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Sports Enjoyment and Learning Satisfaction of College Students in Basketball: Basis for Course Enhancement Design

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Abstract: College students widely embrace basketball as a popular sport, and it holds significant value in the physical education curriculum of colleges and universities. China's traditional basketball training is rooted in the professional sports teams operating under the national system. The experience of enjoying sports can be defined as a positive emotional state that reflects the overall sense of participating in physical activity, including feelings of happiness, liking, and enjoyment. Learning satisfaction refers to the attitude or perception of students toward their learning activities. The status quo of PE teachers teaching basketball in colleges and universities in China was found to be problematic because of traditional methods, populated classes, teachers' assessments, and students' multiple courses every semester. The study investigated the sports enjoyment and learning satisfaction of college students in basketball courses in China. This study was anchored on the self-determination theory and employed a quantitative comparative correlative design. The results revealed that the college students were generally dissatisfied with their sports enjoyment and learning in basketball courses. Hence, the study proposed a course enhancement program in basketball to improve the exercise performance of college students while playing basketball, to maintain the satisfaction of college students in competitive enjoyment of basketball, to address the dissatisfaction of college students with course content, basketball teachers may use a variety of teaching methods, to improve the learning satisfaction of college students in environmental hygiene in basketball courses, and to maintain the strong relationship between students' enjoyment of sports and their overall satisfaction with their learning experience, despite their low-evaluation.

Keywords: College Basketball; Learning Satisfaction in Basketball; Sports Enjoyment in Basketball.

1. Introduction

Basketball involves a high-stakes team sport with players displaying physical, technical, tactical, psychological, and intellectual abilities within a specific time and space. It involves two teams, typically consisting of five players each, facing off on a rectangular court, aiming to score by shooting a basketball (approximately 9.4 inches or 24 cm in diameter) through the defending team's hoop (an 18-inch or 46 cm diameter basket mounted 10 feet or 3.048 meter high to a backboard at each end of the court) while also preventing the opposing team from scoring through their own hoop. A field goal is awarded two points, except when made from behind the three-point line, in which case it is worth three points. When a foul occurs, timed play stops and the fouled player or the designated shooter for a technical foul is awarded one or more one-point free throws (Rathi, 2020).

College students widely embrace basketball as a popular sport, and it holds significant value in the physical education curriculum of colleges and universities. The leaders of education departments and schools heavily emphasize basketball education in college physical education. Nearly all higher education institutions include basketball as a fundamental component of their physical education programs (Liu, 2021).

The primary objective of college basketball sports education is to generate interest in basketball among students and gradually develop their lifelong physical education, aiming to enhance students' overall quality. Achieving this ultimate goal relies on students actively participating in basketball teaching activities. Positive motivation is crucial for students to engage in these activities under the guidance of teachers and to improve their comprehensive quality through their own efforts. Aside from that, playing basketball can promote cardiovascular health, burn calories, build bone strength, boost the immune system, provide strength training, and boost mental development to name some (Rathi, 2020).

Incorporating basketball games into the teaching curriculum can assist physical education instructors in simplifying the lesson content and maintaining consistent teaching objectives for game and basketball sports education. This approach not only enables students to learn through playing in a fun way, thereby improving their understanding of basketball, but it also actively engages students in the learning process. Ultimately, the basketball game helps to enhance students' knowledge of sports-related information and contributes to the advancements in basketball education (Liu et al., 2016).

The game of basketball is a team sport that relies on the collaboration of many individuals to accomplish the team's objectives. It involves various teaching processes and technical components, along with numerous team spirit resources and influences. Educators should delve into the teaching content, search for team spirit elements within the material, and shape students' team spirit through the content. Basketball encompasses intense competition, strong defense, and frequent physical interaction. Moreover, guiding students to communicate effectively within a team and helping them grasp the concept of collective effort is crucial for nurturing team spirit (Chen et al., 2019).

Currently, basketball stands as the primary extracurricular sport for college students. The college basketball league, conducted within or between schools, has significantly heightened students' passion for basketball. During basketball

competitions, players experience a range of complex emotions, where positive emotions can enhance their performance (Du, 2020).

On the other hand, when playing basketball, college students engage in a variety of actions like jumping, stopping, and getting up. Throughout this time, their bodies are consistently impacted. If they lack strong physical abilities as a foundation, college students will experience an increasing number of sports injuries due to training. The primary cause is the inadequate physical condition of college students. If college students have good physical fitness, they can perform certain movements using muscle support, consequently decreasing the risk of harm to bones and muscles. Having good physical condition enables us to execute all basketball movements excellently, resulting in high-quality performance and effectively lowering the likelihood of injuries (Hu, 2022).

Thus, with the popularity of basketball courses in colleges and universities and its development in physical education, it is timely to investigate the sports enjoyment, and learning satisfaction of college students enrolled in basketball courses in China.

1.1. Background of the Study

The introduction of basketball in China happened earlier, but its progress was lethargic; its promotion was limited; the level of competition was low; and its overall standard was lacking. Despite the breakthrough in the development of Chinese basketball after the establishment of the People's Republic of China, the development of the Chinese Professional Basketball League CBA has been relatively brief, and its system is not flawless. Influenced by traditional Chinese sports culture, Chinese basketball is rooted in the harmony between mind and nature. It is characterized by a relatively tranquil and balanced demeanor, with minimal emphasis on physical confrontation and competitive awareness and limited performance intensity on the court (Wu et al., 2022).

Apparently, China's traditional basketball player training is rooted in the professional sports teams operating under the national system. Although this method has rapidly produced exceptional basketball players, it has also led to various problems. The separation of the sports system from the education system, an overemphasis on sports training, and the neglect of cultural subjects have hindered the holistic development of athletes. While new training methods like integrating sports and education, socialization, and professionalism have started to emerge in China in recent years, they are not yet fully developed. In general, the traditional professional sports teams continue to dominate the training model for basketball players in China (Wu et al., 2022).

The advancement of college basketball provides a strong basis for the progress of competitive sports in China and helps enhance the pool of talented basketball players in the country. It is essential for educational institutions to thoroughly understand the nuances of training high-level national basketball talents. Basketball is not just about physical skills; theoretical knowledge is equally crucial. Traditional teaching approaches in theoretical learning are rigid, relying heavily on oral explanations and demonstrations by physical education teachers (Zheng & Qu, 2021).

The experience of enjoying sports can be defined as a positive emotional state that reflects the overall sense of participating in physical activity, including feelings of happiness, liking, and enjoyment (Soares et al., 2020). As a result, the enjoyment of sports should encompass the satisfaction and delight of those taking part in physical activities. Additionally, fun also holds significant importance in achieving the objectives of physical education (Krommidas et al., 2020).

Meanwhile, learning satisfaction has been widely utilized in education to gauge the effectiveness of students' learning. Learning satisfaction refers to the attitude or perception of students toward their learning activities. Satisfaction in these activities stems from students' interests, desires, and needs during the learning process (Petclai, 2022). Therefore, learning satisfaction can be used to elucidate students' motivation to engage in learning activities and the outcomes of their participation. The factors influencing students' learning satisfaction can be categorized into two groups: intrinsic student-related factors, including motivational aspects such as academic performance, recognition from teachers and peers, and the learning process itself (Lazarraga, 2023).

The status quo of PE teachers teaching basketball in colleges and universities in China was found to be problematic. First, physical basketball instructors often adhere to traditional methods and teaching ideologies due to their extensive experience, resulting in a lack of innovation in their teaching approach. Second, in colleges and universities, physical education classes have a significant number of students, and basketball involves intricate skills such as dribbling, passing, and maintaining the correct walking position and posture. The teaching content designed by teachers for large classes is considerably unreasonable. Lastly, teachers at numerous colleges and universities are typically assessed based on each course after every semester. Nonetheless, students are usually enrolled in multiple courses per semester, making it challenging for them to thoroughly appraise the teaching quality of more than ten or twenty courses simultaneously. Consequently, students frequently resort to duplicating and pasting identical comments in their teaching evaluations, leading to a cursory assessment (Liu et al., 2016).

Likewise, Liu (2021) found several problems in college basketball courses under the concept of health first. First, the predominant role in curriculum teaching and implementation is held by teachers. Second, the emphasis on professional skills results in the neglect of students' physical and mental health development. Third, there are limited extracurricular basketball sports activities and an inadequate physical exercise environment for students. And, the teaching assessments prioritize professional skills over spiritual qualities.

1.2. Statement of the Problem

This study described the teaching quality, sports enjoyment, and learning satisfaction in basketball courses of college students in China.

Specifically, this study provided evidence and answered the following questions:

1. What is the college students' sports enjoyment in basketball courses in terms of:
   - 1.1 Sports benefits
   - 1.2 Peer interaction
   - 1.3 Class atmosphere
   - 1.4 Exercise performance
   - 1.5 Competitive enjoyment

2. What is the learning satisfaction of college students in basketball course in terms of:

2.1 Teaching methods
2.2 Course content
2.3 Learning outcomes
2.4 Course equipment and facilities
2.5 Peer relationship
2.6 Environmental hygiene

3. Is there a significant relationship between the assessment of sports enjoyment and the learning satisfaction of college students in basketball courses?

