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## The Impact of E-Learning on the Acceptability of Undergraduate Basketball Students at Shangrao Normal University

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### Abstract

*This study investigates the impact of e-learning on the acceptability of undergraduate students in the context of basketball sports education at Shangrao Normal University, Jiangxi, China, with a focus on the challenges posed by the COVID-19 pandemic. The research problem centers on the need to understand how e-learning has affected sports education, particularly basketball coaching and instruction, in this unique setting. The study also explores the role of access to technology, course content adaptation, and student engagement in shaping students' acceptability of e-learning. This quantitative cross-sectional study employs a questionnaire-based survey to gather data from undergraduate students in basketball-specific physical education courses. Stratified random sampling ensures representation from diverse backgrounds across the province. Data collection is conducted through e-learning platforms and virtual surveying technologies, evaluating variables such as mode of delivery, course content adaptation, access to technology, student engagement, and student sport performance perception. Statistical analyses, including regression and correlation, are utilized to assess the relationships between these variables. The study reveals that e-learning has had a significant impact on basketball sports education during the COVID-19 pandemic. Factors such as access to technology, course content adaptation, and student engagement play crucial roles in determining students' acceptability of e-learning. The research highlights the importance of professional development for teaching staff and emphasizes the need for equal access to technological resources. It also underscores the value of efficient evaluation practices in enhancing the quality of e-learning experiences. This research contributes to the field by offering insights into optimizing e-learning in the unique context of basketball sports education at Shangrao Normal University. The study's recommendations provide guidance for educational institutions seeking to enhance their e-learning strategies, particularly in sports*

*education.*

**Keywords:** *E-learning, Basketball sports education, Acceptability, COVID-19 pandemic, Shangrao Normal University*

## **I. INTRODUCTION**

Educating students during the pandemic presented both difficulties and possibilities (Almetwazi, 2020). One positive aspect is that students are able to study in the comfort of their own homes when they use an online learning platform. Concerns were voiced, however, concerning the loss of personal contact between students and teachers and the existence of digital divides in internet access. In addition, pupils' basketball skills were hindered because virtual practical training could not completely replace on-court experience.

Jiangxi, a province in southeast China, is a stunningly beautiful and culturally significant region. Over 46 million people call this province home; it features mountains, rivers, and lush plains. Jiangxi has developed greatly as a result of its position as a major cultural and economic center in China. When it comes to learning, the province boasts a robust network of universities that provide students with access to a wide variety of majors and specializations.

Before the Covid-19 outbreak, Jiangxi's educational system took a more traditional approach, with teachers and students meeting face to face for the vast majority of their classroom time. As a means of cultivating well-rounded athletes and sports fans, the province's basketball sports education for undergraduate students featured a blend of theoretical knowledge and practical training. The basketball history, regulations, strategy, sports psychology, coaching techniques, fitness, and nutrition were all covered in the class. Students were given the opportunity to hone their on-court abilities as well as their theoretical knowledge of the sport (Elliott, 2021).

Basketball sports education traditionally comprised lectures, talks, and training sessions in gyms and outdoor sports facilities to teach its modules. In order to keep pupils interested and get them involved, teachers used a wide variety of strategies. Students' ability to think critically and solve problems was bolstered by classroom discussions on game strategies, team dynamics, and the psychology of athletes. Training sessions included on-court drills and hands-on instruction to help kids improve fundamental basketball abilities like shooting, passing, dribbling, and defending.

Students were evaluated in a variety of ways, including through traditional exam formats, oral presentations, individual and group projects, and game play (Nguyen, 2019). Students'

theoretical knowledge, practical skills, teamwork, leadership, and comprehension of the sport as a whole were all taken into account as evaluation criteria. The importance of students' performances on the court and their strategic thinking abilities in determining their grades cannot be overstated.

Like the rest of the world, the field of education in Jiangxi underwent a dramatic shift after the spread of the Covid-19 epidemic. Jiangxi's educational institutions have to quickly adjust to remote learning methods, such as the implementation of e-learning platforms and virtual classrooms, in response to the necessity of social separation and campus closures. The basketball sports education system underwent radical transformation as a result of this transition to online learning.

