

Theoretical and Technical Learning in Table Tennis Among Physical Education Major Students

Jingjing Zhu^{1,*}, DR. Maria Luvimi I. Casihan^{2,a}

¹Graduate School, Adamson University, CO 1000, Manila Philippines

²Graduate School, Adamson University, CO 1000, Manila Philippines

*Corresponding author: Zhu Jingjing (Email: 842674927@qq.com)

^aDR. Maria Luvimi I. Casihan (Email: marialuvimi.casihan@adamson.edu.ph)

Abstract

In the current wave of diversified sports development, table tennis, as a globally popular sport, not only shows unique charm in the competitive field but also plays an important role in vocational education. This paper explores the combination of theoretical learning and technical learning of table tennis students, emphasizing that the two complement each other and jointly improve the comprehensive competitiveness of athletes. Through the evaluation of students' learning motivation, learning methods, learning environment, and other aspects, the study found that students are somewhat dissatisfied with theoretical learning, and at the same time, they are in urgent need of innovative training methods in technical learning. The study shows that in educational practice, it is necessary to comprehensively consider the characteristics of theoretical learning and technical learning, and seek a balance and integration between the two, to promote the all-round development of students, thereby cultivating more high-level table tennis talents and providing support for the long-term development of table tennis.

Keywords

Table tennis major, Theoretical learning, Technical learning, Student development.

1. Introduction

In the current wave of diversified sports development, table tennis, as a globally beloved sport, not only demonstrates unique charm in the competitive field but also plays an important role in professional education. The theoretical and technical learning of students majoring in sports table tennis are the two wings to enhance their comprehensive competitive ability. The two complement each other and jointly promote athletes to achieve excellent results in high-level competitions. Theoretical learning not only covers the basic knowledge, competition rules, strategic thinking, etc. of table tennis, but also includes in-depth research on related disciplines such as sports physiology, sports psychology, and sports nutrition, enabling students to fully understand the scientific principles behind sports and better guide practice. Technical learning focuses on cultivating practical operational skills, including polishing basic techniques, mastery of advanced skills, and improvement of on-site adaptability. The aim is to enable students to pursue excellence in technology through scientific and systematic training. Whether in terms of theoretical depth or technical accuracy, students majoring in sports table tennis must constantly explore and innovate to adapt to the increasingly fierce international table tennis competition.

From the perspective of theoretical learning, table tennis students should first master the basic principles of sports training, including the reasonable arrangement of athlete training load, scientific selection of training methods, and prevention and treatment of sports injuries. In

addition, monitoring the competitive state of athletes, evaluating their physical fitness and skills are also crucial. On this basis, students also need to have an understanding of the particularity of table tennis, such as the structure of movement techniques, the decomposition and training of technical movements, and the application of tactics. In terms of technical learning, the practical operation of table tennis students is the key to improving their technical level. This not only involves the polishing of basic skills, such as serving, receiving, forehand and backhand attacks, spinning changes, etc., but also includes the learning and innovation of advanced techniques, such as continuous attack, controlling the opponent's rhythm, and using different tactics to cope with the game. In this process, theoretical learning and technical learning complement each other, focusing not only on deepening and expanding theoretical knowledge, but also on honing and improving practical skills.

The combination of theoretical and technical learning for students majoring in sports table tennis is an important way to cultivate high-level table tennis players. The foundation of theoretical learning lies in a deep understanding and application of relevant laws, policies, rules, and regulations. According to official documents such as the National Sports School Table Tennis Training Regulations and Table Tennis Competition Rules, students should systematically learn the basic rules, equipment specifications, and athlete behavior norms of table tennis competitions. In addition, the Outline of the National Fitness Plan issued by the General Administration of Sport of China also puts forward clear requirements for the cultivation of sports talents, emphasizing the importance of combining professional training with theoretical learning. In terms of technical learning, students not only need to master basic technical movements such as serving, receiving, attacking and defending transitions, but also need to be able to understand and apply tactical theories, including game observation, opponent analysis, and strategy formulation. This process requires reference to the Table Tennis Coach Handbook and various professional books, as well as drawing on practical experience and technical analysis reports from domestic and foreign table tennis competitions. Through the study of relevant laws, regulations, professional literature, and the continuous deepening of technical training, students majoring in sports table tennis can continuously improve on the path of competitive sports, achieve the dual goals of personal value and bringing glory to the country.