4. Based on the results, what course enhancement can be designed for college basketball?

Hypotheses

1. There was no significant relationship between the assessment of sports enjoyment and the learning satisfaction of college students in basketball courses.

1.3. Significance of the Study

This study examined the satisfaction of college students in China when it comes to enjoying and learning from playing college basketball, to create improvements for college basketball courses. The findings of this study will benefit the following groups of individuals:

- Students. The study will provide relative information about the students' sports enjoyment and learning satisfaction in basketball courses. They will have a deeper purpose in playing basketball than performing a course requirement.
- PE Teachers. The results of the study will be their reference to the student's assessment of their sports enjoyment and learning satisfaction in basketball courses. Likewise, the output of the study will provide them with a useful guide in facilitating basketball using student-centered activities for learning, practicing, competing, and evaluating.
- PE Curriculum Developers. The curriculum developers may refer to the output of the study in upgrading the college basketball curriculum in China. The students' sports enjoyment and learning satisfaction in basketball courses must be integrated in the course learning outcomes.
- Basketball Coaches. The PE teachers can collaborate with basketball coaches in conducting their classes in the basketball course. Thus, this study will be a helpful material for coaches to understand their students' sports enjoyment and learning satisfaction to become successful basketball players.
- Future Researchers. The study's limitations could involve future researchers' interest in expanding and extending college basketball.

1.4. Scope and Delimitation of the Study

The objective of this research was to examine the pleasure derived from sports and the level of satisfaction with learning among college students participating in basketball in China to improve the course. The participants involved college students from different majors and academic years who were taking basketball as part of their physical education curriculum. They were chosen from five universities in China to ensure diverse backgrounds and varying levels of experience in learning college basketball.

The study focused on the sports enjoyment of college students in their basketball course so they could assess its sports benefits, peer interaction, class atmosphere, exercise performance, and competitive enjoyment. Likewise, they evaluated their learning satisfaction in basketball courses by rating its teaching methods, course content, learning outcomes, course equipment and facilities, peer relationships, and environmental hygiene. The study investigated the relationship between college students' sports enjoyment and learning satisfaction to design an enhanced basketball course in colleges and universities in China.

The data collection was limited to the use of the adopted questionnaire used by Yang (2018) in measuring the sports enjoyment scale with 23 questions and the learning satisfaction scale with 33 questions. These tools were developed based on the key findings in previous studies about sports enjoyment and learning satisfaction. The study adopted these questionnaires for they provide considerable and revealing insights on the variables of the study.

Thus, several limitations could impact the respondents' choices and the study's interpretations. The respondents' assessment of their sports enjoyment and learning satisfaction may be influenced by potential self-report bias. The findings' statistical power and generalizability might be compromised due to the limited sample size.

In addition, factors outside of academics, such as personal circumstances, ongoing life events, and environmental shifts, could affect how students are assessed and evaluated. The study may also be affected by the unique methods of teaching basketball at various universities in China, potentially restricting the applicability of the results to other scenarios. Therefore, careful and impartial data gathering and analysis were implemented to mitigate these constraints.

1.5. Theoretical Framework

Self-Determination Theory

The theory of self-determination (SDT) (Ryan & Deci, 2017) has gained significant influence in explaining human motivation and well-being through extensive research. It provides a framework for understanding the motivational underpinnings of personality and social behavior, as well as the connection between basic psychological needs and well-being, psychological thriving, and a high quality of life. Unlike traditional approaches to human motivation that view motivation as a single concept, SDT focuses on different types of motivation (ranging from autonomous to controlled motivation) to predict various outcomes such as performance, engagement, energy, and psychological well-being. Specifically, the theory makes a distinction between autonomous and controlled motivations. Acting autonomously means making decisions with a full sense of intention and endorsing those decisions.

In contrast, being controlled means feeling pressured or compelled by external forces such as the promise of a reward, fear of punishment, personal ego, or other external factors. Numerous studies have demonstrated that when individuals are motivated autonomously, either through intrinsic motivation or well-internalized forms of extrinsic motivation, they exhibit greater interest, excitement, energy, and confidence. This leads to improved performance, creativity, perseverance, and overall well-being (Ryan & Deci, 2017).

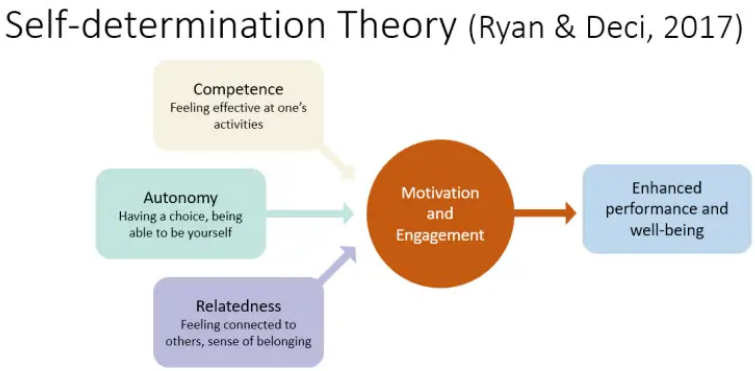

Figure 1. Self-determination Theory

Researchers have utilized Self-determination Theory (SDT) to examine how a student's motivation and well-being are affected by social factors. SDT supporters suggest that motivation exists on a continuum with three levels: autonomous motivation, controlled motivation, and amotivation. When a student's behavior is guided by more self-determined forms of motivation (autonomous motivation), positive student outcomes in physical education, such as enjoyment and satisfaction, are observed. Conversely, when a student's behavior is driven by less self-determined forms of motivation (controlled motivation or amotivation), negative student responses in physical education may occur. According to SDT, autonomy plays a crucial role in influencing the regulation of self-determined behavior. Thus, a teacher's encouragement of autonomy during physical education classes will lead to an increase in students' autonomous motivation (Gil-Arias, 2020).

The findings in the literature review on SDT in physical education indicated that peers play a critical role in the physical education environment, impacting motivation, needs fulfillment, engagement, and emotional well-being. Supportive peer connections were linked to feeling connected, internal motivation, and positive emotions. The results imply that students believe that offering variety, new experiences, choices, and recognition for effort can boost self-driven motivation for physical education. Positive peer interactions are connected to feeling connected, and a stronger sense of belonging is connected to feeling competent and positive emotional outcomes (White et al., 2021).

Moreover, in SDT, when students feel supported in their autonomy within the learning environment, it can lead to fulfilling their psychological needs for autonomy, competence, and relatedness. As a result, their level of satisfaction with their needs would impact their motivation for that specific learning activity or setting. Research on SDT in physical education has demonstrated strong connections between students' perception of autonomy support and their learning outcomes in psychomotor, cognitive, and affective domains. For instance, it was established that students' perception of autonomy significantly predicted their satisfaction of needs and contributed to their achievement in knowledge of personal conditioning (Sun et al., 2017).

Through this theory, the study was able to draw out the sports enjoyment and learning satisfaction of students in colleges and universities as the basis for the design of enhanced basketball courses.

1.6. Conceptual Framework

The study evaluated the sports enjoyment and learning satisfaction of students in college basketball courses in China. First, the college student respondents must be enrolled or have been enrolled in a basketball course to be able to evaluate their sports enjoyment and learning satisfaction.

The adopted research tool collected the college students' sports enjoyment in their basketball course in terms of its sports benefits, peer interaction, class atmosphere, exercise performance, and competitive enjoyment. Likewise, they evaluated their learning satisfaction in basketball courses by rating its teaching methods, course content, learning outcomes, course equipment and facilities, peer relationships, and environmental hygiene.

Lastly, sports enjoyment and learning satisfaction were correlated to understand their significant relationship in learning college basketball. The results of these were significant input to the design of an enhanced basketball course in colleges and universities in China. This research output served as a guideline and basis for PE teachers in facilitating student-centered activities in teaching basketball in colleges and universities.

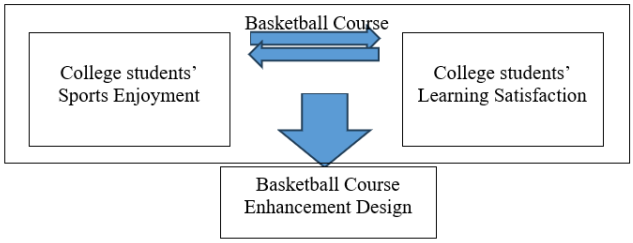

Figure 2. Research Paradigm of Sports Enjoyment and Learning Satisfaction of Students in College Basketball in China as Basis for Course Enhancement Design

1.7. Definition of Terms

The following technical terms were operationally used in the conduct of the study:

Class atmosphere. It encompasses the atmosphere of a learning space, including its social, emotional, and physical elements. It is shaped by the moods, attitudes, and interactions between instructors and students, as well as among the students themselves. Both deliberate and unintentional behavior, as well as direct and indirect messages, contribute to the classroom atmosphere (Barr, 2016).