The basketball sports education curriculum had to be adapted for delivery via the internet during the epidemic. Theoretical instruction was delivered remotely through the use of multimedia including video lectures and interactive internet platforms. (Waller, 2023). While the online setting did offer some leeway and convenience, it also presented certain obstacles, particularly for students with varying levels of internet access or who lacked the requisite tools.

Online learning management systems and video conferencing platforms were heavily utilized in the dissemination of the modules. Students could submit their work and participate in class discussions and live lectures from any location with a reliable internet connection. Although there were benefits to e-learning, such as the ability to learn at your own pace and from wherever you happen to be, there were also issues, such as how to keep students interested, how to guarantee good communication, and how to simulate the hands-on experience of in-person practical training.

Basketball sports education evaluation procedures also evolved during the pandemic (Kullik, 2022). Assessment of students' theoretical knowledge is increasingly done through online quizzes and assignments rather than the more conventional printed exams. Students' on-court performance was assessed less through in-person observations and more through video submissions. Factors like self-discipline, time management, acceptability to virtual tools, and the capacity to effectively demonstrate practical abilities through video recordings had to be factored into the revised evaluation standard for the online environment.

This paper compares basketball sports instruction in Shangrao Normal University Jiangxi before and after the Covid-19 pandemic to shed light on the ways in which e-learning has influenced the field. Due to the pandemic, course content, module distribution, student assessment techniques, and evaluation criteria all had to be revised to accommodate online learning. This research adds to the continuing conversation about the efficacy of e-learning in

the field of sports education, and more specifically in the context of basketball, by investigating these shifts.

Basketball sports education in Shangrao Normal University Jiangxi has been significantly impacted by online learning both before and after the Covid-19 pandemic (Huang, 2023 ). The province's education system has benefited and suffered from the shift to online instruction. This investigation of these shifts provides important new understandings of the efficacy of e-learning in the context of basketball sports education in Shangrao Normal University Jiangxi, China. Recognizing these shifts is critical for enhancing the province's sports education curriculum and planning for the future.

## **II. PROBLEM STATEMENT**

In Jiangxi, China, as in the rest of the world, the Covid-19 pandemic has caused enormous disruptions to the educational system. Schools in Jiangxi had to quickly adapt to online teaching after being forced to close campuses due to social isolation and safety concerns (Tiejun, 2021). Undergraduate students in the province's basketball sports programs were profoundly affected by the change to online instruction. However, there is still a dearth of in-depth investigation of how e-learning has affected basketball coaching and instruction in Jiangxi. Prior to and during the spread of the Covid-19 virus, the issue statement centered on determining the scope of e-learning's effect on basketball sports education by analyzing course materials, module distribution, student assessment techniques, and evaluation standards.

There isn't a ton of literature on e-learning specifically in the field of physical education and training. In Shangrao Normal University Jiangxi province, there is a noticeable lack of studies examining the effect of e-learning on sports education, especially in the field of basketball. While research into the efficacy of e-learning has been conducted in other regions and sports, it has not yet sufficiently addressed the distinctive features of Shangrao Normal University Jiangxi 's basketball sports education system or the particular obstacles encountered during the epidemic. Therefore, a before-and-after research of e-learning's impact on basketball sports instruction in Shangrao Normal University Jiangxi is warranted.

The usefulness of various e-learning technologies and platforms utilized in the context of basketball sports instruction is also not well studied. For educational institutions looking to improve their e-learning tactics in the future, knowing which e-learning methods were most effective during the epidemic and how they compare to traditional face-to-face training is crucial.

The epidemic also brought to light problems with equal access to e-learning (Tiejun, 2021). It is essential to create accessible and effective teaching techniques that take into account the difficulties some students, especially those from underprivileged backgrounds, may experience when attempting to use online learning resources and participate in hands-on training sessions.