With the continuous development of sports, table tennis, as China's national sport, is increasingly valued for its professionalism and technical research. Table tennis is not only a sport that requires high physical fitness and skills, but also a science that integrates collective strength, skills, and tactics. The purpose of the study is to explore the timeliness of theoretical and technical learning for table tennis majors, identify the problems in the current teaching process, and propose corresponding improvement strategies. This will help improve the comprehensive quality of table tennis students, promote their rapid improvement in technical level, and cultivate more high-level athletes and coaches for the long-term development of table tennis.

2. Theoretical/Conceptual Framework

Students majoring in sports table tennis must integrate relevant theories, concepts, or models when conducting theoretical and technical learning, in order to construct a scientifically rigorous academic framework, which helps them improve their performance in training and competitions. The following are two theoretical models closely related to the study of table tennis, which can serve as the theoretical basis for research.

Bandura's social learning theory emphasizes the role of observational learning in skill acquisition. In table tennis training, students not only improve their skills through hands-on practice, but also learn through observing coach demonstrations, high-level player

competitions, and peer training. This theory suggests that by observing the performance and consequences of others, students can learn new skills and strategies without actually performing technical actions. This provides a theoretical basis for coaches to design teaching activities such as imitation learning and video analysis.

Researchers should adopt a scientific research paradigm to design and implement research plans. Research paradigms typically include constructing hypotheses, selecting appropriate research methods, collecting and analyzing data, and drawing conclusions. In the research of table tennis technology and theoretical learning, this approach not only deepens the understanding of table tennis learning theory, but also contributes to the practice and development of professional fields.

3. Research Paradigm

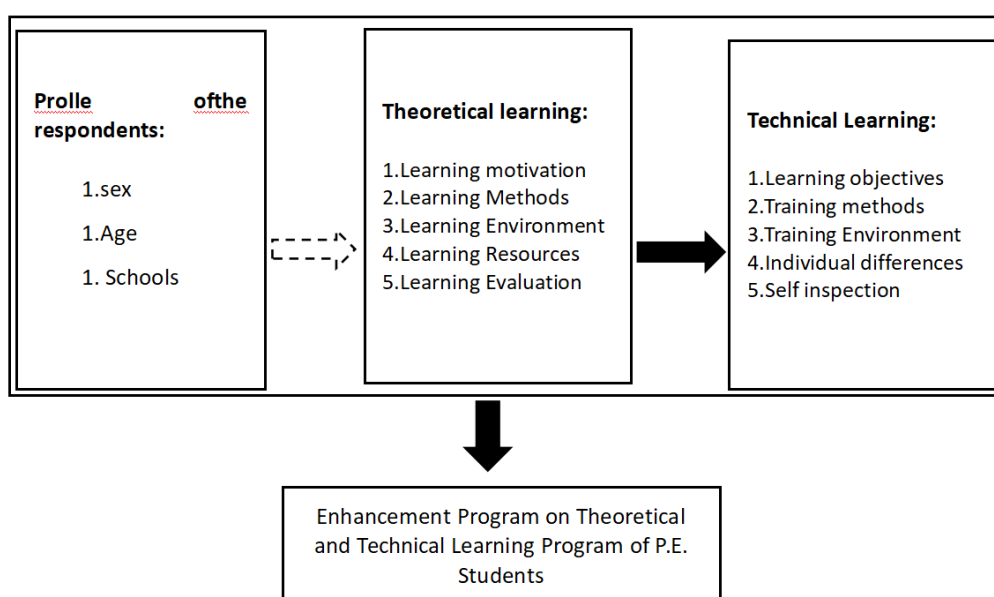


Figure 1. Research Paradigm

4. Statement of the Problem

This study aims to provide a detailed analysis of theoretical and technical learning for students majoring in sports table tennis, comprehensively evaluate their perceived satisfaction with theoretical and technical learning, explore key factors, and provide useful reference and guidance for the comprehensive development of sports table tennis students.

1. What is the profile of the students in terms of:

1.1 sex

1.2 age

1.3 grade level

1.4 school affiliation

2. What is the assessment of student respondents majoring table on the theoretical learning in terms:

2.1 learning motivation

2.2 learning methods

2.3 learning environment

2.4 learning resources

2.5 learning evaluation

3. Is there a significant difference in the assessment of theoretical learning among students majoring in table tennis when the profile is taken as a test factor?

