Based On The Learners' Needs Of Game Based Learning In Sanda Teaching：A Learner-Centered Approach

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ARTICLE INFO	ABSTRACT
	This study investigates Chinese learners' requirements for game-based learning in Sanda teaching. A questionnaire survey, utilizing a Likert 5-level scale, was led with 200 learners haphazardly chosen from Capital University of Physical Education and Sports, Yunnan Normal University, and Lvliang University. The survey evaluated learners' inclinations and views of game-based learning in Sanda teaching, Focusing on their learning needs, needs for the learning system, and requirements for the learning climate. Descriptive statistics, reliability, and validity tests were utilized to break down the responses. Findings indicate that conventional teaching techniques in physical education, including Sanda courses, often make learners feel bored and unmotivated. However, learners unequivocally favour a learner-centred approach based on game-based learning. Incorporating sports games into classroom teaching altogether upgrades learner motivation and engagement. Results additionally feature learners' appreciation for joining augmented reality (AR) games with after-class practice in Sanda learning. The vivid experience given by AR games further develops learners' general learning encounters and expands interest and diligence in fitness exercises. Chinese learners in Sanda courses profoundly esteem a teaching approach combining game-based learning with AR innovation. This learner-centred approach encourages an animating and intelligent learning climate, uplifting learner motivation and further developing learning results. The study's bits of knowledge are essential for instructors and educational plan originators in physical education, underlining the meaning of taking on imaginative teaching techniques to make seriously captivating and viable learning encounters for learners in Sanda teaching and beyond.

Keywords: Game-based learning, Sanda teaching, Learner-centered approach, Learner needs, Augmented reality (AR) games |

Introduction

The particularity of physical education courses is that physical education courses require learners to participate in exercise. Gaming based learning is a good measure to ensure the fun of physical education. Therefore, the combination of games and sports is called sports games. Sports games are the main means of physical exercise. A modern game method that enhances physical fitness, entertain the body and mind, and cultivate temperament. The combination of the characteristics of games and Sanda movement can fully mobilize students' enthusiasm and improve the learning interest of learners. (Ge Canghai, 2017). From the perspective

of sports games on the psychological health of learners, sports games can have a positive impact on learners, which is conducive to good development of physical and mental health. (Alexandro Quotas & Huan-Carlos Bustatmant, 2020).

Sanda is a modern fighting sport with Chinese characteristics. Because Sanda has strong practicality, it is a sports that is loved by learners. However, there is a single teaching mode in the current teaching. In addition, the learning of Sanda needs to perform a lot of physical fitness exercises, and physical fitness exercises are often dull. This is why many learners have failed to persist for Sanda for a long time. In addition, although there is also game -based learning in sports teaching, sometimes it can bring fun to learners to a certain extent. However, sports games have not been able to play the best results in combination with specific sports. Therefore, this study will combine the characteristics of the Sanda Movement, and develop a game -based learning teaching mode suitable for learners according to the needs of learners.

There are many investigations about how the comprehensive learning of games affects learners. The benefits of game -based learning have been fully proven (Li, 2021; Lister, 2022), including improving learners 'interest in learning and promoting the enthusiasm of learners' learning. On the other hand, the traditional teaching model allows learners to feel a certain learning atmosphere, which is also the advantage of traditional classrooms (Muyang et al., 2021). Combining game -based learning with traditional classroom teaching, so that teachers can use the best side of the two to create a dynamic and effective learning environment for their learners (Holbrey, 2020). However, under the current learning environment, game -based learning is in a blank state in Sanda teaching research (Jossan et al., 2021).

In China, people are more and more concerned about incorporating technology into education, especially the innovation of teaching methods (Wang et al., 2021). However, in this context, there are very few studies based on game learning. China's existing research is generally concentrated in teaching methods and greater elements based on game -based learning. It does not solve how to build game learning teaching methods based on game learning (Hu et al., 2022; yan, 2022). It is necessary to further study the learning needs of Chinese students in Sanda Teaching, the needs of the learning process, and the needs of the learning environment, and develop the Sanda teaching Models that are suitable for learners to learn based on game -based learning (Harden, 2022). Although previous studies have clarified the benefits of game -based learning, there are still obvious defects, and further research is needed (Behnamnia et al., 2022; Park et al., 2019). First of all, rarely the correlation between game learning in Sanda Learning (Rasheed et al., 2020). Secondly, there are few research on game learning based on the needs of learners, especially in the context of using game -based learning -based learning (ChiriaceScu et al., 2023). In the end, most of the previous research in China focused on teaching methods and general characteristics of game -based learning, ignoring the special integration of these technologies (Alper et al., 2021; Hu et al., 2022).