While e-learning has its benefits, like the ability to learn at your own pace and from wherever you happen to be, it also raises questions about how to keep students engaged, how to guarantee good communication, and how to simulate the hands-on experience of in-person practical training. The strengths and drawbacks of the e-learning approach to basketball sports education can be better understood and areas for improvement can be pinpointed by investigating the student experience and perspectives on e-learning in this context.

A detailed knowledge of the efficacy of e-learning in the context of basketball sports education in Shangrao Normal University Jiangxi is hampered by a lack of province-specific comprehensive studies. Filling this knowledge gap is important for guaranteeing the province's future supply of well-rounded athletes and sports fans by guiding educational planning, policymaking, and enhancements to sports education programs.

### **III. LITERATURE REVIEW**

The term "basketball sports education" refers to a system that is structured and all-encompassing in character, with the purpose of training and developing athletes in the sport of basketball. The concept was coined by the National Association of Sports Commissions and Affiliates (NASCA). You will need a wide variety of academic knowledge, practical skills, and physical conditioning in order to completely appreciate the game, cultivate a genuine appreciation for it, and play at the greatest level possible. Receiving sports education is beneficial for basketball players because it will not only boost their awareness of the rules, methods, and tactics of the game, but it will also motivate them to get in shape, collaborate with one another, and display excellent sportsmanship. This is a win-win situation for everyone involved. Basketball sports education is extremely important for the growth of basketball players, coaches, and fans at all different skill levels, from casual pick-up games to the highest

levels of professional competition. As a consequence of this, students who participate in programmes that educate them about physical education and athletic training should place a significant emphasis on basketball sports education.

A well-rounded education in basketball should entail providing students with a strong foundation in the theoretical understanding of the game. An education in basketball should absolutely include this particular facet. You need to have a solid understanding of all of the nuances of the game, as well as the rules of basketball and the specific functions that each player fulfils on the team. It is completely covered both the fundamentals of the game, including as dribbling, shooting, passing, and defence, and the more advanced ideas, such as offensive plays and defensive systems. Students receive instruction in a variety of basketball-related topics, including basketball-specific fitness conditioning and injury prevention, as well as information on basketball and sports nutrition.

The education of a basketball player should not just consist of reading about the game, but also of obtaining plenty of actual playing experience. Reading about the game is important, but so is getting plenty of actual playing experience. Drills, workouts, and on-court practises are given a significant amount of importance by coaches and instructors in the game of basketball as a means of supporting players in the development of their basketball skills. The process of building a skill involves learning a range of things, such as how to work cohesively with colleagues, how to make decisions on the fly, and how to adapt to a variety of game circumstances. Games and scrimmages are frequently incorporated into basketball practises. This serves two purposes: it better prepares players for genuine basketball competition and it gives them valuable experience.

At every level of the game, there are a number of convincing arguments in favour of adding basketball coaching and instruction as part of a student's official education. These arguments are supported by a number of persuasive grounds. Through involvement in this sport, children have the opportunity to enhance their physical fitness and gain valuable life skills such as the ability to manage their time effectively and the perseverance to work towards achieving a goal. Children who take part in basketball sports education may gain important life skills as a consequence of learning the significance of working together as a team and may benefit from having their personalities formed as a result of participating in basketball sports education. The engagement of kids in basketball sports education can help them achieve a higher overall level of academic performance and improve their overall quality of life. This is because it is commonly acknowledged that physical activity has a favourable influence on both cognitive function and mental health.

Players of basketball who have aspirations of playing at a higher level need to have a solid foundation in sports education if they intend to be successful at the greatest possible level of competition. If they want to play at a higher level, they need to be able to compete at the top level. It is a fantastic approach for discovering young athletes who have potential and providing them with the opportunity to polish their abilities under the tutelage of more experienced trainers. This may be accomplished by using this strategy. Education in basketball as a sport adds to the development of high-performance athletes and raises the likelihood of winning for basketball programmes competing at all levels of the sport's hierarchy of competition. This happens as a result of the fact that these courses make it easier for young athletes to enhance their skills in preparation for national and international basketball competitions.