Competitive enjoyment. It is the desire to compete and the pleasure of engaging in the game. People tend to perform

better when they are engaged in an activity or competition that they enjoy.

Course content. It is any material containing information necessary for participation or comprehension of content, including assigned readings, video recordings, exams, and any other materials essential for learning.

Course equipment. These are educational tools and materials utilized to aid learning and teaching within a formal educational environment. These resources encompass physical tools like scientific instruments and audiovisual aids, as well as software and online resources that bolster classroom instruction. In today's contemporary era, educational equipment holds heightened significance as it plays a pivotal role in enriching the student learning experience. Advancements in technology have rendered this equipment more interactive, captivating, and efficient in fostering a conducive learning atmosphere for students.

Environmental hygiene. Environmental hygiene involves the thorough cleaning of surfaces using suitable products, sterilizing equipment and devices used by people in a certain place such as school, restaurant, gym, etc. It includes hygiene practiced in performing processes, safely handling sharps, as well as managing waste, and linen.

Exercise performance. It is the way an individual performs during exercise that shows how the cardiovascular, pulmonary, and neural systems work together, along with the muscles being used. Physical activity causes the heart rate, arterial pressure, cardiac output, myocardial contractility, and rate and depth of breathing to increase in a graded manner.

Learning outcomes. These are the skills, abilities, knowledge, or values that students should be able to demonstrate after finishing a course are described by learning outcomes. These outcomes focus on students rather than teachers, outlining what the students will be able to do, rather than what the instructor will teach.

Learning satisfaction. It is the level of satisfaction experienced by students during their learning process is what learning satisfaction entails. Evaluating and managing higher education is significantly influenced by it, as it is a direct reflection of students' contentment with their colleges and universities.

Peer interaction. It happens when students engage, share, take turns, or communicate verbally and non-verbally with each other; they are engaging in peer interactions. In tertiary education, peer interaction is oftentimes used in the classroom across disciplines.

Sports benefits. It presents the rewards and advantages of playing sports in particular, basketball. Physically, playing basketball can promote cardiovascular health benefits, burn calories, build bone strength, boost the immune system, provide strength training, and boost mental development to name some (Rathi, 2020).

Sports enjoyment. It is a positive emotional response reflecting feelings of pleasure, liking, and fun. Further studies define sports enjoyment as athletes' positive emotional reaction to their involvement in sports, encompassing general feelings such as fun, pleasure, liking, and love.

Sports facilities. These are enclosed areas such as sports pavilions, stadiums, gymnasiums, health spas, boxing arenas, swimming pools, roller and ice rinks, billiard halls, bowling alleys, and similar places, where the public, students, or groups of people gather to participate in physical exercise, take part in athletic competitions, or watch sporting events.

Teaching Methods. These are described as students' satisfaction with their teacher's teaching methods, strategies, and/or approaches.

2. METHODOLOGY

The following section provides an overview of the research design, research site, and participants. Additionally, it outlines the sampling method and research tools used. It provides a descriptive account of the data collection process and the statistical analysis of the data. Lastly, it discusses the ethical considerations implemented in the study.

2.1. Research Design

The purpose of this research was to assess how much college basketball students in China enjoy sports and find satisfaction in their learning. This study used a quantitative research design, which offered a sophisticated and intricate approach at a practical level. The process employed was a valuable strategy to gain a comprehensive understanding of research problems and to compare various perspectives based on quantitative data, as well as to explain quantitative results through subsequent data collection and analysis.

First, it employed a comparative research design to analyze the association between the respondents' sports enjoyment and learning satisfaction in college basketball courses. It involved the comparison and analysis of quantitative data to draw conclusions and make comparisons between various variables or groups. This approach was frequently employed in quantitative research to explore relationships, variances, or patterns among variables. Its goal is to conduct a systematic and unbiased analysis of data to produce dependable and generalizable results. The use of quantitative-comparative design in research was crucial as it enabled researchers to make well-founded decisions, recognize trends, and test hypotheses, thereby ensuring the accuracy, validity, and applicability of research findings to broader populations.

In the proposed study, comparative research design quantitatively compared the varying and similar data sets to distinguish the respondents' assessment of their sports enjoyment including its sports benefits, peer interaction, class atmosphere, exercise performance, and competitive enjoyment; and learning satisfaction in basketball course by rating its teaching methods, course content, learning outcomes, course equipment and facilities, peer relationship, and environmental hygiene. The comparative method showed the possible disparities of the college students' assessment of their enjoyment and learning in playing basketball.

Finally, the correlational approach involved assessing and grasping the statistical connection between college students' enjoyment of sports and their satisfaction with learning. This was done in a non-experimental manner using both categorical and numerical data, which comprises quantifiable measures. As a result, it offered valuable insights into how to improve the design of basketball courses in colleges and universities.

2.1.1. Sampling Method

In order to accomplish its research objectives and address its research inquiries, the planned study employed purposive sampling, which was a non-probability sampling method that depended on the researcher's discretion in choosing participants who have experience in the subject under investigation. In this study, the purposive sample comprised college students who were participating in basketball from the specified colleges and universities in China:

Table 1. Sample questionnaire

Universities	Description	Total Student Population	Sample
1. Anhui Normal University	It is the earliest institution of higher learning in Anhui. It is located in Wuhu. The predecessor of the school was the Provincial Anhui University, which was renamed the National Anhui University in 1946 and moved to Wuhu in December 1949. It was officially named Anhui Normal University in 1972. The campus covers a total area of 2,024,300 square meters and a construction area of 1053,400 square meters. The school has 2,712 faculty and staff, including 148 faculty and staff of the School of Physical Education, including 129 full-time teachers, 19 professors, 63 associate professors, 28 doctors (including students); 6 doctoral tutors and more than 50 master tutors. At present, there are 2030 undergraduates in the School of Physical Education (including 159 from junior college to university), 384 full-time ordinary master's students, and 40 part-time graduate students.	2,030	100
2. Hefei Normal University	Hefei Normal University is located in Hefei City, Anhui Province. The school, formerly known as Anhui Institute of Education, was founded in 1955 and transformed into a provincial full-time general undergraduate college in 2007. The campus covers an area of 1,295 mu, and the school has more than 1,200 on-the-job teaching staff. There are now 14 secondary colleges, 59 undergraduate majors, and 11 postgraduate training directions for master's degree in education. There are nearly 17,000 full-time undergraduates, graduate students and international students. The School of Physical Education has more than 300 national and provincial outstanding athletes. The college has 64 faculty and staff and 56 full-time teachers, including 6 professors, 21 associate professors (including 1 senior experimenter), 2 doctors and 4 doctoral students. The physical education major has been successively approved by the provincial "characteristic major", the provincial "six excellence, one top" talent training major, the provincial first-class undergraduate major, the provincial first-class undergraduate talent demonstration leading base, and the "national training plan" demonstration project training base.	300	100
3. Huainan Normal University	Huainan Normal University is a full-time general undergraduate college in Anhui Province. Formerly known as Huainan Normal College, it was founded in 1958, closed in 1962, and resumed in March 1978. At present, there are more than 1,300 on-the-job teaching staff and 1,004 full-time teachers, of which 330 have senior titles and 919 have doctoral and master's degrees. Among them, there are 904 full-time students, 64 teaching staff and 10 external teachers in the College of Physical Education. Among them: 4 professors, 19 associate professors; 19 doctors (including studying), 38 masters.	904	100
4. Nanjing Normal University	It is a national "double first-class" construction university and Jiangsu high-level university construction university. Nanjing Normal University has three campuses: Xianlin, Suiyuan and Zijin. Suiyuan campus has the reputation of "the most beautiful campus in the East". There are 28 secondary colleges and 2 independent colleges. The school has on-the-job teaching staff, full-time teachers, and deputy senior titles. Among them, there are 94 teaching staff in the College of Physical Education Science, including 78 full-time teachers. There are 18 full-time teachers, 34 associate professors, 28 doctoral degrees, and more than 90% of teachers have master's degrees. Among the full-time teachers, there are 11 doctoral tutors, 42 master tutors, 9 international and national referees, and 21 international and national athletes.	3,280	100
5. Jiangsu Normal University	Jiangsu Normal University is a university jointly built by the Jiangsu Provincial People's Government and the Ministry of Education. It is a high-level university construction university in Jiangsu. The school was founded in Wuxi, Jiangsu Province in 1952. In 1958, the school moved north to Xuzhou. In 2011, the school was renamed Jiangsu Normal University.	2,500	100

Total Respondents = 500

The selection of institutions was based on specific criteria, which considered the presence of basketball programs, the convenience for college students to access these institutions, and the inclusion of diverse geographic locations to ensure comprehensive representation. Once the universities were invited, potential participants received communication through collaboration with university sports departments or basketball trainers. College students who met the eligibility criteria received invitations to take part in the research.

Thus, the rationale for the research involved a comprehensive evaluation of a variety of participants representing five distinct universities in China. The diverse sample population, comprising individuals with different backgrounds and experiences in sports dance courses, contributed varied and engaging insights to the course improvement design.