4. What is the assessment of the student respondents majoring in table tennis on their technical learning in terms of:

4.1 learning objectives

4.2 training methods

4.3 training Environment

4.4 individual differences

4.5 self - inspection

5. Is there a significant difference in the assessment of theoretical learning among students majoring in table tennis when the profile is taken as a test factor?

6. Is there a significant relationship between theoretical learning and technical learning in the assessment of student respondents majoring in table tennis?

7. What enhancement theoretical and technical learning program can be proposed based on the research results?

5. Scope and Delimitation of the Study

Exploring the theoretical and technical learning of students majoring in sports table tennis. The research location is set within the student population of sports table tennis majors in four universities, and the research subjects are students from this major. Through the study of relevant variables, including indicators or measurement methods for theoretical and technical learning, as well as the range of participants and survey subjects, the data collection methods, locations, and research cycles that were considered during the research process, discussions were conducted. In addition, the limitations of the research were explored. The respondents came from Gansu province with four schools where the respondents will be coming from. Namely: Tianshui Normal University, Northwest Normal University, Northwest Minzu University, and the Lanzhou University of Technology with a population of 360 table tennis students and a sample size of 186 respondents using Qualtrics Calculator.

The main objective of this study is to analyze the theoretical and technical learning of students majoring in sports table tennis. By investigating and analyzing relevant data, this study explores the current situation and problems of students in theoretical and technical learning in this major, providing reference for further improving the learning effectiveness and level of students in this major.

The scope of the research includes the following aspects: theoretical learning and technical learning, as independent variables, were analyzed and compared separately. Evaluate the level and effectiveness of theoretical and technical learning through a series of indicators and measurement methods. The research subjects are students majoring in sports table tennis from four universities, with them as the research population and survey objects. During the data collection process, a questionnaire survey was used to ensure the comprehensiveness and accuracy of the data.

6. Methodology

6.1. Research Design

Deeply explore the correlation between theoretical and technical learning of table tennis majors and its impact on sports performance. The design and methodology of the study need to be clearly explained by the researcher, without relying on textbook knowledge, but must be

closely linked to the variables being studied. Therefore, this study adopted a quantitative-descriptive-correlational research design to ensure a comprehensive understanding and evaluation of the learning status of table tennis major students from both theoretical and practical dimensions.

The descriptive research section collected the theoretical learning content, methods, attitudes, and practical characteristics of table tennis major students through questionnaire surveys and literature reviews. Through quantitative data analysis, the researcher can depict the basic landscape of students' theoretical and technological learning, providing benchmark data for further experimental research. Experimental research will select representative samples for in-depth analysis. Under the condition of controlling variables, different teaching interventions are set up, such as theoretical teaching reinforcement, incremental technical exercise, etc., to observe the changes in students' mastery of table tennis skills and competition performance.

This study, through quantitative research design, helps to comprehensively understand the interaction and comprehensive effects of table tennis major students in acquiring theoretical knowledge and improving technical skills, providing scientific theoretical support and practical guidance for table tennis teaching and training.

6.2. Research Locale and Participants

In this study, the researcher selected four universities as research sites, from the four schools .Each university has its unique educational background and development direction, providing rich diversity for research.

School	Total Population	Sample Size
School A	100	52
School B	100	52
School C	100	52
School D	60	30
Total	360	186

School A is located in Tianshui City, Gansu Province, and is a comprehensive university mainly focused on teacher education. The school has a long history and profound cultural heritage, focusing on cultivating students' teaching abilities and academic literacy. Table tennis majors enjoy excellent training conditions and teaching staff here, actively participating in various competitions and activities. School B is located in Lanzhou City, Gansu Province, and is a century-old higher education institution specializing in teacher education. The school has strong comprehensive strengths and a complete range of disciplines. Table tennis majors not only receive professional skills training here but also focus on learning theoretical knowledge and cultivating comprehensive development abilities. School C is also located in Lanzhou City and is an important ethnic university in the northwest region of China. The school is committed to ethnic unity and cultural heritage. Students majoring in table tennis grow up in a multicultural atmosphere, which not only enhances their competitive level but also promotes their understanding and recognition of different cultures. School D is a comprehensive university mainly focused on engineering, located in Lanzhou City. The school has strong research capabilities and emphasizes practice and innovation. Table tennis majors not only receive strict technical training here but also utilize the school's advanced scientific research resources to conduct scientific research and enhance their overall quality.