Because of the impact that technology and the advent of the digital era have had in recent years, changes have been made to the way that basketball is coached. When it comes to the training of modern basketball players, the utilisation of e-learning platforms, virtual coaching, and interactive technologies is now considered to be standard practise. Convenience, accessibility, and a usually positive welcome are some of the benefits that may be enjoyed by coaches and athletes from all over the world when they participate in online coaching sessions, video lessons, or online courses. The incorporation of technology into the coaching and training of basketball players makes it possible to adopt a strategy that is not only more exhaustive but also data-driven. This paves the way for whole new possibilities of development.

Additionally, basketball has developed into a sport that is actually played all over the world as a consequence of the development in the number of international events, training camps, and exchange programmes that bring together athletes from all over the world. Not only can experiences of this nature improve the participants' perspectives on the sport of basketball, but they also build goodwill and tolerance among sportsmen and fans of sports all around the world.

Education of basketball as a sport is essential to the development of both the game and the people who play it. Academic study, the development of skills, physical preparation, and character formation are all components of this programme, which aims to produce well-rounded athletes and individuals. Basketball is a sport that has a significant educational impact on its participants because of the values of teamwork, discipline, and perseverance that are instilled in them through participation in the sport. Embracing e-learning platforms and virtual resources promotes accessibility and the sharing of knowledge, transforming basketball sports education into a dynamic and transformative journey for all involved as technology continues

to impact the landscape of sports education. This is due to the fact that technology is continuing to affect the landscape of sports education.

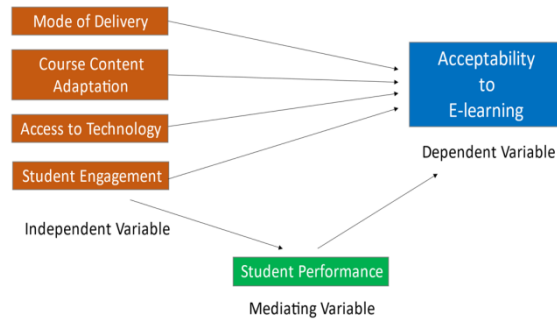


Figure 1. Conceptual Framework

#### IV. METHOD

This quantitative study will make use of a cross-sectional survey as its approach for collecting data in order to analyse the effects that e-learning has had on basketball sports instruction at Shangrao Normal University in Jiangxi, China. The study was conducted by researchers from China. We have come to the conclusion that a cross-sectional survey is the most appropriate strategy to use in order to gather information regarding the perspectives of undergraduate students prior to, during, and after the Covid-19 outbreak. Because it is so simple for us to collect all of the necessary information in a single sitting, we came to this conclusion. Within a constrained amount of time, this design makes it possible to evaluate the linkages between independent variables (IVs) and the dependent variable (DV), with consideration given to the mediating variable (MV). The MV is taken into consideration in this design as well.

At Shangrao Normal University in Jiangxi, undergraduate students from a variety of diverse backgrounds who are enrolled in basketball-specific physical education courses was subjected to research using a questionnaire that has already been produced. This research was conducted using a questionnaire that was employed. In order to pick the sample, we will make use of a technique that is known as "stratified random selection." Because of this, we was able to guarantee that we have representation from a diverse range of schools and geographic areas across the province. The conceptual framework and the research objectives will serve as the basis for the development of the survey questionnaire. The survey questionnaire will incorporate measurement scales and items related to the independent variables (mode of



delivery, course content adaptation, access to technology, and student engagement), the mediating variable (student sport performance perception), and the dependent variable (acceptability to e-learning).

Because of the characteristics of the investigation that is currently being conducted, it has been decided that the process of collecting data was carried out digitally through the use of e-learning platforms and virtual surveying technologies. This decision was made because of the specifics of the investigation that is currently being conducted. The major data collection will not begin until after the questionnaire has been tested in a limited setting to confirm that it is comprehensive and accurate. Throughout the course of the outbreak, there was close observation of the degree to which students are involved, as well as their thoughts regarding how adaptable the course material is, how simple it is for them to gain access to the necessary technical resources, and how quickly and easily they can do so. In addition, in order to take into consideration a mediating variable, the academic and practical basketball sports education performance of the students was analysed.