2.1.2. Research Instrument

The research instrument intended to collect the college students' sports enjoyment and learning satisfaction, which was adopted questionnaire from Yang (2018). The questionnaire was divided into two parts: the sports enjoyment scale and the learning satisfaction scale.

First, the sports enjoyment scale has 23 questions which mainly refer to the sports benefits, peer interaction, class atmosphere, and exercise performance that college students experience in basketball courses. Second, the learning satisfaction scale part has 33 questions, which mainly refer to teaching methods, course content, learning outcomes, course equipment and facilities, peer interaction, and environmental hygiene in basketball courses.

Both parts of the questionnaire used the 4-point Likert scale ranging from strongly agree to strongly disagree. Before being put into use, the selected survey went through thorough validation procedures to guarantee its reliability and accuracy. It was evaluated by basketball coaches, sports psychologists, and physical education experts to ensure its content validity. These detailed steps in instrumentation aimed to create a robust and effective tool for gathering comprehensive data on various factors that affect performance outcomes in college basketball.

This questionnaire was developed based on the key findings in a previous study about sports enjoyment and learning satisfaction. Thus, the proposed study adopted these questionnaires for they provide considerable and revealing insights on the variables of the study.

2.1.3. Data Gathering Procedure

To achieve the study's objectives, the researcher conscientiously adhered to the data collection process

following approval from the ethics committee, as well as using research instruments and consent forms ethically. To assess the sports enjoyment and learning satisfaction in college basketball in China, first, the researcher sent letters to the preselected schools, namely Anhui Normal University, Hefei Normal University, Huainan Normal University, Nanjing Normal University, and Jiangsu Normal University, to formally ask for consent for research recruitment along with the approved validated research tools. The selected respondents must be enrolled or have been enrolled in a basketball course to be able to evaluate their sports enjoyment and learning satisfaction.

Second, the college students provided their assessment of their sports enjoyment in terms of their sports benefits, peer interaction, class atmosphere, and exercise performance. The researcher was available to clarify the questions to respondents when needed for their best accomplishment of the research tool.

Third, the respondents accomplished the learning satisfaction assessment part of the questionnaire to evaluate teaching methods, course content, learning outcomes, course equipment and facilities, peer interaction, and environmental hygiene in the basketball course. The researcher assured the respondents that their academic grades and status would not be influenced or affected by their answers to the questionnaire.

Finally, the information gathered remained private and protected by encoding and inputting it into a database that would deleted once the study was completed. Statistical methods and descriptive analysis were used to analyze the data to answer the research questions and develop an improved basketball course for college students in China.

2.1.4. Statistical Treatment of the Data

The planned research utilized statistical techniques with the use of the Statistical Package for Social Sciences (SPSS) to examine, understand, and outline the assessment of students' satisfaction with sports involvement and educational fulfillment in college basketball in China.

The first step involved using t-tests and/or F-tests to conduct a comparative analysis for comparing the different and similar data sets related to the respondents' evaluations of sports enjoyment based on the constructs of (1) Sports benefits, (2) peer interaction, (3) class atmosphere, and (4) exercise performance; and learning satisfaction in basketball course based in the constructs of (1) Teaching methods; (2) Course content; (3) Learning outcomes; (4) Course equipment and facilities; (5) Peer relationship; and (6) Environmental hygiene. The comparative method revealed the potential differences in college students' perceptions of their sports enjoyment and learning satisfaction in a basketball course.

The Pearson R or Regression was employed for the correlational method to assess and comprehend the statistical correlation between sports enjoyment and learning satisfaction in a non-experimental manner, utilizing both categorical and numerical data comprising measurable quantities. The findings from these analyses provided valuable insights for improving the basketball course in colleges and universities. This research outcome acted as a reference and foundation for educators in organizing student-centered activities in college basketball.

On the other hand, data, charts, tables, graphs, and/or diagrams were used as statistical graphics to organize the analyzed data by the research questions and to highlight the significant findings. The study questions, goals, and recent literature were all taken into consideration when interpreting the results. However, if the study's shortcomings and incomplete interpretation were acknowledged, more research may be done to look into these potential problem areas.

2.2. Ethical Considerations

The approach to the suggested research was only be focused on achieving its goal to assess the sports enjoyment and learning satisfaction of students in college basketball, but also on applying the ethical and unbiased research methodology by adhering to the following ethical guidelines:

There was no conflict of interest because the researcher covered all the costs associated with this study. No external funding or support has been obtained from any institution or organization for this research. The location where the research took place was provided with a consent letter without any financial compensation, officially allowing the gathering of data, and any form of special favor was not accepted. Similarly, no payments, rewards, or compensation in the form of reimbursement or gifts were offered to participants as a form of bribery to take part in the study, nor any payments or gifts was accepted from their educational institutions.

The principles of privacy and confidentiality constitute the fundamental basis of research ethics, and thus, the study rigorously adhered to these standards throughout its execution. Within the consent letter, participants were invited to voluntarily affix their signatures to acknowledge their consent, in conjunction with the submission of their completed questionnaire. It was imperative to note that no consent form was associated with any specific questionnaire to maintain the anonymity of the respondents. Furthermore, the confidentiality of the participants was safeguarded by refraining from disclosing any personal identifiers in the research report. The researcher was committed to providing a research report upon the request of any participant.

Respondents were also assured that all data collected were used only for research purposes and would be shared with the University Research Ethics Committee (UERC), which can be contacted through their official email address: uerc-secretariat @adamson.edu.ph. Research data adhered to the data retention periods and policies of the University's data management policy. Regarding the retention period of the research output, the Dance Training Program design would be kept for a long time and published in the journal for a longer period because of its continued research value to researchers and the general public. In addition, collected data would be deleted in accordance with the university's information management practices once the retention period has expired.

As mentioned during data collection, permission was sought from selected universities in China. Respondents participating in the survey were informed of the location of the survey and will be asked to agree to complete the questionnaire. The collaboration with the respondents was done considering the availability of the interviewee and with the authorization of their professors so as not to interfere in each one's classroom. Once consent was signed, respondents were guided through the data collection process and had up to 20 to 30 minutes to answer the survey.

The participants are 18 years old and above and college students enrolled in a basketball course at selected colleges and universities in China. The recruitment was approved and referred by the school administrators and teachers who accepted the research proposal. Additionally, the recruitment process strictly adhered to the policies of the colleges and

universities regarding research conduct.

Though the proposed study was about sports enjoyment and learning satisfaction of students in college basketball, no physical or moral harm was inflicted, as the principles of beneficence and respect for human dignity prohibited harm and exploitation of any individual. The researcher consistently assisted each participant during data collection. Moreover, this study upheld human dignity, respecting the participants' right to self-determination and full disclosure. This means that participants could independently decide, without coercion, whether or not to take part in the study. They had the right not to answer any questions that may cause discomfort, and their decision to disclose or withhold personal information was respected. Any queries or requests for clarification about any aspect of the questionnaire that may cause uncertainty were promptly addressed.

The proposed study's purpose, benefits, and potential impact did not jeopardize the cultural traditions of any group or contravene any community policies.

3. Results, Analysis, and Interpretation

This chapter presents the data in an organized tabular format and provides a comprehensive explanation and analysis of the data. The conclusions in this section derive from a statistical study conducted with Jamovi 2.3.28.

The Shapiro-Wilk test, a statistical test specifically designed to assess normality, was used to determine if the parametric test was appropriate for the research objectives. Parametric testing was used when the p-value was greater than 0.05. When the p-value was less than 0.05, its casted doubt on the conformity of the data to a uniform distribution. Hence, non-parametric testing was utilized.

The research inquiries addressed in this paper were revisited. Consequently, the results are presented together with their justifications and evaluations.

Preliminary Analysis

Reliability

Table A. Reliability Measurement – Assessment of Sports Enjoyment (Cronbach's Alpha)

Construct	Cronbach's Alpha	No. of Item/s Deleted	No. of Item/s Retained
Sports Benefits	0.90	0	5
Peer Interaction	0.88	0	4
Class Atmosphere	0.88	0	4
Exercise Performance	0.94	0	5
Competitive Enjoyment	0.83	0	4

Assessment of Learning Satisfaction (Cronbach's Alpha)

Construct	Cronbach's Alpha	No. of Item/s Deleted	No. of Item/s Retained
Teaching Methods	0.89	0	7
Course Content	0.78	0	4
Learning Outcomes	0.91	0	6
Course Equipment and Facilities	0.93	0	6
Peer Relationship	0.88	0	5
Environmental Hygiene	0.83	0	5

Table A presents the evaluation of the reliability of the scales used to measure internal consistency of the scales, sports enjoyment that was measured using sports benefits, peer interaction, class atmosphere, exercise performance, and competitive enjoyment, as well as learning satisfaction based on teaching methods, course content, learning outcomes, course equipment and facilities, peer relationships, and environmental hygiene. Cronbach's alpha (CA) was used to evaluate internal consistency measurements. Nunnally (1978) and Fornell and Larker (1981) stated that a coefficient alpha (CA) value of 0.70 or higher implies high-quality items as well as internal consistency. The estimated coefficient alpha (CA) values range from 0.78 to 0.94, indicating that all of the items exhibit acceptable quality and show significant internal consistency.