The table tennis majors participating in this study come from these four universities. Under the cultivation of their respective schools, they not only possess solid table tennis skills, but also excel in academic, cultural, and innovative aspects. The participation of these students will

provide valuable data and insights for this study, assisting in the development and promotion of table tennis.

6.3. Sampling Method

This study aimed to explore in-depth the theoretical and technical learning of students majoring in sports table tennis. Students majoring in sports table tennis from four schools. Random sampling in selecting respondents. Firstly, the characteristics and advantages of table tennis majors in various schools were determined through purposive sampling to ensure the representativeness and diversity of the samples; Subsequently, based on ensuring that the sample covers multiple dimensions such as grade level, gender, and technical level, a stratified random sampling was adopted to achieve balance and fairness among the respondents. This comprehensive sampling method helps the researcher to comprehensively understand the learning status of table tennis major students and provides solid data support for research.

The actual population of the study was 360, which was obtained through the statistics of the total number of students majoring in table tennis in the four universities mentioned above. On this basis, the researcher determined a sample size of 186, which ensures the validity of the study while also considering the feasibility of data processing. The sample extraction used stratified random sampling technology, which first stratified based on factors such as different schools, grades, and gender ratios, and then randomly selected samples from each level, to better reflect the characteristics of the population. This sampling technique ensures the representativeness of the samples, making the research results more universal and credible.

In the purposive sampling technique, the researcher has set clear inclusion criteria to ensure the specificity of the sample and the depth of the study. These standards include: 1) respondents must be students majoring in table tennis from the four universities mentioned above; 2) The respondents have a certain foundation in theoretical knowledge and technical practice of table tennis; 3) Respondents are willing to actively participate in research and provide authentic information; 4) And exclude students who are unable to participate in table tennis training and competitions due to special reasons such as injuries. By setting these standards, we can selectively select the most suitable interviewee group, providing a solid foundation for further research.

According to the above sampling methods and inclusion criteria, the final sample population has broad representativeness and diversity. They come from different schools with different learning backgrounds and technical levels, including beginners, intermediate players, and advanced players. The proportion of male and female students is balanced, and the grade distribution ranges from freshman to senior. The selection of samples ensures the robustness and wide applicability of the research results, enabling us to comprehensively understand the current situation of table tennis students in theoretical learning and technical training, and provide scientific suggestions and guidance for related teaching and training.

6.4. Research Instrument

This study aims to reveal the problems that exist in the learning process and explore the relationship between theoretical and technical learning for students majoring in sports table tennis, to provide a reference for improving the quality of learning and education in sports table tennis.

This study used a three-part questionnaire survey tool for data collection. The first part is a population survey, aimed at collecting basic information about the research participants, including age, sex, and years of school affiliation.

The second and part three is a researcher-made questionnaire, mainly aimed at evaluating the theoretical learning and basic structure of students majoring in sports table tennis. The questionnaire is in the form of a Likert scale, with participants scoring based on their level of

agreement or disagreement, ranging from 1 (strongly disagree) to 4 (strongly agree). The development of this questionnaire relies on an extensive literature review to ensure its content is consistent with the existing structure of shared leadership.

The third part focuses on evaluating technological learning and its related structures, using a Likert scale similar to the second part. Participants expressed their views on a scale of 1 to 4, and this section of the questionnaire is carefully crafted based on extensive literature reviews, aiming to accurately capture subtle differences in technological learning.

It is worth mentioning that all questionnaires produced by researchers have undergone strict validation and reliability testing before being put into use, to ensure that the questionnaire can accurately measure the expected structure and produce consistent and reliable results. This study ensured the integrity of the data collection method and enhanced the reliability of the research results through this rigorous verification process.

The results of the validity and reliability test are:

Cronbach Alpha		Number of projects
0.948		70
KMO and Bartlett test		
Kaiser-Meyer-Olkin measure of sampling adequacy.		0.948
Approximately chi-square		12915.752
Bartlett's Sphere Test		2346
df		0.000
Significance		

7. Results and Discussions

7.1. The profile of the respondents

Table 1 shows the profile of the 186 participants in this survey. In terms of gender distribution, women accounted for the majority, accounting for 66.7%, while men accounted for only 33.3%. The age distribution was the same as the sex distribution because sex and age were listed repeatedly in this table. In terms of grade distribution, sophomores were the largest, accounting for 34.9%, followed by freshmen, juniors, and seniors. In terms of school affiliation, there were more students from School B and School C, accounting for 31.2% and 25.3% respectively, while there were relatively fewer students from School A and School B. Overall, the participants were mainly female and sophomores, and the distribution of students from different schools was relatively balance,