Research Aim

The primary objective of this research study is to delve into the specific needs of Chinese learners regarding game-based learning in the context of Sanda teaching. The study seeks to comprehensively explore and understand learners' requirements across three critical dimensions: learning needs, needs related to the learning process, and needs concerning the learning environment. Through a meticulous investigation of learners' perspectives and preferences, this research aims to shed light on the factors that contribute to learner motivation, engagement, and overall learning experience within the realm of Sanda courses. By analyzing and assessing the participants' feedback, gathered through a well-designed questionnaire survey, the study endeavors to identify the most effective strategies and approaches to optimize the integration of game-based learning in Sanda teaching. The ultimate goal is to propose a learner-centered teaching model that harmoniously incorporates game-based learning principles, aligning the teaching process with the specific needs and aspirations of the learners. By addressing these key aspects of learners' needs, this study aspires to enhance the effectiveness and appeal of Sanda teaching, fostering a dynamic and enriched learning environment that encourages learners to achieve their full potential in this modern fighting discipline.

Research Objectives
1. To identify and assess the specific learning needs of Chinese learners concerning game-based learning in the context of Sanda teaching.
2. To investigate and understand the learners' needs during the learning process of game-based learning in Sanda teaching.
3. To explore the learners' needs regarding the learning environment of game-based learning in Sanda teaching.

Research Questions
1. What are the learners' learning needs of game based learning in Sanda teaching?
2. What are the learners' needs of learning process of game based learning in Sanda teaching?
3. What are the learners' needs of learning environment of game based learning in Sanda teaching?

Literature Review

Learners' Needs
Needs is the difference between the present and the future. That is, what the situation is, what standards are met, and what standards are to be completed in the future. Learner needs in this study refer to the difference between learners regarding the situation and expectations of teaching. The needs of learners are the critical basis for formulating teaching plans, curriculum settings, and cultivating learners' autonomous abilities. The needs of learners are divided into three ways such as the wishes of learners, the needs of learning process, andthe needs of the learning environment. (Widdowson, 2017).

Learners 'learning needs
The inherent motivation and desire to participate in educational activities, pursue information, and achieve learning goals are called learning needs (Alam, 2022). Learning needs are important in the learning process because it affects students' efforts, toughness and overall success (Robison, 2022). Several factors affect the learning needs of learners (Esra & Sevilen, 2021). First of all, the internal motivation comes from internal variables, such as curiosity and personal interests affect the learning needs of learners (Huang, 2021). Learning needs will also stimulate the desire to master some kinds of skills or the desire for success. (Maninera and Temolini, 2023).

Although the external learning needs of learners may initially increase their participation, if there is no help of internal learning needs, they may not be able to maintain power over time (Dodds et al., 2022). Teachers and other educators are crucial to improving students' learning enthusiasm (Maaranen et al., 2019). Education workers can use encouragement to actively participate, enhance the fun of the classroom, and follow the principles of learning to tap the inherent driving force of learning in teaching (Patall & Zanblano, 2019). In teaching, teachers respect the learning needs of learners, combine teaching content and the existing skills of learners, coupled with fun games to help cultivate the sense of accomplishment of learners, and improve the learning motivation of learners (Neo et al., 2022).

In addition, social situations also affect the learning needs of learners (Law et al., 2019). Active teacher -student interaction, collaborative learning environment, and companion support all help to belong and inherent driving force (Tzur et al., 2023). When the learners feel respected, supported, and have contact with the learner community, they will have a strong learning needs (Diep et al., 2019).

In summary, learning needs are a complex structure, which is also affected by internal and external influence (LiU et al., 2020). Education workers can increase the enthusiasm of learners to participate in educational activities by stimulating their learning interests and achieve their learning goals (Ohet al., 2020).

Learners' needs of learning progress
The needs of the learning process, one person reflects the details of his goal in the learning process (Faradilla et al., 2022). It is of great significance in learning and performance, because if the details in the learning process can make learners more confident and be brave to face challenges (Rafiola et al., 2020).