Table B. Normality

			Shapiro-Wilk	
	N	SD	W	p
Sports Enjoyment in Basketball	500	0.60	0.87	< .001
Learning Satisfaction	500	0.60	0.85	< .001

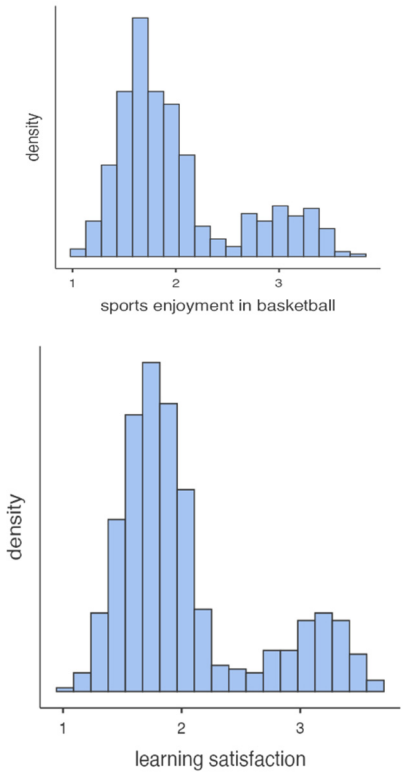

Figure 3. The histogram

Both the p-values generated from the p-values were lower than 0.05, implying that the scores were not regularly distributed. Furthermore, the histogram analysis revealed a positive skew in the data. Hence, to determine if there was a significant relationship between the assessment of sports enjoyment and the learning satisfaction of college students in basketball courses, a non-parametric test, particularly the Spearmans' rho correlation, was performed.

3.1. College Students' Sports Enjoyment in Basketball Course

3.1.1. Sports Benefits

Table 2. Assessment of College Students' Sports Enjoyment in Basketball Course in terms of Sports Benefits

Indicators	Mean	SD	Verbal Interpretation	Rank
1. Basketball can improve my health.	2.01	0.94	Low	2
2. Basketball can promote the sound of my mind.	2.00	0.95	Low	3.5
3. I can learn basketball skills and knowledge.	1.98	0.91	Low	5
4. I can release the stress of my body and mind through basketball.	2.03	0.95	Low	1
5. Basketball can improve the fitness of my body.	2.00	0.95	Low	3.5
COMPOSITE MEAN	**2.00**	**0.83**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 2 displays the evaluation of college students' enjoyment of sports on the basketball course, specifically focusing on the advantages of sports. The aggregated statistics indicate a composite mean score of 2.00 with a standard deviation of 0.83, signifying a low evaluation. The student's express disagreement over their ability to acquire basketball abilities and knowledge (M = 1.98), the notion that basketball may enhance mental well-being (M = 2.00), and the belief that basketball can augment physical fitness (M = 2.00). Thus, the data indicates a clear need for attention to the sports benefits of basketball, as the low average score suggests that college students may not be satisfied or may have concerns.

According to their feedback, item number 3 had the lowest average score of 1.98, which indicates that the college students disagreed that they could learn basketball skills and knowledge. Similarly, in the study by Koekoek et al. (2019), they found comparatively low percentages of students agreeing on spotting and judging a shot on the basket. For Weiwang et al. (2021), students' insufficient basketball learning and knowledge were the effects of traditional basketball teaching methods. This impact on students' learning and personal learning abilities lowers teaching efficiency and effectiveness.

On the other hand, item number 4 (I can alleviate the stress of my body and mind through basketball) earned the greatest average score of 2.03. This result was substantiated by previous research results. Basketball may considerably increase college students' muscular strength and endurance levels; basketball plays an important role in developing college students' physical fitness, particularly cardiorespiratory endurance and flexibility (Liao, 2023). Moreover, basketball significantly impacts college students' psychological well-being and can foster a healthy, beautiful, and vibrant sports environment. It has a big impact on college students' mental health, which can satisfy students' physical and mental states, keep students in a healthy and pleasant mental state, and increase students. It is worthwhile to acquire and utilize the ability to resist pressure and interpersonal communication and foster a spirit of unity and collaboration among students (Li et al., 2020).

3.1.2. Peer Interaction

Table 3. Assessment of College Students' Sports Enjoyment in Basketball Course in terms of Peer Interaction

Indicators	Mean	SD	Verbal Interpretation	Rank
1. Through basketball, I can interact with my classmates.	2.02	0.90	Low	4
2. Basketball allows me to have a chance to get to know other students.	2.05	0.94	Low	3
3. Basketball gives me the opportunity to promote the friendship among my classmates.	1.99	0.91	Low	2
4. Basketball gives me the opportunity to belong and contribute to a team.	2.07	0.98	Low	1
COMPOSITE MEAN	**2.03**	**0.82**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 3 summarizes the evaluation of college students' pleasure of sports in the basketball course about peer interaction. The composite mean score is 2.03, indicating a low rating, supported by a standard deviation of 0.82. The data indicates that students do not believe basketball facilitates interaction with classmates (M = 2.02) and provides opportunities to meet other students (M = 2.05). These results indicated that college students may feel that

existing teams are closed off or that only certain students are included, they might think basketball is not a welcoming space for newcomers. Likewise, some students may view basketball primarily as a competitive sport, focusing more on winning than on building friendships and teamwork. If there are few organized games or inclusive environments for casual play, students may not have the chance to interact with others through basketball.

Based on their responses, item number 3 recorded the lowest average score of 1.99, which means that college students disagreed that basketball allowed them to promote friendships among their classmates. This result was in contrast with the results of the basketball intervention experiment among middle school students in China. Based on their findings, the students' interpersonal relationships, self-identity, and social adjustment improved significantly after the basketball intervention. It was observed that students could improve social adjustment, with interpersonal relationships and self-identity as chain mediators in the effect process of the basketball intervention (Haoran et al., 2023).

However, item number 4 (Basketball provides me the opportunity to belong and contribute to a team) attained the highest average score of 2.07. This result was similar to the findings that, on average, the teamwork intensity index was influenced by time in possession in the offensive zone, total duration of ball possession, and screen off the ball. Thus, basketball offers the chance to belong and contribute to a team (Dunkley, 2015).

3.1.3. Class Atmosphere

Table 4. Assessment of College Students' Sports Enjoyment in Basketball Course in terms of Class Atmosphere

Indicators	Mean	SD	Verbal Interpretation	Rank
1. Basketball makes me feel free.	2.00	0.93	Low	3
2. Basketball makes me feel happy.	2.03	0.99	Low	1
3. Basketball makes feel exciting.	1.98	0.96	Low	4
4. Basketball makes me discover my potentials.	2.01	0.96	Low	2
COMPOSITE MEAN	**2.00**	**0.82**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 4 illustrates the evaluation of college students' enjoyment of sports in the basketball course regarding class atmosphere, yielding a composite mean score of 2.00 and a standard deviation of 0.82. The data indicated a low evaluation for this dimension, with participants expressing disagreement that basketball evokes excitement (M = 1.98), fosters a sense of freedom (M = 2.00), or facilitates the discovery of their potential (M = 2.01). Analysis of the responses revealed that item number 3 had the lowest average score of 1.98, while item number 2 (basketball makes me feel happy) achieved the highest average score of 2.03.

3.1.4. Exercise Performance

Table 5. Assessment of College Students' Sports Enjoyment in Basketball Course in terms of Exercise Performance

Indicators	Mean	SD	Verbal Interpretation	Rank
1. Basketball provides the opportunity for self-challenge.	1.96	0.94	Low	1
2. Basketball showcases my abilities in dribbling, passing, shooting, running, etc.	1.94	0.93	Low	2.5
3. Basketball is an opportunity to show myself.	1.91	0.94	Low	5
4. Basketball trains my competing skills.	1.93	0.91	Low	4
5. Basketball helps me perform better than other students.	1.94	0.96	Low	2.5
COMPOSITE MEAN	**1.94**	**0.81**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 5 displays an assessment of college students' enjoyment of sports on a basketball course, measured by exercise performance. The composite mean score is 1.94, accompanied by a standard deviation of 0.81, indicating a low assessment. The data analysis indicated that students do not perceive basketball as a means to showcase themselves (M = 1.91), enhance their competitive skills (M = 1.91), improve their competitive abilities (M = 1.93), or outperform their peers (M = 1.94). These results may be due to some reasons. First, fear of judgment or social pressure can deter students from participating in competitive sports. If they believe they would not measure up to their peers, they may avoid the experience altogether. In environments where academic performance is prioritized such as in China, students might view sports as less important or secondary to their educational goals.

Specifically, item number 3 received the lowest mean score of 1.91 according to the participants' responses, which means that college students disagreed that basketball is an opportunity for them to show themselves. This result was explained further that in China, students adore basketball, but they are not engaged in it. The primary problem is that contemporary basketball instruction in business schools follows the classic indoctrination teaching model. Basketball

teachers are in charge of the majority of the school's instruction. The teachers have complete control over the teaching process. Most college students can only passively receive the lesson; their own originality and subjective initiative cannot be used (Cui, 2023).