The data was analysed using statistical methods that are suitable for the processing of quantitative data, such as descriptive statistics, regression analysis, and correlation analysis. These statistical methods will also be utilised in order to test the validity of the hypotheses. In order to determine whether or not there are any significant affects or links, a regression analysis was run on the dependent variable, the mediating variable, as well as the independent variables. This was done so that the results may be interpreted. By conducting research into the extent of the correlations as well as the directions in which they point, we are able to acquire a more in-depth comprehension of the interrelationships that exist between the various variables. In order to provide a full overview of the research population, we will utilise descriptive statistics to characterise the sample's attributes in order to gather information about the larger study population. The findings of the sample will serve as the foundation for these statistical calculations.

The design of the study is cross-sectional, which means that it provides a snapshot of the perspectives and experiences of students at a certain juncture in time. This helps shed some light on the effect that e-learning has had throughout the years on the progression of basketball coaching and training, which is helpful. Despite this, it is essential to keep in mind that there is a lack of longitudinal data, which could shed light on variations over time and the prospective long-term effects that e-learning could have on sports education. These statistics could be able to provide some insight on the potential long-term effects that e-learning might have on sports education. In spite of this constraint, the quantitative approach that was utilised for the purpose

of this research, in conjunction with the cross-sectional survey design, made it possible to investigate the correlations and associations that exist between the variables. At Shangrao Normal University in Jiangxi, China, this, in turn, helps to evidence-based decision-making and instructional planning within the context of e-learning and sports education.

## **V. FINDINGS**

The findings of the study provide incredibly useful insights into the perceptions and experiences of people regarding the impact that e-learning has had on basketball sports teaching both during and after the pandemic. These perspectives and experiences can be found in both before and after the epidemic. The findings are highlighting the multifaceted and intricate character of this educational transition in a number of different ways, and they are indicative of a wide diversity of perspectives. Because of the epidemic, educational institutions and students were compelled to delve into uncharted ground and make the shift from the more conventional face-to-face training to more modern digital learning environments. E-learning has emerged as a practical option, bringing with it a number of benefits as well as challenges that have had a significant impact on the viewpoints and experiences of individuals.

The realisation that e-learning has a good influence on acceptability and engagement within basketball sports education is a key finding that resulted from the study. This is a noteworthy discovery since it was recognised that e-learning has a positive influence on acceptability and engagement. This finding stands out as one of the most important discoveries. Students have expressed a broad appreciation for the flexibility that e-learning gives, which enables them to more successfully manage their study schedules. Students have also expressed a widespread appreciation for the convenience that e-learning provides. The availability of a variety of learning tools, such as video lessons and interactive modules, enhanced the learning experience by giving students the opportunity to connect with the topic at hand in a number of different ways that were meaningful as well as exciting. This, in turn, contributed to an overall improvement in the quality of the education they received. This adaptability and accessibility were particularly helpful for those persons who, in traditional classroom settings, would have struggled due to time-related or logistical constraints. This was the case since traditional classroom settings are not as flexible.

Nevertheless, the poll shed light on a number of challenges and constraints that are inherently present in online education. Participants expressed their concerns about the quality of involvement they had with professors and students, which was thought to be more beneficial

in face-to-face education but was lacking in online education. In addition, some respondents were unable to participate to the fullest extent possible because technological barriers, such as difficulties in connecting to the internet, prevented them from doing so. These challenges underscore the importance of tackling digital inequality in order to guarantee that all students are able to fully participate in e-learning experiences. This can be accomplished by ensuring that all students have access to computers and the internet.

The association that was observed between student sport performance perception and the acceptance of e-learning was one of the things that came out of the survey that was one of the most intriguing things that came out of it. It appeared that students' better academic and practical performance during the epidemic played a favourable role in their adoption of e-learning methodologies, which was a beneficial development. This connection demonstrates that good adaptation to e-learning, effective adaptation of course content, and accessibility of technology are interconnected components that collectively contribute to improve the educational experience and performance outcomes of students. This connection specifically shows that effective adaptation to e-learning, effective adaptation of course material, and technological accessibility are all interconnected components.