There are several factors that affect the needs of learners' learning progress (Hutzler et al., 2019). First of all, mastering experience can significantly improve the needs of learners in the learning process (Wilson et al., 2020). When learners complete their tasks or obtain the expected results, their learning process needs is stronger (Hu & Yeo, 2020). However, Zeineldin et al. (2023) pointed out that frustration or lack of improvement may have the opposite effect. Therefore, studies have shown that it is important to provide learners with the opportunity to realize and establish self -confidence in accordance with the needs of learning progress, so they can better master skills (Arini & Wahaidin, 2022; Hong et al., 2021).

Alternative experience, such as seeing others successfully completing a task, may affect the needs of learners' learning process (Wilde & Hsu, 2019). Seeing examples or companions of companions can help learners cultivate confidence in their talents (Corwith, 2021). Allowing learners to observe and learn from skilled personnel can make learners more confident in the learning process (Cai et al., 2021).

Finally, teachers should enhance the self -confidence of learners to master skills based on the needs of learners' learning (Trutina and Schwennge, 2020). Education workers can help students build self -confidence in the learning process by providing experience in grasping experience, promoting good examples, providing appropriate feedback and cultivating a supportive learning environment (Thornton et al., 2020). This enableslearners to face problems confidently and achieve their learning goals (Kioupi & Voulvoulis, 2019).

Learners' needs of learning environment
Teaching form is an important part of learners'needs of learning environment (Singh et al., 2021). Learners'needs of learning environmental including teaching resources, teachers' teaching methods, and overall classroom atmosphere (Daskan & Yildiz, 2020). According to the needs of learners in the learning environment, creating a kind of important measure to stimulate the interest of learners and enhance the enthusiasm of learning to learn from teaching methods (Behnamnia et al., 2022).

Studies have shown that the teaching mode is very important according to the learner's needs for the learning environment (Asarta & Schmitt, 2020). First of all, different teaching model learners have different experiences (Maghsudi et al., 2021). Secondly, factors such as teaching resources, teachers' teaching methods are important

factor (humorous houses, 2021). Finally, according to the needs of learning, teachers can innovate the teaching mode from overall (Shearer et al., 2020).

In addition, in the context of continuous changes in education technology, learners have strong desire to have more satisfactory teaching models in the needs of the learning environment (Dakhi et al., 2020). The emergence of AR and other technologies, coupled with the integration of games, promoted the innovation of educational technology (Holly et al. Andothers, 2021). In addition, according to learners' needs for learning environment, using modern technology for teaching innovation is an important measure to improve the learning environment of the learner (Ansari & Khan, 2020).

Teaching innovation helps improve the classroom atmosphere, thereby meeting the learner's needs for the learning environment (Diepet al., 2019). With the advancement of technology, the innovation of teaching models is becoming more and more important (Saykili, 2019). The use of modern technology for innovation to stimulate the learning interest of learners, promote the improvement of the learning environment of the learner, and enhance the learner's skills is also the inner expectations of learners (Le et al., 2022).

Finally, absorb the advantages of different teaching modes to meet the learner's needs for learning environment (Castro, 2019). By digging the fun of teaching content, follow the principles of learners -centered, enhance the enthusiasm of learners, and promote the mastery of learners' learning skills can provide a satisfactory learning environment for learners(Yang et al., 2021).

Game-Based Learning in Sanda Teaching

As a mediator in Sanda teaching, game-based learning refers to the incorporation of interactive gaming components into the training process to improve motivation, engagement, and skill development (Bauer et al., 2020). Sanda, also known as Chinese kickboxing, is a martial art that demands the use of both striking and grappling techniques (Ma & Dong, 2022).

Integrating game-based learning methods into Sanda training can provide a number of advantages (Tsihouridis et al., 2023). For starters, games create a stimulating and entertaining environment that boosts learner engagement (Holbrey, 2020). Game-based learning catches learners' attention and encourages active engagement by presenting obstacles, incentives, and a sense of accomplishment (May, 2021). This increased involvement encourages ongoing practice and skill enhancement (Acosta et al., 2019).

Games also provide a safe and controlled environment for students to experiment with various strategies and techniques (So et al., 2019). Virtual or physical games allow practitioners to use their knowledge and skills in a dynamic context by replicating real-life combat scenarios (Hill & Cebulski, 2022). This experience learning encourages decision-making, critical thinking, and adaptability, all of which are important characteristics in Sanda training (Tathahira, 2020).