7.2. The Assessment of Student Respondents Majoring Table on The Theoretical Learning

7.2.1. Learning Motivation

Table 2 shows that students hold different attitudes towards different aspects of table tennis theory learning. Among them, the highest score is "theoretical learning helps improve technical skills and lay a solid foundation for actual competitions", with a mean of 2.97, showing that students generally believe that theoretical learning plays an important role in improving technology. The lowest score is "understanding history and rules, deepening love", with a mean of 2.45, which shows that students' motivation to learn the history and rules of table tennis is relatively weak.

Table 1. The Profile of the Respondents

Respondents		Frequency	Percentage
Sex	male	62	33.3
	female	124	66.7
	Total	186	100.0
Age	18-21	62	33.3
	22-25	124	66.7
	Total	186	100.0
Grade	Freshman	56	30.1
	Sophomore	65	34.9
	Junior	30	16.1
	Senior	35	18.8
	Total	186	100.0
school affiliation	School A	51	27.4
	School B	58	31.2
	School C	30	16.1
	School D	47	25.3
	Total	186	100.0

Overall, the average learning motivation score of students is 2.58, between "neutral" and "agree", slightly leaning towards "agree". This means that most students recognize the importance of table tennis theory learning, especially in improving technology, tactical research, cultivating concentration and flexible thinking, broadening horizons, and cultivating teamwork and communication skills. However, students' motivation to understand and love the history and rules of table tennis is relatively insufficient, which suggests that teachers need to pay more attention and innovate teaching methods to stimulate students' interest in the cultural history of table tennis.

Table 2. The Assessment of Learning Motivation

	Mean	SD	Verbal Description / Interpretation	Rank	
1. The theory of table tennis helps to improve technical skills and lays a solid foundation for practical combat.	2.97	1.03	Agree/ Manifested	1	
2. Conduct in-depth tactical research to enhance competitive advantages.	2.53	0.74	Agree/ Manifested	3	
3. Theoretical learning cultivates focus and flexible thinking.	2.58	0.86	Agree/ Manifested	2	
4. Understand history and rules, and deepen love.	2.45	0.79	Disagree/Slightly Manifested	7	
5. Expand your horizons and learn the skills of excellent athletes.	2.52	0.80	Agree/ Manifested	4	
6. Develop teamwork and communication skills.	2.51	0.82	Agree/ Manifested	5	
7. Theoretical support makes the competition more confident.	2.48	0.77	Disagree/Slightly Manifested	6	
Overall	2.58	0.63	Agree/Manifested		

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

7.2.2. Learning Methods

Table 3 shows that students have different attitudes towards different learning methods. Among them, the highest score is "mastering various tactics and techniques, adapting to the situation, and improving the chance of winning", with an average of 2.54, indicating that students believe that mastering diverse tactics and techniques is essential to improving the chance of winning the game.

The lowest scores are "making scientific training plans, reasonably allocating practice time, and improving learning efficiency" and "consulting professional coaches or experienced players for targeted guidance and improving technical skills", with an average of 2.47, slightly below the average. This may mean that students are more passive in planning their study time and seeking professional guidance, or lack a clear understanding of how to make an effective training plan.

Table 3. The Assessment of Learning Methods

	Mean	SD	Adjectival Description / Interpretation	Rank
1. Watch professional player game videos, learn skills and tactics, and improve the level of the game.	2.51	0.74	Agree/Manifested	3.5
2. Continuously practice basic movements and techniques to improve ball skills.	2.52	0.85	Agree/Manifested	2
3. Learn to observe and analyze the game from multiple perspectives, identify opponents' weaknesses, and develop targeted tactics.	2.51	0.77	Agree/Manifested	3.5
4. Master various tactics and techniques, adapt to the situation, and improve the chances of winning.	2.54	0.69	Agree/Manifested	1
5. Develop a scientific training plan, allocate practice time reasonably, and improve learning efficiency.	2.47	0.77	Disagree/Slightly Manifested	6.5
6. After the competition, summarize the shortcomings and identify improvement methods and directions.	2.50	0.79	Agree/Manifested	5
7. Consult professional coaches or experienced players to obtain targeted guidance and improve technical skills.	2.47	0.85	Disagree/Slightly Manifested	6.5
Composite Mean Learning Methods	2.49	0.57	Disagree	

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

Overall, the average evaluation of students' learning methods is 2.49, slightly biased between "neutral" and "agree", but closer to "neutral". This means that students have a relatively average recognition of various learning methods, but generally do not have a strong preference for a specific method. This result suggests that teachers need to pay attention to students' needs in

making training plans and seeking professional guidance, and guide them to plan their study time and seek help more actively.