Through the utilisation of a comprehensive understanding of its impact, the survey provides an in-depth understanding of how e-learning impacted basketball sports education both during and after the epidemic. This knowledge can be obtained by looking at the survey's results. It demonstrates that even though e-learning offered flexibility, a broad variety of materials, and the promise of better performance, there were challenges connected with engagement, access to technology, and the capability to adapt. These insights will be valuable for educational institutions that are striving to improve their approaches to e-learning, making sure that they address both the good elements and areas of fear that have surfaced as a result of this transformative moment in education. This transformational moment in education has resulted in a number of positive elements and areas of worry. It is highly likely that the results of this global study on digital education will have a big impact on the path that education will take in the years to come.

This research reveals a number of essential aspects, one of the most important of which is the vital role that altering the content of the course plays in shaping the experiences and attitudes that students have regarding e-learning. Higher levels of acceptance were associated with curricular materials that had been effectively modified to make them suitable for use in an online learning environment. This was because such modifications made the materials more suited for usage in online learning environments. This demonstrates how vital it is for the

content of a virtual school curriculum to be carefully crafted and carried out in an efficient manner. It indicates that educators and instructional designers need to commit time and effort in order to ensure that course content is not simply transferred from in-person to online formats, but rather that it is intelligently changed in order to match the specific requirements and preferences of online learners. This is because online learners tend to learn in a more asynchronous manner than in-person learners do.

## **VI. DISCUSSION**

The research that was carried out at Shangrao Normal University both before and after the COVID-19 outbreak offers insight into the crucial influence that e-learning had in the education of basketball players. The findings of the research led to a number of recommendations, all of which are outlined in this section for your edification and convenience. These standards lay a heavy emphasis on the importance of professional growth for teaching staff, active participation from students, equal access to technological resources, and efficient evaluation practises. These recommendations are meant to improve the overall quality of e-learning experiences and provide answers to challenges that developed along the process of switching to virtual education. They are also intended to improve the overall quality of e-learning experiences. They can be found in this location.

The findings of this research could potentially be applied in a variety of various ways in the future. Research that is longitudinal, comparative, exploratory of hybrid learning models, analysis of inclusive education, and examination of technological advancements are some examples of these directions. These areas of inquiry will continue to have an effect on the environment even after it has been altered by the constant changes that occur in the landscape of e-learning in the field of sports education.

This study sheds light on the path forward for Shangrao Normal University and other institutions by providing insights into the optimisation of e-learning within the unique arena of basketball sport education. The significance of the study lies in the fact that it elucidates potential paths forward. Institutions will be able to successfully transition into the digital age of education and thrive in this new period if they follow these guidelines, implement additional research, and perform additional research. Because of this, educational institutions are in a position where they may place a higher focus on the practicability and widespread acceptability of e-learning among students.

## **VII. CONCLUSION (OR LIMITATION OR SUGGESTION FOR FURTHER STUDIES)**

It is probable that the findings may not represent the full scope of e-learning options that are available at the institution because the scope of the survey was limited to students enrolled in their first year of college. Students at various academic levels, such as graduate students and faculty members, may have noticeably distinct viewpoints and requirements with regard to e-learning. One example of this is the possibility that students at different academic levels may have significantly different requirements. It is possible that a more complete understanding of the impact that e-learning has had on the education of student-athletes at universities will arise from the investigation of the different perspectives that have been presented here.

When all is said and done, one of the components of the research that is going to be of the utmost importance is going to be investigating how e-learning affects actual game play. Researchers are in a position to demonstrate the efficacy of the method by studying the influence that e-learning has on the performance of basketball players in conditions that are analogous to those seen in the real world. In conclusion, the following suggestions for further research in the subject of e-learning for basketball training have the potential to contribute to the overall growth and development of the field. This might lead to better-designed platforms, increased learning experiences, and ultimately improved performance for enthusiasts and athletes alike in the long run.

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