication distribution shows a typical pattern consistent with Bradford's Law, where a small number of journals produce the majority of articles in a research area. Most articles are concentrated in a few journals that are considered core sources, while other journals make smaller but still important contributions. This reflects that research in physical education, sports psychology, and related disciplines tends to refer to established and influential journals. Thus, journals in Zone 1 can be considered as primary references for researchers who want to explore related studies.

The analysis in the Three-Field Plot provides in-depth insights into how the sportsmanship theme is connected to the cited references, relevant authors, and more specific research themes. Cited References (CR) column: Frequently cited seminal references, such as "Organ DW, Organizational Citizenship Behavior: The Good Soldier Syndrome" and other works on organizational citizenship behavior, indicate that sportsmanship research draws inspiration from the literature on ethical behavior and positive contributions of individuals in social environments, including sports. This indicates that sportsmanship is often studied as a form of behavior that reflects the values of ethics, collaboration, and respect for rules. Authors (AU) column: Authors such as Baeza, Miguel A, Edeh, Friday Ogbu, and Irwin, Sidney V. play a significant role in building and developing the sportsmanship literature. Their presence at the center of

the data stream indicates that they are significant contributors who bridge the foundational literature with current research themes. Descriptors (DE) column: Keywords such as athletes, physical education, competition, and martial arts indicate that sportsmanship research is often in the context of practical sports. This includes studies on how athletes demonstrate sportsmanship values in competition, how physical education helps teach sportsmanship to students, and how martial arts contexts can develop these values. Esports as a keyword shows the extension of the concept of sportsmanship to the realm of electronic sports, highlighting the relevance of this theme in the digital age. In addition, the keyword gender reflects the social dimensions being explored, for example, differences in sportsmanship based on gender.

This figure confirms that sportsmanship is not only an ethical concept but also an interdisciplinary research area that encompasses individual behavior, organizational values, and social and cultural dimensions. Sportsmanship is explored in a variety of settings, from traditional sports and esports to physical education, with particular attention to competition, values, and their impact on character development. This research is increasingly relevant in supporting the development of morals, collaborative culture, and integrity in various contexts.

Figure 10. Three-Field Plot



Sources: Biblioshiny by R Studio

The Word Cloud above visualizes the most frequently occurring words in the literature analysis related to the field of sportsmanship research, with larger words indicating higher frequency. This analysis can provide an overview of the main themes, study population, and focus of the research.

Study Population: Terms such as “human”, “male”, “female”, “adolescent”, “adult”, and “child” indicate that this study focuses on humans as the main subjects, with attention to various age groups, from children to adults. The dominance of the terms “male” and “female” indicates the importance of gender as a key variable in the study, which is relevant to sportsmanship studies that often involve differences in behavior based on gender.

Research Focus: Words such as “sport,” “athlete,” and “sports” emphasize that the literature focuses on sports topics, including athletes’ behavior in competition, performance, and values such as sportsmanship. In addition, words such as “human experiment,” “controlled study,” and “questionnaire” indicate that many studies used controlled experiments or survey methods to obtain measurable data.

Social and Psychological Dimensions: Terms such as “social behavior”, “learning”, and “psychology” indicate that social behavior, learning processes, and psychological aspects are the main focus. The presence of words such as “morality”, “altruism”, and “achievement” highlight the attention to the development of ethical values, character, and individual success, which are the core of physical education and sports. These dimensions are very relevant in developing sportsmanship among students and athletes.

Table 4. List of 10 most relevant journals on the topic of "Sportsmanship"