7.2.3. Learning Environment

Table 4 shows that students gave different evaluations on different aspects of the learning environment. Among them, the highest scores were “professional coaches imparting in-depth theoretical knowledge” and “sufficient venues and equipment for practice and consolidation of theory”, with mean values of 2.53 and 2.51, indicating that students generally believe that the guidance of professional coaches and sufficient practice conditions are key elements in the learning environment.

However, the lowest scores were “rich resources, providing comprehensive table tennis theory” and “setting learning goals, regularly evaluating results, and encouraging progress”, with mean values of 2.42 and 2.47, indicating that students were dissatisfied with the richness of learning resources and the setting and evaluation of learning goals.

Table 4. The Assessment of Learning Environment

	Mean	SD	Descriptive/ Interpretation	Rank
1. Enrich resources and provide comprehensive table tennis theory.	2.42	0.83	Disagree/ Slightly Manifested	7
2. Practice exercises to cultivate skills and strategies.	2.48	0.85	Disagree/Slightly Manifested	5
3. A professional coach who imparts in-depth theoretical knowledge.	2.51	0.77	Agree/Manifested	2.5
4. Adequate venue equipment, practice and consolidate theory.	2.53	0.87	Agree/Manifested	1
5. Encourage mutual learning and communication, and create a learning atmosphere.	2.50	0.76	Agree/Manifested	4
6. Personalized tutoring to solve learning difficulties.	2.51	0.82	Agree/Manifested	2.5
7. Set learning goals, regularly evaluate results, and motivate progress.	2.47	0.79	Disagree/Slightly Manifested	6
Learning Environment	2.49	0.58	Disagree	

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

Overall, the average evaluation value of the learning environment was 2.49, slightly biased towards “neutral” to “disagree”. This means that students are not very satisfied with the current learning environment, especially in terms of learning resources and the setting and evaluation of learning goals. This result suggests that teachers and relevant institutions need to pay attention to the improvement of the learning environment, provide richer learning resources and set clear learning goals to better meet students’ learning needs.

7.2.4. Learning Resources

Table 5. The Assessment of Learning Resources

	Mean	SD	Descriptive /Interpretation	Rank
1. Explore the history and global development trends of table tennis.	2.47	0.75	Disagree/Slightly Manifested	5
2. Understand the rules and common rules of table tennis matches.	2.53	0.84	Agree/ Manifested	2.5
3. Describe the core points of table tennis techniques, such as serving and receiving the ball, forehand and backhand, and tactical application.	2.53	0.89	Agree/Manifested	2.5
4. Discuss the importance and scientific methods of table tennis training.	2.46	0.80	Disagree/Slightly Manifested	6
5. Analyze psychological factors in the competition to improve performance.	2.48	0.79	Disagree/Slightly Manifested	4
6. Research tactical strategies, including offensive and defensive transitions, variable speed changes, and opponent analysis.	2.45	0.82	Disagree/Slightly Manifested	7
7. Solve difficult problems in table tennis learning, such as improving ball sense, dealing with different opponents, etc.	2.57	0.78	Agree/Manifested	1
Overall	2.50	0.57	Agree/manifested	

Legend :3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

Table 5 shows that students' evaluation of different learning resources shows some differences. Among them, the highest score is "solving difficulties in table tennis learning, such as improving ball sense, dealing with different opponents, etc.", with an average of 2.57, indicating that students have a high demand for resources to solve specific learning problems.

The lowest scores are "exploring the history and global development trends of table tennis", "analyzing psychological factors in the game to improve performance" and "studying tactical strategies, including attack and defense conversion, speed changes and opponent analysis", with averages of 2.47, 2.48 and 2.45 respectively, indicating that students have relatively low demand for learning resources in these aspects.

Overall, the average evaluation value of learning resources is 2.50, slightly biased towards the "agree" side, but the overall satisfaction is not high. This result means that students' demand for learning resources is targeted and practical, and they are more inclined to solve specific learning problems, while the demand for some more macro or theoretical learning resources is relatively low. Therefore, when providing learning resources, teachers and relevant institutions should pay more attention to targeting and practicality to meet the actual needs of students.