Conversely, item number 1 (basketball offers the potential for self-challenge) yielded the highest mean score of 1.96. This result shows that the college students strongly considered that basketball provides the opportunity for self-challenge. Since basketball requires a range of skills, including coordination, strategy, and teamwork, students often appreciate the opportunity to improve their abilities, which can be a fulfilling challenge. Many students value the challenge of pushing their physical limits and achieving fitness goals. Likewise, facing challenges in a game, such as dealing with pressure or overcoming setbacks, helps students build resilience and mental strength (Yang, 2018). Overall, these aspects contribute to the belief that basketball can be a meaningful avenue for personal and athletic growth.

3.2. Competitive Enjoyment

Table 6. Assessment of College Students' Sports Enjoyment in Basketball Course in terms of Competitive Enjoyment

Indicators	Mean	SD	Verbal Interpretation	Rank
1. Basketball allows me to compete with my classmates.	2.05	0.96	Low	3.5
2. Through basketball, I enjoy the joy of victory.	2.11	0.99	Low	1
3. Basketball allows me to win against other students.	2.06	0.97	Low	2
4. Basketball gives me the feeling of enjoyment and competition.	2.05	0.92	Low	3.5
COMPOSITE MEAN	**2.07**	**0.81**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 6 provides an evaluation of college students' love of sports in the basketball course, specifically on competitive enjoyment. The composite's mean score is 2.07, with a standard deviation of 0.81, signifying a low evaluation. This implies that the students do not concur that basketball facilitates victories over other students (M = 2.06). This result showed that college students in China do not believe that basketball is a way to compete successfully against their peers. Their low evaluation affirmed that basketball cannot serve as a means of competition and success among students in China.

Specifically, responses indicated that items 1 and 4 recorded the lowest mean score of 2.05. This means that college students contended that basketball allows them to compete with their classmates and does not give them the feeling of enjoyment and competition. According to Xu (2020), students in basketball courses perform relevant competition content to a certain extent to enhance their sense of competition for their positive psychology and thinking that can exercise their perseverance. Historically, traditional sports games in physical education have occupied a long time, so it was difficult to let students raise interest. Basketball games are fresh and exciting and can effectively allow students to meet and pursue new things to enhance their interest in basketball learning.

On the contrary, item 2 (Through basketball, I feel the joy of triumph) achieved the highest average score of 2.11. This result attests that in the basketball course, students may not only increase their athletic abilities but also give them a strong will and belief they can win (Yiming, 2024). Moreover, students may feel the joy of triumph through basketball because winning games or improving individual skills provides a tangible sense of accomplishment, boosting self-esteem and confidence. Experiencing victory as part of a team fosters camaraderie and shared joy, creating strong bonds among teammates.

Table 7. Summary of the Assessment of College Students' Sports Enjoyment in Basketball Course

	N	Mean	SD	Verbal Interpretation
Sports Benefit	500	2.00	0.83	Low
Peer Interaction	500	2.03	0.82	Low
Class atmosphere	500	2.00	0.82	Low
Exercise Performance	500	1.94	0.81	Low
Competitive Enjoyment	500	2.07	0.81	Low
Overall	**500**	**2.01**	**0.60**	**Low**

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 7 shows the summary of the evaluation of college students' sports enjoyment in basketball courses. The composite mean score of 2.01 generally indicated a low evaluation. Specifically, exercise performance ranked the lowest score (1.94), which indicated that students perceived their performance in exercise as lacking. A study showed that

problematic smartphone use caused exercise interventions in basketball courses to decrease (Xiao et al., 2021). Other possible reasons are when students feel they are less skilled than their peers, they may be more critical of their performance, leading to feelings of inadequacy. Some students may struggle with the physical demands of basketball, such as endurance or coordination, leading them to feel less competent. Thus, if students do not receive constructive feedback from coaches or peers, they may not recognize their progress or areas for improvement, contributing to feelings of inadequacy.

However, the item on competitive enjoyment ranked the highest score (2.07), which shed light on the college student's perception of basketball as an enjoyable competition to play. The adrenaline and excitement that come from competing against peers can create a heightened sense of enjoyment. Competing allows students to challenge themselves and improve their skills, which can be gratifying and boost confidence. The opportunity to set and achieve competitive goals, such as winning games or improving individual performance, contributes to a sense of fulfillment (Wang et al., 2024).

3.3. Learning Satisfaction of College Students in Basketball Course

3.3.1. Teaching Methods

Table 8. Assessment of Learning Satisfaction of College Students in Basketball Course in terms of Teaching Methods

Indicators	Mean	SD	Verbal Interpretation	Rank
1. My teacher has professional knowledge in basketball.	2.09	0.98	Low	3
2. My teacher is focused on teaching basketball.	2.07	0.96	Low	5
3. My teacher has technical ability in basketball.	2.02	0.95	Low	7
4. My teacher's skill in basketball evident in his/her teaching.	2.11	0.98	Low	2
5. My teacher demonstrates the professional action in teaching basketball.	2.08	0.98	Low	4
6. My teacher's attitude in teaching basketball is proper.	2.18	1.04	Low	1
7. When teaching basketball, my teacher's interaction with the students is respectful.	2.04	0.95	Low	6
COMPOSITE MEAN	**2.08**	**0.83**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 8 presents an evaluation of learning satisfaction among college students enrolled in a basketball course, focusing on instructional methodologies. The data in the table indicates a mean score of 2.08, accompanied by a low degree of variability, as evidenced by a standard deviation of 0.83. Results showed that college students disagreed that the teacher's contact with pupils is respectful during basketball instruction (M = 2.04), which demonstrated the way the instructor communicates can impact perceptions. If students feel the teacher's communication is not respectful or supportive, it can lead to negative views. And, college students contested that the teacher is dedicated to teaching basketball (M = 2.07), which indicated that when students observe the instructor seeming disinterested or unprepared, they may question the instructor's dedication to teaching basketball. Students may have higher expectations for technical instruction and personal interaction than what they experience, leading to dissatisfaction.

According to their responses, item number 3 had the lowest average score of 2.02, which implied that college students owned a low evaluation and contested the instructor's technical proficiency in basketball (M = 2.02). For this reason, college students might not observe the instructor demonstrating advanced basketball techniques or skills, leading them to perceive a lack of technical proficiency. Studies showed that in higher education teaching practice, the classic basketball teaching mode with a classroom, teacher, and textbook is still more commonly used. There are issues such as the traditional teaching paradigm of treating teachers as the primary source of instruction (Yang, 2018), a lack of teaching materials, and a single teaching technique (Wei et al., 2021). Current higher education must investigate innovative teaching models using modern information technology to foster innovation and change in education informatization, as well as to further advance education modernization (Hu et al., 2023).

In contrast, item number 6 (My teacher's attitude in teaching basketball is appropriate) attained the highest mean score of 2.18. This result showed that in Chinese culture, respect and harmony in teacher-student relationships are highly valued. A teacher's positive and respectful attitude aligns with these cultural expectations, making students feel comfortable and respected (Cui, 2019). Furthermore, the students may have observed an encouraging and supportive attitude from their basketball teacher which can motivate students to participate actively, fostering a positive learning environment that students appreciate.

3.3.2. Course Content

Table 9 assesses college students' perception of learning satisfaction in a basketball course in terms of course content. The data analysis indicates that the mean composite score was 1.98, with a standard deviation of 0.82, signifying a low level of evaluation. This reflects their disagreement over the inclusion of curriculum planning content in the basketball course (M = 1.96), which means many students might prioritize hands-on experience and skill development over theoretical aspects, believing that practical application is more beneficial than curriculum planning. Likewise, college students contested the organization of the duration of weeks in the basketball course (M = 2.01). This result indicated that students might feel that the duration is too short to adequately develop their skills or improve their game, leading to

frustration. If the pacing of the course feels rushed, students may struggle to grasp essential concepts or techniques, prompting complaints about the schedule.

Table 9. Assessment of Learning Satisfaction of College Students in Basketball Course in terms of Course Content

Indicators	Mean	SD	Verbal Interpretation	Rank
1. The basketball course has curriculum planning content.	1.96	0.94	Low	3
2. The number of weeks in the basketball course is arranged.	2.01	0.95	Low	2
3. The arrangement of learning goals in the basketball course is logical and achievable.	1.93	0.93	Low	4
4. The arrangement of lessons in the basketball course is progressive.	2.03	0.94	Low	1
COMPOSITE MEAN	**1.98**	**0.82**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

According to the responses, item number 3 obtained the lowest average score of 1.93, which means college students disagreed that the arrangement of learning goals in the basketball course is logical and achievable. This result was still found to be associated with the teaching of basketball in tertiary education. Traditional basketball instruction lacks dramatic, visual, and correct demonstrations of actions. Furthermore, demonstrative movements are frequently imprecise as a result of physical quality decline. Basketball mechanics are not visibly demonstrated in the picture presentations, and there is no idea of time. Teaching films simply repeat finished movements, replicate others' actions, or examine faults. There is a shortage of appropriate and tough-acting aims. Furthermore, as compared to human motion acting, video-based education is not as visually appealing, vibrant, or coherent. Thus, these deficiencies have an impact on students' learning initiative, can lead to learning burnout, and lessen the learning and teaching effect (Sheng & Sheng, 2018)

Meanwhile, item number 4 (the arrangement of lessons in the basketball course is progressive) achieved the highest mean score of 2.03. According to Liu (2018), in college basketball teaching and training, technical tactical training is the main training content, and it is effective. Training in technical methods can create a strong foundation so that college students can perform at a higher technical level when participating in basketball sports.