Furthermore, game-based learning allows for instant feedback and assessment (Irwansyah & Izzati, 2021). Learners can receive rapid feedback on their methods, timing, and overall performance by using in-game performance evaluations (Oliveira et al., 2021). This timely feedback allows students to reflect on their performance and make changes to enhance their skills (Kim et al., 2019). Tracking progress and achievements within the game environment can also help learners with self-monitoring and motivation (Riemer & Schrader, 2022).

Furthermore, in Sanda teaching, the social aspect of game-based learning should not be disregarded (Barr, 2019). Multiplayer or team-based games encourage learners' collaboration, communication, and healthy competition (Liu et al., 2023). These interactions foster a sense of community and shared goals, encouraging social learning and collaborative skills development (Scavarelli et al., 2021).

In conclusion, game-based learning is an effective mediator in Sanda training (Spiliotopoulos et al., 2019). Game-based learning provides an effective and exciting approach to understanding the techniques and strategies involved with this martial art by increasing motivation, engagement, skill development, and offering quick feedback (Alam, 2022).
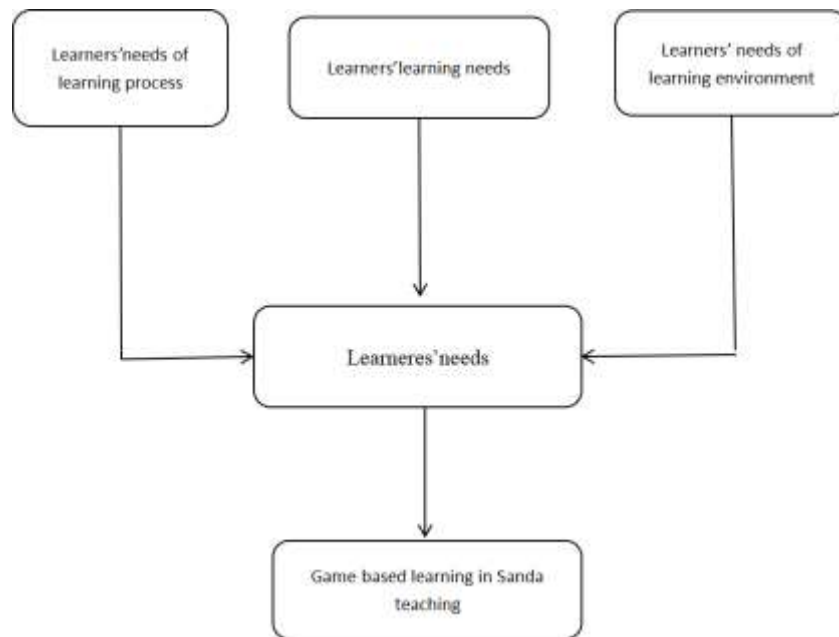
Figure 1: *Conceptual Model*

On the basis of above discussed literature, this study has formed (see figure 1) the following hypotheses:
- H1: Learners' learning needs are very important for game based learning in Sanda teaching.
- H2: Learners' needs of learning process are very important for game based learning in Sanda teaching.
- H3: Learners' needs of learning environment are very important for game based learning in Sanda teaching.