7.2.5. Learning Evaluation

Table 6. The Assessment of Theoretical Learning

	Mean	SD	Descriptive	Rank
1. The theory is systematic and comprehensive	2.50	0.80	Agree/ Manifested	2.5
2. The method of evaluation is interesting	2.47	0.84	Disagree/ Slightly Manifested	6
3. Does the teacher have a high level of knowledge	2.49	0.83	Disagree/ Slightly Manifested	4.5
4. Students flexibly apply theoretical knowledge	2.42	0.87	Disagree/ Slightly Manifested	7
5. There are sufficient opportunities for practice to consolidate the theory	2.55	0.81	Agree/ Manifested	1
6. Effective feedback and guidance are provided	2.49	0.79	Disagree /Slightly Manifested	4.5
7. Students feel challenged and fulfilled during the learning process	2.50	0.88	Agree/ Manifested	2.5
Overall	2.49	0.59	Disagree/ Slightly Manifested	

Legend:3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50-Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

Table 6 shows that there are some differences in students' evaluation of theoretical learning. Among them, the highest score is "there are enough practical opportunities to consolidate the theory" (mean value is 2.55), indicating that students think it is very important to closely combine theoretical learning with practice. At the same time, "theory is systematic and comprehensive" (mean value is 2.50) and "students feel challenged and satisfied in the learning process" (mean value is 2.50) also received high evaluations, showing that students recognize systematic and challenging theoretical learning.

However, the lowest scores are "evaluation methods are interesting" (mean value is 2.47), "teachers have high knowledge levels" (mean value is 2.49), and "provide effective feedback and guidance" (mean value is 2.49). These low scores may indicate that students think that the current evaluation methods are not attractive enough, feel that the teachers' knowledge levels are average, and lack sufficient feedback and guidance in the learning process.

Overall, the average evaluation value of theoretical learning is 2.49, which is slightly biased towards the "disagree" side, which means that students are not satisfied with theoretical learning overall. This suggests that we need to improve teaching methods, evaluation methods, and teacher-student interaction to improve students' learning experience and effect.

Table 7. Summary of the Assessment of Learning Evaluation

	Mean	SD	Descriptive	Rank
Learning Motivation	2.58	0.63	Disagree/Slightly Manifested	1
Learning Methods	2.49	0.57	Disagree/Slightly Manifested	4
Learning Environment	2.49	0.58	Disagree/ Slightly Manifested	4
Learning Resources	2.50	0.57	Agree/ Manifested	2
Learning Evaluation	2.49	0.59	Disagree/Slightly/ Manifested	4

Legend:3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50-Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

Table 7 shows that learning resources scored the highest (mean value was 2.50), which means that students were relatively satisfied with learning resources and believed that learning resources were sufficient and of high quality.

However, the scores of learning motivation (mean value was 2.58), learning methods (mean value was 2.49), learning environment (mean value was 2.49) and learning evaluation (mean value was 2.49) were all low, indicating that students were dissatisfied with these aspects. Among them, although the score of learning motivation was slightly higher than the other three aspects, it was still low overall, indicating that students may not have enough motivation to learn.

Overall, the average value was 2.49, slightly biased towards the “disagree” side, which means that students were not satisfied with their current learning situation overall. This result suggests that we need to pay attention to students’ learning motivation, methods and environment, and optimize the learning evaluation system to better stimulate students’ interest in learning and improve learning outcomes.

7.3. Difference in The Assessment of Theoretical Learning Among Students Majoring in Table Tennis

Table 8 shows that in terms of sex, the mean values of theoretical learning assessments of male and female students are similar, and statistical tests show that sex differences are not significant, indicating that sex has a small impact on theoretical learning. In terms of age, the mean values of theoretical learning assessment of students in the two age groups of 18-21 and 22-25 are also similar, and the age difference is also not significant, indicating that age has little impact on theoretical learning. In terms of grade, although the means of different grades fluctuate, statistical tests show that grade differences are not significant, which may indicate that differences among students in theoretical learning do not change significantly with grade growth. In terms of schools, although the mean values of each school are different, overall, the differences between schools are not significant, indicating that students from different schools do not show obvious differences in theoretical learning. To sum up, factors such as gender, age, grade and school do not show significant differences in the theoretical learning evaluation of table tennis majors.