3.3.3. Learning Result

Table 10. Assessment of Learning Satisfaction of College Students in Basketball Course in terms of Learning Result

Indicators	Mean	SD	Verbal Interpretation	Rank
1. The learning increases my interest in basketball.	1.97	0.96	Low	4
2. The learning in basketball improves my physical strength.	1.96	0.95	Low	5.5
3. I learn professional skills in basketball.	1.96	0.96	Low	5.5
4. The learning in basketball gives me a sense of achievement.	2.04	0.96	Low	1.5
5. The learning in basketball improves my sports knowledge.	2.04	1.03	Low	1.5
6. The learning in basketball increases my sports skills.	1.99	0.97	Low	3
COMPOSITE MEAN	**1.99**	**0.85**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 10 presents the participants' assessments of learning satisfaction with learning outcomes, yielding a composite mean score of 1.99 and a standard deviation of 0.85. The descriptive data indicates a low evaluation for this variable, revealing disagreement regarding the increase in interest in basketball (M = 1.97).

Based on the participants' feedback, item number 2, the enhancement of physical strength through basketball learning, and number 3, the acquisition of professional basketball skills, obtained the lowest average score of 1.96. The results undermined the literature review on basketball that examined the effect of core training on athletic performance. Core training can enhance basketball athletic performance in various areas, including strength, sprinting, jumping, balance, agility, shooting, dribbling, passing, rebounding, and stepping. Core training, especially on unstable surfaces, and a combination of static and dynamic core exercises enhance basketball players' athletic and skill performance (Luo et al., 2023).

Nevertheless, item numbers 4 (The learning in basketball gives me a sense of achievement) and 5 (The learning in basketball improves my sports knowledge) received the highest average score of 2.04. These results depicted that a sense of achievement and improvement in sports knowledge was highly acknowledged by college students. One reason for this is the use of dynamic grouping where each group leader led the students in communicating and learning from one another. Students with better motor skills led and mentored

those with less developed abilities, sharing personal experiences to promote confidence and facilitate improvement together. Meanwhile, the instructor visited and watched each group, addressing any unique difficulties raised by the pupils. This strategy not only kept them motivated, but it also encouraged independent thinking, all while keeping to the idea of distinction and meeting the demands of the majority (Wang & Li, 2023).

3.3.4. Course Equipment and Facilities

Table 11. Assessment of Learning Satisfaction of College Students in Basketball Course in terms of Course Equipment and Facilities

Indicators	Mean	SD	Verbal Interpretation	Rank
1. The quantity of the basketball equipment and facilities are sufficient.	2.15	0.99	Low	1
2. The quality of the basketball equipment and facilities are good.	2.08	0.92	Low	3
3. The basketball court has enough space.	2.04	0.92	Low	6
4. The number of basketball courts is sufficient.	2.11	0.96	Low	2
5. The safety of the basketball court is consistently secured.	2.07	0.96	Low	4
6. The number and equipment of the class are suitable for the basketball course.	2.05	0.94	Low	5
COMPOSITE MEAN	**2.08**	**0.80**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 11 displays the evaluation of learning satisfaction among college students enrolled in a basketball course, focusing on course equipment and facilities, resulting in a composite mean score of 2.08 and a standard deviation of 0.80. The descriptive data reveals a low assessment for this variable, the suitability of the class size and equipment for the basketball course (M = 2.05), and the consistent safety of the basketball court (M = 2.07). Specifically, their responses in item number 3 suggested that the students contested the adequacy of space on the basketball court with the lowest mean score of 2.04. Their negative response may be influenced by many students interested in basketball; limited court availability can lead to overcrowding, making it difficult for players to practice or participate in games effectively. However, due to constraints imposed by human factors, institutional factors, and students themselves, several issues in physical training in Chinese colleges and universities have arisen, including a deficient team of physical education teachers, a lack of high-quality sports campus activities, and insufficient investment in physical training infrastructure in colleges and universities, among others (Tan, 2022).

Whereas item number 1 (The quantity of the basketball equipment and facilities is sufficient) produced the highest mean score of 2.15. However, this result was opposite to the findings of insufficient basketball equipment and facilities in universities in China (Zhang, 2017; Tan, 2022; Wang & Wang, 2020). Even the sports management strategies in terms of sports facilities and equipment were disagreed by basketball coaches in China (Wei, 2023). Nevertheless, the college students may have had positive experiences with the equipment and facilities, leading them to perceive them as sufficient, even if others face issues. Different students have varying standards and expectations for equipment and facilities based on their prior experiences, which can influence their assessments which can be considered as the limitations of the study.

3.3.5. Peer Relationship

Table 12. Assessment of Learning Satisfaction of College Students in Basketball Course in terms of Peer Relationship

Indicators	Mean	SD	Verbal Interpretation	Rank
1. The basketball course increases the opportunity for me and my classmates to practice.	2.06	0.97	Low	4.5
2. The basketball course increases the opportunity for me to compete with others.	2.08	0.99	Low	3
3. The basketball course improves the feelings between me and my classmates.	2.06	0.97	Low	4.5
4. Through basketball course, I can enjoy the sports skills of my classmates.	2.09	0.99	Low	2
5. Through basketball course, I'm able to understand the personality of my classmates.	2.11	1.00	Low	1
COMPOSITE MEAN	**2.08**	**0.86**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 12 displays the evaluation of learning satisfaction among college students in the basketball course on peer relationships, yielding a composite mean score of 2.08 and a standard deviation of 0.86. The descriptive data demonstrates a low assessment for this variable, indicating that it increases competitive opportunities (M = 2.08). Particularly, in their

comments, items 1 and 3 had the lowest mean scores, which students did not concur that the basketball course enhances opportunities for them and their peers to practice (M = 2.06) and improves interpersonal relations among classmates (M = 2.06). These negative responses may be influenced by the training of basketball in China. The basketball game's hit rate is low during high-intensity conflict and defense, whereas training is typically leisurely and low-intensity. Teaching evaluations are primarily based on theoretical and skill tests. This method of teaching does not evaluate students' attitudes or progress. The evaluation is not comprehensive enough (Liu, 2019).

Meanwhile, item 5 (Through the basketball course, I can comprehend the personalities of my classmates) achieved the greatest mean score of 2.11. This result attested that basketball is a team sport that requires collaboration and communication. Observing how teammates interact can provide insights into their personalities, such as leadership styles, competitiveness, and teamwork. The fast-paced and competitive nature of basketball can reveal how individuals handle stress, make decisions, and respond to challenges, which can be indicative of their personality traits. Playing basketball often fosters social interactions outside of formal settings, allowing students to see different sides of their classmates, including their humor, sportsmanship, and ability to cooperate or compete (Li et al., 2020).

3.3.6. Environmental Hygiene

Table 13. Assessment of Learning Satisfaction of College Students in Basketball Course in terms of Environmental Hygiene

Indicators	Mean	SD	Verbal Interpretation	Rank
1. Sufficient trash cans are positioned in the basketball courts.	1.97	0.90	Low	3
2. The cleanliness of the basketball courts is well-maintained.	1.95	0.88	Low	4
3. The basketball courts are well-ventilated.	2.01	0.95	Low	2
4. The environment of the basketball courts is clean and tidy.	1.94	0.90	Low	5
5. Environmental hygiene is consistently observed in all basketball courts.	2.04	0.95	Low	1
COMPOSITE MEAN	**1.98**	**0.79**	**Low**	

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

Table 13 presents the evaluation of learning satisfaction among college students enrolled in a basketball course about environmental hygiene. The tabulated data produced a composite mean score of 1.98 and a standard deviation of 0.79, indicating a poor ranking. This implies their disagreement over the maintenance of the courts' cleanliness (M = 1.95) and the adequacy of garbage can placement in the basketball courts (M = 1.97). In particular, item number 4 attained the lowest mean score of 1.94 on the cleanliness and tidiness of the basketball courts. This negative response depicted that students may have different experiences based on the specific courts they use. Some courts might be well-maintained, while others may be neglected. Likewise, the quality of facilities can vary significantly between urban and rural areas or among different universities. Students from different regions might have contrasting opinions based on their local facilities. For this reason, the university management should prioritize providing clean and hygienic physical facilities to promote comfort, health, and wisdom for students (Tripathi & Acharya, 2021).