Methodology

In order to analysis of the needs of learners for game based learning in Sanda course, the researcher established the foundation for the following model construction. The specific practices of this part are as follows:
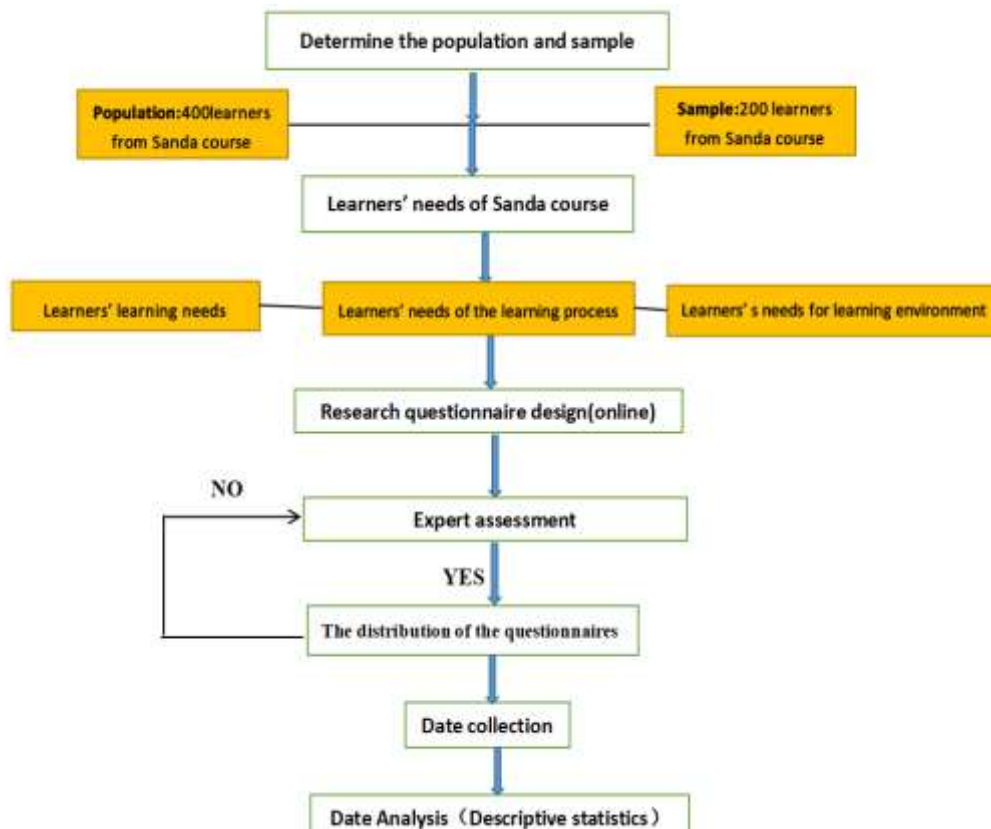

Figure 2: *Process of Research learners' needs*

In this study, in order to examine Sanda courses of Chinese universities. Random selected by 400 learners from Capital University of Physical Education and Sports, Yunnan Normal University, and Luliang University randomly selected 200 learners.

In this study, in order to investigate learners' needs for game based learning in Sabda course, the questionnaires were conducted in the method of surveying questionnaires. The questionnaires belonged to the Level 5 meter. The questionnaires include: learner's learning needs; 2. Learners' needs for the learning process; 3. Learners' needs for the learning environment. For the results of the questionnaire, this study was analyzed by descriptive statistics.

Results

The researcher based on the research goals of this thesis. The number of samples 200 learners were selected from the 400 learners in Sanda course of Capital University of Physical Education and Sports, Yunnan Normal University, and Lvliang University.

Questionnaire in this section belongs to Likert 5-level scale. The analysis of learners' needs is performed in descriptive statistics. The needs of learners are divided into the following three parts, which consists of learners' learning needs, learners 'learning progress and learners' learning environment.

Reliability represents the degree of reliability and consistency of data, which can reflect the stability and concentration of data. Validity refers to the ability of measurement tools to accurately measure the real situation of things, and it can reflect the accuracy of data. We then tested the reliability and validity of the questionnaire. According to the results of Cronbach's Alpha, we can see that the Cronbach's α scores of the three parts of questions are 0.983, 0.992 and 0.990 respectively , which indicates that the internal consistency of our scale with this particular sample is very high. The overall Cronbach's Alpha for the entire questionnaire was 0.992, which indicates strong internal consistency across all questions in the questionnaire. A high Cronbach's Alpha coefficient indicates that the items in the questionnaire correlate well with each other and contribute significantly to a single common theme. But in fact, this does not necessarily mean that the design of the questionnaire is completely reliable, because it may mean that our questionnaire has more emotional biases, so that when everyone chooses the questions of the questionnaire, the choices of all questions are not consistent. We need to go further consider this question.

Table1: *Cronbach's Alpha*

Question	Cronbach's Alpha
Learners' learning needs	0.983
Learners 'needs for learning process	0.992
Learners 'needs for learning environment	0.990
Overall	0.992

Then we used factor analysis to test the validity of the questionnaire. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.930, above the suggested value of 0.6, and the Bartlett test for sphericity was significant (p < .000), indicating that the sample was suitable for factor analysis.