Title	Author	Methodology	Results	Citations	Field-Weighted citation impact	Quartile journals in Scopus
"I Thee Pledge": Exploring Student Fan Identity with Sportsmanship Pledge Values	(Patterson et al., 2021)	Exploratory case study	Investigated the student fan perceptions of identity and the values promoted by this sportsmanship pledge and explored whether the values and scope of this particular sportsmanship pledge proudly represented sportsmanship values that were meaningful to the student fans	0	0	International Journal of Sport and Society: Q3
Validity Evidence of Sportsmanship Coaching Behaviors Scale (SCBS) for the Brazilian Context	(Nunes Rocha et al., 2023)	Quantitative: Content analysis	The content validity demonstrated that the items of the instrument were clear and relevant (CVCs between 0.80 and 1.00) and that they were evaluating the correct dimensions ($Kappa \geq 0.70$). Em seguida, 302 young athletes of both sexes participated (mean age 16.1 ± 3.61).	1	0.22	Cuadernos de Psicología del Deporte: Q3
Sport education and sportsmanship orientations: An intervention in high school students	(Burgueño & Medina-Casaubón, 2020)	Quantitative: This research aims to examine the influence of sports education on sportsmanship	Sport education is an effective pedagogical model to be taken into consideration by physical education teachers in order to optimally promote the high school student's moral and ethical education via the development of sportsmanship orientations in the context of school physical education	19	0.87	International Journal of Environmental Research and Public Health: Q2
Sportsmanship and basic psychological needs in sports students	(COSMA et al., 2021)	Quantity	Obtained results showed that the satisfaction of basic psychological needs is associated with sportsmanship. Mediation analyzes have shown that task orientation mediates the relationship between the need for autonomy and the need for competence satisfaction and four of the dimensions of sportsmanship and the relationship between the need for relatedness satisfaction and three of sportsmanship dimensions	2	0.25	Baltic Journal of Health and Physical Activity: Q3
"I don't complain, but I am ready for any eventuality": How job search and sportsmanship interact in the prediction of intention to leave a profession	(Paille & Valeau, 2019)	The research is based on a sample of professional employees	Showed that the moderating effect of job search on the relationship between professional commitment and intention to leave a profession is higher at a low level of sportsmanship and lower when sportsmanship is high	1	0	International Journal of Organizational Analysis: Q2
Effects of a hybrid teaching model (SEM + TGFU) and the model of personal and social responsibility on sportsmanship and enjoyment in 4° Secondary and 1° Baccalaureate students	(Gómez Buendía et al., 2021)	Quantitative	Results showed significant differences in enjoyment when applying both the hybrid model (SEM+TGFU) and the PSRM model ($p < .01$). It is concluded that both interventions with the hybrid model and the PSRM produce positive effects on students' enjoyment	12	1.60	Retos: Q2
The moderating role of sportsmanship and violent	(Courel-Ibáñez et al., 2019)	Discriminant analysis, Pearson correlation and	Results confirmed a negative impact of aggressiveness on obedience and pro-social behavior during school stages, but	26	0.90	PLoS ONE: Q1



Table 4. List of 10 most relevant journals on the topic of "Sportsmanship"

Title	Author	Methodology	Results	Citations	Field-Weighted citation impact	Quartile journals in Scopus
attitudes on social and personal responsibility in adolescents. A clustering-classification approach		ANOVA tests were performed to identify the relationships	sportsmanship mitigated this negative influence. The sportsmanlike and nonviolent profile obtained the highest personal and social responsibility level			

Sources: Scopus.co

The Potential of Learning Media in Directing Sportsmanship

The literature analysis as attached to the previous study points shows that there is an opportunity to strengthen the spirit of sportsmanship by increasing the effectiveness of a learning media. As we know, learning in the modern era has faced various significant developments. These developments lead to the digitalization of the learning process which has led to the development of classes on digital media. Learning in traditional classes is unable to provide a direct learning environment, faster evaluation, and greater involvement. On the contrary, digital learning devices and technologies fill this gap (Haleem et al., 2022). Thus, technological developments need to be considered as one of the solutions to strengthening the role of learning media to revive the spirit of sportsmanship. This is also justified by several studies that agree with conclusions that are in line with these conclusions. Digital learning generally leads to improved learning outcomes, classroom learning, assessment, and administration, as well as the development of important skills among disadvantaged groups (Oguguo et al., 2023; Palloff & Pratt, 2015; Sharma, 2003). It is also explained that learning media increases the element of enthusiasm for learning (Anggraeni et al., 2022)

In the following discussion, the researcher will test the truth about 'Does technology need to be involved in the learning process?'. The response to this question has been answered empirically that students today (Gen Z) tend to influence their teachers to be able to integrate learning with technology (Szymkowiak et al., 2021). The research as explained above shows deeper confirmation that the use of technology is indeed vital in increasing the potential for success in learning. This also applies to efforts to strengthen the spirit of sportsmanship. The opportunity to teach values through sports must be maximized. Sports must enhance life learning. This does not follow the rules but rather appreciates them, and believes in them (Palou & Borrás, 2019). The spirit of sportsmanship is a character that is closer to the attitude of values. Learning values, in several studies, is often associated with learning that tends good learning interactivity. An educational study from Kuwait explains that the findings of interaction with peers appear as the most influential factor in shaping the results, while instructor factors and course design are not significant (Alkhaldi et al., 2024).

The explanation, as described, at least, has an important conclusion to be considered in compiling learning as a form of solution in arranging sportsmanship learning. Technology integration needs to be reviewed as one of the models that need to be considered to strengthen learning facilities that follow student needs empirically. Second, student involvement as peers can also be involved to be granted as a learning resource. Thus, interactivity is one of the capital that needs to be owned by a learning media to be able to attract more functional learning goals. The expected learning characteristics as explained above, can be achieved by strengthening board game learning media. The impact of board game-based learning creates interaction and sharing of knowledge through dialogue that seems to be appreciated and supports learning the concept of traffic orchestration (Stav et al., 2024). The next discussion is 'How can learning media be useful for creating a spirit of sportsmanship?'