Table 14. Summary of the Assessment of Learning Satisfaction of College Students in Basketball Course

	N	Mean	SD	Verbal Interpretation
Teaching Methods	500	2.08	0.83	Low
Course Content	500	1.98	0.82	Low
Learning Result	500	1.99	0.85	Low
Course Equipment and Facilities	500	2.08	0.80	Low
Peer Relationship	500	2.08	0.86	Low
Environmental Hygiene	500	1.98	0.79	Low
Overall	**500**	**2.03**	**0.60**	**Low**

Legend: 1.00-1.50: Strongly Disagree (Very Low); 1.51-2.50: Disagree (Low); 2.51-3.50; Agree (Average); 3.51-4.00: Strongly Agree (High)

In contrast, item number 5 (Environmental hygiene is consistently practiced in all basketball courts) achieved the highest mean score of 2.04. This response showed that the college students attested to the good practices and measures taken to maintain clean and healthy surroundings on university basketball courts. It encompasses the management of physical, chemical, and biological factors that can affect human health and well-being.

Furthermore, many universities in China may have established maintenance protocols for sports facilities, ensuring regular cleaning and upkeep of basketball courts. Policies promoting public health and hygiene in educational institutions could lead to better practices in maintaining cleanliness in sports facilities. There is a strong cultural emphasis on cleanliness and hygiene in Chinese society, which may extend to public and shared spaces, including basketball courts (Wang & Wang, 2020).

Table 14 shows the summary of the assessment of the learning satisfaction of college students in basketball courses. All categories have a sample size of 500 students, indicating a robust assessment. Each category has a mean score below 2.1 which falls within a "Low" satisfaction range. The standard deviations range from 0.60 to 0.86. The relatively low standard deviations indicate that students' responses are somewhat clustered around the mean, suggesting a consistent perception of low satisfaction across the sample. All categories are rated as "Low" which indicates that students were generally dissatisfied with these aspects of the basketball course.

Overall, teaching methods, course equipment and facilities, and peer relationships may create a relatively more favorable view in these categories, despite the overall low satisfaction rating in the course. It indicated that while improvements are needed, there are elements that students find somewhat beneficial. While, low scores in course content and environmental hygiene suggested that students see significant room for improvement, highlighting a disconnect between their expectations and their actual experiences. Addressing these concerns could be crucial for enhancing overall satisfaction in the basketball course.

3.4. Relationship in the Assessment of Sports Enjoyment and Learning Satisfaction of College Students in Basketball Course

Table 15. *Correlation Matrix* between *Assessment of Sports* Enjoyment *and Learning Satisfaction of College Students in Basketball Course*

	Teaching Methods	Course Content	Learning Result	Course Equipment and Facilities	Peer Relationship	Environmental Hygiene	Overall
Sports Benefit	0.28	0.37	0.45	0.37	0.36	0.35	0.43
	< .001	< .001	< .001	< .001	< .001	< .001	< .001
Peer Interaction	0.39	0.43	0.40	0.39	0.31	0.36	0.46
	< .001	< .001	< .001	< .001	< .001	< .001	< .001
Class atmosphere	0.34	0.37	0.39	0.40	0.37	0.36	0.46
	< .001	< .001	< .001	< .001	< .001	< .001	< .001
Exercise Performance	0.26	0.33	0.35	0.36	0.31	0.23	0.36
	< .001	< .001	< .001	< .001	< .001	< .001	< .001
Competitive Enjoyment	0.28	0.32	0.38	0.36	0.31	0.37	0.39
	< .001	< .001	< .001	< .001	< .001	< .001	< .001
Overall	0.38	0.43	0.45	0.45	0.37	0.37	0.50
	< .001	< .001	< .001	< .001	< .001	< .001	< .001

Legend: .00-0.19: Very Weak; 0.20-0.39: Weak; 0.40-0.59: Moderate; 0.60-0.79: Strong; 0.80-1.00: Very Strong

The use of Spearman's rho correlation yielded p-values below the 0.05 significance threshold for all variables. The evaluation of sports enjoyment was correlated with the evaluation of learning satisfaction. The correlation coefficients range from 0.23 to 0.50, signifying modest to strong positive connections. This implied that an increase in the evaluation of sports enjoyment—considering factors such as sports benefits, peer interaction, class atmosphere, exercise performance, and competitive enjoyment—will correspondingly elevate the assessment of learning satisfaction, which was based on teaching methods, course content, learning outcomes, course equipment and facilities, peer relationships, and environmental hygiene, and vice versa.

In other words, when students find the basketball experience enjoyable, their evaluation of these satisfaction factors will improve. For instance, enjoying the competitive aspects might enhance their perception of learning outcomes. Positive peer interactions can lead to higher satisfaction with the overall course atmosphere. When students are satisfied with the course elements (like effective teaching and good facilities), they are more likely to enjoy participating in basketball. Conversely, when students enjoy the sport, they may perceive the course elements more positively.

In summary, the enjoyment of sports and the assessment of learning satisfaction are closely linked. Improvements in one area can lead to positive changes in the other, emphasizing the

importance of fostering an enjoyable and supportive learning environment in sports courses.

3.4.1. Summary of Findings

The study investigated the sports enjoyment and learning satisfaction of students in college basketball courses in China. Through quantitative design, the following findings were summarized:

The college students' evaluation of sports enjoyment in basketball courses generally indicated a low evaluation, specifically in exercise performance. However, college students' evaluation of competitive enjoyment ranked the highest score.

The college students' evaluation of learning satisfaction in basketball courses rated low in all categories, especially in course content and environmental hygiene. In contrast, teaching methods, course equipment and facilities, and peer relationships in basketball courses were found satisfying by the college students.

Nevertheless, the enjoyment of sports and the assessment of learning satisfaction were found to be closely associated. Improvements in one area can lead to positive changes in the other, emphasizing the importance of fostering an enjoyable and supportive learning environment in sports courses.

4. Conclusion

Based on the summarized findings, the following conclusions were drawn:

The "low" satisfaction of college students in sports enjoyment indicated they're not very satisfying experiences in the course. Particularly, the lowest score in exercise performance demonstrated the college students' lack of exercise performance while playing basketball in school. Reduced exercise can lead to weight gain, decreased cardiovascular fitness, and overall poorer physical health. This may increase the risk of chronic conditions like obesity, diabetes, and heart disease. Moreover, insufficient practice and performance can hinder the development of basketball skills, such as shooting, dribbling, and teamwork. Students may struggle to improve or may not enjoy the sport as much due to a lack of proficiency.

Positively, the high assessment on competitive enjoyment shed light on the college student's perception of basketball as an enjoyable competition to play. This refers to the excitement, thrill, and satisfaction that students derive from participating in basketball competitions, which may include elements like teamwork, strategy, and the challenge of competing against others.

The generally "Low" learning satisfaction of college students in basketball courses clearly showed their dissatisfaction, particularly in course content and environmental hygiene. Definitely, the college students were largely dissatisfied with their basketball courses, with significant concerns specifically regarding the course content and the cleanliness of the environment. This low level of learning satisfaction indicates that improvements are necessary in these areas to enhance students' overall experiences and engagement in the course. It suggests that addressing these issues could lead to better satisfaction and potentially improve the participation and performance of college students in basketball.

There is a strong relationship between students' enjoyment of sports and their overall satisfaction with their learning experience. Specifically, it suggested that when students find enjoyment in sports, it positively influences their perception of the course and its various components, leading to higher levels of learning satisfaction. Conversely, if students are dissatisfied with their learning experience, their enjoyment of the sport may decrease. This emphasizes the importance of fostering an enjoyable sporting environment to enhance overall learning outcomes.

5. Recommendations

Based on the research findings and conclusions, the following actions were recommended:

To improve the exercise performance of college students while playing basketball, regular, organized practice sessions that focus on skill development, teamwork, and physical conditioning to enhance performance should be implemented. Basketball teachers in the university can create detailed practice plans that outline specific drills and objectives for each session, ensuring a balanced focus on skills, teamwork, and conditioning such as incorporating a variety of drills targeting fundamental skills such as dribbling, shooting, passing, and defense.

To maintain the satisfaction of college students in competitive enjoyment of basketball, sports teachers and administrators may organize friendly competitions, such as tournaments or league play, that prioritize fun and sportsmanship. Set clear expectations for behavior to ensure that competition remains positive and supportive.

To address the dissatisfaction of college students in course content, basketball teachers may use a variety of teaching methods, including hands-on activities, interactive discussions, and multimedia resources, to make lessons more engaging and relatable. They may include practical applications of skills through games, tournaments, and collaborative projects. Real-world contexts can make learning more meaningful for students.

To improve the learning satisfaction of college students in environmental hygiene in basketball courses, classes may collaborate with facility management to ensure regular cleaning and maintenance of basketball courts and equipment. This includes timely repairs and upkeep of facilities. Basketball teachers can establish a system for students to report hygiene issues or concerns related to facilities. Responding to this feedback can demonstrate that their concerns are valued.

To maintain the strong relationship between students' enjoyment of sports and their overall satisfaction with their learning experience, basketball teachers can include games, challenges, and varied drills that keep practices engaging and enjoyable. Emphasizing fun can enhance the overall experience. They can promote teamwork through collaborative drills and team-building activities. Strong relationships among teammates can enhance enjoyment and motivation.

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