Table 2: *KMO and Bartlett's Test*

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.930
Bartlett's Test of Sphericity	Approx. Chi-Square	6755.246
	df	66
	Sig.	.000

In addition, the extracted commonness (indicating the amount of variance explained by factors in each variable) is above 0.8, indicating that most of the variance in these problems can be explained by the extracted factors. However our principal component analysis revealed a single factor that explained 93.717% of the variance. This shows that the questionnaire is highly unidimensional, and our questionnaire actually has three questions, which shows that the other two questions are not well differentiated from the first question in terms of answer levels.

Table 1: *Communalities*

Learners' learning needs		
I think the combination of game -based learning and AR is essential in the learning of Sanda. It can improve my fighting skills	1.000	.852
I think the combination of game -based learning and AR is essential in the learning of Sanda. It can improve my physical fitness	1.000	.912

I think the combination of game -based learning and AR is essential in the learning of Sanda. It can improve my self-protection ability	1.000	.925
I think the combination of game -based learning with AR is learner-centered	1.000	.894
Learners 'needs for learning process		
I think the combination of game -based learning with AR can make me more want to insist on fitness after class	1.000	.962
I think the combination of game -based learning with AR is to make me feel more fun in the learning process	1.000	.970
I think the combination of game -based learning with AR can make me better cope with the challenges in the learning process	1.000	.963
I think combination of game -based learning with AR help me overcome the fear in the fighting practice	1.000	.955
Learners 'needs for learning environment		
1. I think the teaching method of teachers can play a key role in the combination of game -based learning with AR	1.000	.948
2. I think the combination of game -based learning with AR can improve the atmosphere of the classroom	1.000	.943
3. I think the targetedness of the game is very important for the combination of game -based learning with AR	1.000	.951
4. I think the feedback of instructors and learners is very important for the combination of game -based learning with AR	1.000	.971
Extraction Method: Principal Component Analysis.		

The descriptive statistics provide important information about the respondents' ratings for each of the 12 questions in the survey. It can be seen from the following table that the mean scores for all questions range between 3.86 and 4.12 on a scale of 1 to 5, which indicates that on average, learners have a positive attitude towards the combination of game-based learning with Augmented Reality (AR) in the Sanda course, which means that respondents, on average, agree with the statements in the questionnaire. The standard deviation measures the amount of variance or dispersion in the responses. The standard deviation values for the questions range from .606 to .926. Lower standard deviation values for Question1 to Question4 imply that responses were closely clustered around the mean, meaning that respondents had similar opinions about these items. In addition, the regression factor score indicates the position of an individual with respect to the factor, essentially providing a scale for the factor analysis. It is centered at zero with a standard deviation of one, which is a typical setting for regression factor scores. This score helps in the interpretation of the factor analysis results and isn't typically used for individual question analysis.

Table 2: Descriptive Statistics

N		Minimum	Maximum	Mean	StDen
Learners' learning needs					
I think the combination of game -based learning and AR is essential in the learning of Sanda. It can improve my fighting skills	200	1	5	4.12	.60
I think the combination of game -based learning with AR is learner-centered	200	1	5	4.09 4.05	.617
Learners'needs for learning process					
I think the combination of game -based learning with AR can make me more want to insist on fitness afterclass	200	1	5	3.96	.79
I think the combination of game -based learning with AR is to make me feel more fun in the learning process	200	1	5	3.91	.87
I think the combination of game -based learning with AR can make me better cope with the challenges in thelearning process	200	1	5	3.90	.85
I think combination of game -based learning with AR help me overcome the fear in the fighting practice	200	1	5	3.93	.83
Learners'needs for learning environment					
I think the teaching method of teachers can play a key role in the combination of game -based learning with AR	200	1	5	3.87	.91
I think the combination of game -based learning with AR can improve the atmosphere of the classroom	200	1	5	3.87	.92
I think the targetedness of the game is very important for the combination of game -based learning with AR	200	1	5	3.86	.91

I think the feedback of instructors and learners is very important for the combination of game -based learning with AR	200	1			
REGR factor score 1 for analysis 1	200	-3.94237			
Valid N (listwise)	200				
I think the combination of game -based learning and AR is essential in the learning of Sanda. It can improve my physical fitiness	200				
I think the combination of game -based learning and AR is essential in the learning of Sanda. It can improve my self-protection abilit	200	1	5	4.02	.68

Discussion

This study aims to determine the needs of learners from the learning needs of learners, learners 'needs for the learning process, and learners' needs for the learning environment to determine the teaching model of game learning in Sanda teaching. These discoveries are conducive to building a learner -centered teaching model.