PEACEMAP (Peace Education and Character Building through Mindfulness and Action Packed-Play)

Digital gamification is a widespread practice in the world of education (Mauri-Medrano et al., 2024). The development of digital media is one of the capitals in the formation of learning media for the spirit of sportsmanship. This situation must be considered as a potential that must be optimized. In previous



studies, board game learning will also help students to be stronger in having additional knowledge. Furthermore, there is evidence that a board game appears to be superior to a non-game group in terms of knowledge improvement (Anyanwu, 2014; Arayapisit et al., 2023; Jermaina et al., 2022). In other research, there is a study that proves the influence of learning using board games to help improve competence in solving a problem (problem-solving) (Hou et al., 2023). The analysis as explained above proposes the same conclusion that board games can be one of the media capitals that can be used in the learning process to improve the quality of sportsmanship. Moreover, tactically board games generally have a methodological organization of the way of playing, so that it also creates the presence of various significant interactivity potentials.

After we agree that board games have the potential to improve knowledge competence, the next test is 'Are board games ideal as a value-based learning medium?'. Before answering that question, research conducted Jahn et al., (2024) explains that attention patterns transform stimulus features into common value representations that enable the same decision-making mechanism to deploy attention, regardless of the identity of the pattern. Thus, knowledge capital can be recognized as one of the considerations in the decision-making process. In a cooperative atmosphere, learners actively participate in knowledge construction by interacting with other group members. For example, to achieve a common group goal, group members are encouraged to help each other, discuss their views, and exchange information (Filippou et al., 2022).

PEACEMAP designed by researchers is an educational media that seeks to be a solution in presenting learning tools to strengthen the spirit of sportsmanship. In principle, the preparation of this media at least goes through several steps in its formation. Identifying problems is one of the most important capitals in its initial formation. Then, describe the learning objectives as an orientation. The data obtained in the previous step is used as a consideration in the preparation of product artifacts (design & development). An overview of the steps in compiling PEACEMAP media, inspired by the procedural steps that have been taken J. Ellis & Levy (2010) as follows.

PEACEMAP (Peace Education and Character Building through Mindfulness and Action Play) was developed as a medium for peace education to improve the perception of multiculturalism and tolerance. As we know, tolerance is one of the prerequisites for the presence of a spirit of sportsmanship. Thus, this study reveals the potential for strengthening the spirit of sportsmanship that can be formed by the realization of tolerance. Moreover, the concept of tolerance has developed over time. This has been expressed by The Untamed & The Killed (2021) that tolerance is always related to the response to diversity. This is what will be the capital for strengthening the spirit of sportsmanship. We understand value-based learning as an educational approach that emphasizes the development of student values in addition to specialist knowledge (Schön et al., 2023). Thus, strengthening the knowledge of tolerance can help form a spirit of sportsmanship. Practically, the integration of value-based education with educational technology is indeed a combination that can be considered in the preparation of learning media. The development of technology in learning must also be reviewed as capital to be able to strengthen the value perspective. This is what is called the adoption of e-learning from not only a technology acceptance perspective but also a value perspective (Liao et al., 2022).

Conclusions

Exploration of the concept of sportsmanship, learning media and value-based education produces conclusions that tend to the relationship between the three concepts. The relationship that can be justified is that sportsmanship as a concept has developed into an attitude that is increasingly close to the meaning of tolerance as a social attitude. Thus, education that seeks to foster an attitude of sportsmanship can also be considered to be carried out according to a value-based learning approach. However, value-based learning apparently cannot stand alone as a concept. To achieve internalization of the value of sportsmanship, the concept of value learning must be developed together with interactive learning media.

The literature compiled according to systematic reviews shows the trend of sportsmanship as a model that must be considered that it is a concept related to many social competencies. The development model of sportsmanship is increasingly widespread in studies that do not only see it as a moral study,



but also a phenomenon related to many things. Sports science is the most important part that can define the spirit of sportsmanship more systematically. However, the perception of the concept of the spirit of sportsmanship has faced various developments that have given rise to a richer scientific exploration of the concept of the spirit of sportsmanship.

This study can ultimately justify the potential role of learning media in developing sportsmanship competencies. The most reliable learning model in developing sportsmanship is value-based learning. Scientifically, there are various studies that have previously led to such conclusions. Empirically, this study justifies the same thing. More than that, researchers also found that the formation of interactive media-based learning is very potential to provide opportunities for increasing the spirit of sportsmanship. In conclusion, the conclusion that can be accepted in this study is the development of the concept of sportsmanship as a developing issue. There is significant potential for the influence of value-based learning media in developing the spirit of sportsmanship, and PEACEMAP can be justified as a learning medium that can be effective in strengthening an attitude of tolerance which according to the development of its concept can influence the internalization of sportsmanship values.

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Conflict of Interest

The authors state that there is no conflict of interest.

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