In this study, the main factors of the needs of learners are largely based on the needs of learners in the teaching model of game learning in Sanda Teaching. The study was consistent with the results of the research (Holbrey，2020). He found that building a game-based teaching mode based on the needs of learners can improve learners' learning experience. This conclusion has been supported and expanded by this study. This study emphasizes the specific application of game-based learning in Sanda teaching.

Furthermore, in Sanda teaching, learners' learning needs can provide motivation for learners' learning to a certain extent. This discovery supports research (Liu et al, 2020), which emphasizes the departure from learners' learning needs. Based on game based learning can inspire learners to continue to work hard and allow learners to experience the fun of learning. This study has increased the teaching model based on game learning based on learners 'learning needs, and increased previous literature in the teaching model of game learning in Sanda teaching.

Another key factor is the needs of learners' learning processes. It is a concrete manifestation based on game learning in learning. These discoveries are consistent with the research (Yu & Tsuei, 2022). The study emphasizes that game-based learning should be able to motivate learners to continue to work hard in the learning process and overcome the difficulties encountered in learning. These studies have expanded these discoveries, clearly paid attention to the needs of learners' learning processes, and emphasized the importance of focusing on the learning process of learners.

In addition, the research results also emphasized the significance of the needs of learners' learning environment for building a game -based teaching model. Students' participation, performance and learning persistence are influenced by their self -efficacy and belief. (Yu & Tsuei, 2022) The study emphasizes the importance of learning environmental needs in the learning environment based on the game-based learning environment. Teachers should improve their ability to apply the teaching model based on game learning based on the learning environment of the learning environment, improve the confidence of learners, stimulate their potential, and enhance the learning effect of learners.

This study found that in Sanda Teaching, the teaching model of game learning based on game is exactly what learners need. This shows that the teaching model of game -based learning can give learners a good sense of experience. These discoveries are consistent with the results before Jaaska and Aaltonen (2022), which emphasizes the benefits of combining game -based learning in the educational environment. Therefore, teachers must master the ability to use game learning teaching models and improve their ability to use game organization teaching. Teachers should design and develop game elements to enhance the experience of learning in the learning process.

When comparing the results of this research with the early research work, it is obvious that the associations discovered are consistent and promoted. Previous research was repeatedly discovered that in Sanda teaching, learners' learning needs, learners' needs for learning processes, and learners' needs for the learning environment are very important for building a game based learning model in Sanda teaching. The current work provides specific insights through investigating these factors in the context of Sanda teaching.

These findings have many impacts on educators and decision makers. First of all, game based learning can improve students' learning experience, especially in the background of Sanda Teaching. In order to attract students to participate and obtain effective learning results, educators should consider using game based learning technologies. Secondly, if learners want to actively participate in and benefit from the game -based learning environment, they must respect the needs of learners. Instructors should improve their learning confidence and learning interest when using games during teaching. This will improve the effectiveness of game based learning in Sanda teaching.

Conclusion

As a fighting sport, Sanda has a strong practicality. It is because of the practicality of Sanda that Sanda is loved by the majority of learners. The Sanda Course is widely carried out in Chinese universities, and it is also one of the courses that many learners like. However, the learning of Sanda is not easy, so not all learners have great fighting skills. This is like that evaryone want to succeed,but not all people can achieve their dreams. In the study of Sanda, it is essential to fight with opponents. It is also easy to be injured in the fighting process, and the fighting skills needs to be supported by physical fitness. Physical fitness exercise is often dull

According to the needs of learners, combined with the characteristics of Sanda, the researcher believe that the game-based learning in Sanda teaching is not only the sports games in classroom teaching, but also the use of AR games in after-class exercises is also very important. AR games can enable learners to exercise. There is an immersive experience in the process of learning. As a fighting sport, Sanda is a high-risk sport to a certain extent. Learners may be injured during the learning process. AR games can allow learners to avoid danger during the learning process,better mastery of fighting skills helps learners overcome their fear of fighting an opponent. In addition to teachers giving encouragement to learners in teaching, AR games can give learners' technical support.

Therefore, the researcher suggested that the teaching model of game based learning in Sanda teaching centered on learners should use sports games in the classroom. During the game, teachers should combine the game with the teaching content. Pay attention to the fun of the game. Sexuality, the design of the game must follow the needs of learners. The most important thing is to ensure the safety of the learners during the practice. The learner's post -class practice teachers can arrange learners to perform skills and physical fitness exercises through AR games.

Theoretical and Practical Implications

By emphasizing that game based learning, this study should start from the needs of learners, which helps to build game based learning in teaching suitable for learners. The results of the study proved that the importance of game -based learning in Sanda Teaching to improve the skills of learners, helping us understand effective teaching strategies in teaching practice. This supports the perspective of learning process and learning environment. For example, game -based learning may increase students' interests and help them improve their skills.

The results of this study show that the needs of learning are crucial in game based learning. Motivation factors based on game learning. This study proves that learning needs are very important for the learning model based on the construction of games in Sanda Teaching, and support the theory of early meaning in the educational environment in the educational environment. The discovery of this study has extended the key role of learners' needs for people in constructing game based learning teaching models.

The results of this study show that the use of game -based learning strategies according to the needs of learners may improve learners' participation and experience. Instructors can use the interaction and immersive nature of game -based learning to provide an attractive learning experience. By using game functions, simulation and interactive technologies, teaching designers can create an attractive learning environment, encourage students to actively participate, and improve students' motivation and academic performance. Taking Sanda Teaching as an example, instructors can arrange learners to use AR games to promote learners' good experiences duringphysical exercise.

In Sanda teaching, the performance of learners in the details is reflected in the learning process of learners. When constructing a game, it should be taken into account what the learner may encounter during the learning process. By constructing games that are appropriate for learners to ensure the fun of the game, it is conducive to motivating learners to continue to work hard and overcome difficulties in the learning process.

Studies have shown how important it is to enhance the self -confidence of learners in game -based learning activities. Teachers should adopt strategies to improve their confidence in their success. Through positive feedback and establishing a supportive learning environment, learners' self -confidence can be improved and the performance of game based learning activities.

The conclusion of this study is of inspiration for administrators and decision makers in the field of education. Policy makers may push the game based learning experience into the course after realizing their potential advantages. By allocating resources, providing opportunities for professional development, and promoting research based practice, decision makers can create an educational atmosphere, provide necessary training for instructors to enhance teaching ability based on game learning, and encourage teachers to innovate, students for learners get the best learning experience.

In summary, this study has raised our understanding of gaming learning in Sanda teaching. The actual influence highlights how important it is to design attractive courses, attract learners, and enhance the confidence of learners. These findings may design games to enhance learners 'confidence, promote the improvement of learners' skills, and promote the good experiences of learners in the learning process.

Limitations and Future Recommendations

This study fully clarifies the learning needs of learners, the needs of learners 'learning processes, the needs of

learners' learning environment, and their importance of game based learning in Sanda teaching. But recognizing that certain limitations are crucial. Due to these restrictions, future research will be able to establish and further investigate the results of this study. We will explore the shortcomings of the study in thischapter and put forward some possible directions for more research.

In the context of Sanda training, future study may compare the efficacy of various game-based learning strategies. Comparing the results of various game-based learning interventions, such as serious games, virtual reality, and augmented reality, might provide light on the most successful and interesting methods for boosting blended learning in Sanda training.

Although the teaching mode based on game learning in this article is designed based on the needs of learners, it is not the most perfect. In the future, we may consider factors such as teaching design, social existence, learner characteristics, and technical support. Create a more efficient game based learning teaching mode.

In the context of game -based learning in Sanda Teaching, future research may develop and practical treatment to improve learning motivation and self -efficacy. By analyzing the degree of success of gaming technology, motivating intervention, or self -efficacy intervention, we can deeply understand how to maximize these characteristics and improve learning results. The long -term impact of these therapies can be completed by vertical intervention.

Another way to study in the future is that research may affect the application of game -based learning in sports disciplines. For example, established in digital stadiums, games in this study, especially AR games, are only used in learners' after -class physical exercise. In the future, digital stadiums will help learners have an immersive experience, and AR games can also be put in large quantities of physical education. Researchers may check factors such as cultural differences, different sports, learners' preferences and institutional rules. By understanding the subtle differences in the environment, it is possible to better adapt to teaching strategies and intervention measures to adapt to certain educational environments.

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