Table 8. The Difference in The Assessment of Theoretical Learning Among Students Majoring in Table Tennis

		Mean	SD	F	Sig	Decision	Interpretation
Sex	male	2.4210	.55215	-0.248	0.804	Not Significant	Accept NULL
	female	2.4362	.51706				
Age	18-21	2.4152	.55552	-0.369	0.712	Not Significant	Accept NULL
	22-25	2.4383	.51751				
Grade	Freshman	2.4989	.48095	1.734	0.160	Not Significant	Accept NULL
	Sophomore	2.3800	.58207				
	Junior	2.3291	.55211				
	Senior	.49656	.05812				
	Total	.53036	.02979				
school affiliation	Tianshui Normal University	2.3520	.57180	0.899	0.442	Not Significant	Accept NULL
	Northwest Normal University	2.4635	.51201				
	Northwest Minzu University	2.4255	.50425				
	Lanzhou University of Technology	2.4746	.52796				
	Total	2.4302	.53036				

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

7.4. The Assessment of The Student Respondents Majoring on Table Tennis on Their Technical Learning

7.4.1. Learning Objectives

Table 9 shows that there are significant differences in students' assessments of different learning objectives. Among them, the highest score was "the ability to touch and control the ball" (mean value is 2.82), which shows that students generally believe that this goal is important and easy to achieve. However, other goals such as "quickly and accurately adjust the rhythm of the game", "master different playing styles and ball-changing skills", and "accuracy and stability of technical movements" all scored lower (mean values were all lower than 2.5), reflecting Students found these goals to be difficult or of relatively low importance.

Table 9. The Assessment of Learning Objectives

	Mean	SD	Descriptive	Rank
1. Touch and control ability of the ball.	2.82	1.04	Agree/Manifested	1
2. Quickly and accurately adjust the pace during the competition.	2.41	0.81	Agree/Manifested	5
3. Master different playing styles and changing ball techniques.	2.43	0.77	Disagree/Slightly Manifested	4
4. Accuracy and stability of technical actions.	2.39	0.83	Disagree/Slightly Manifested	6
5. Effective counterattack ability in the face of opponent attacks.	2.45	0.78	Disagree/ Slightly Manifested	3
6. Confidence and ability to cope with pressure in competitions.	2.46	0.79	Disagree/Slightly Manifested	2
7. Tactical thinking and adaptability in competitions.	2.38	0.80	Disagree/Slightly Manifested	7
Overall	2.48	0.63	Disagree/Slightly Manifested	

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

Overall, the average evaluation value of the learning goals is 2.48, slightly leaning towards the "disagree" side, which means that students are not overall satisfied with the current learning goals. This result may mean that teachers need to re-examine and adjust learning goals to ensure that they not only meet students' actual needs but also stimulate students' learning motivation and potential. At the same time, attention should also be paid to the level and feasibility of goal setting to avoid overly complex or difficult-to-achieve goals that may cause frustration to students.

7.4.2. Training Methods

Table 10. The Assessment of Training Methods

	Mean	SD	Descriptive	Rank
1. Improve the accuracy and variability of table tennis serve.	2.39	0.83	Disagree/Slightly Manifested	4.5
2. Better grasp the rhythm and speed of table tennis dribbling during the competition.	2.38	0.78	Disagree/Slightly Manifested	6.5
3. Effectively respond to various types of table tennis serve.	2.42	0.82	Disagree/Slightly Manifested	1
4. The Power and Stability of Forehand Techniques	2.39	0.76	Disagree/Slightly Manifested	4.5
5. Rapid response and flexibility of backhand techniques.	2.40	0.77	Disagree/Slightly Manifested	3
6. Quick attack technique actively controls the situation in the game.	2.38	0.79	Disagree/Slightly Manifested	6.5
7. Accuracy of defensive techniques and counterattack ability.	2.41	0.78	Disagree/Slightly Manifested	2
Overall	2.39	0.56	Disagree/Slightly Manifested	

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

Table 10 shows that the evaluation scores of each training method are low, with a mean value of 2.39, and are described as “Slightly Manifested”, indicating that students believe that the effects of these training methods are not significant. Among them, no training method scored significantly higher than the others, showing that students generally do not have high recognition of various training methods.

This result may mean that the current training method fails to fully meet the needs of students, or that the training method itself has some problems, such as not being scientific enough and lacking pertinence. To improve the training effect, teachers need to have a deep understanding of students’ needs and characteristics, combined with the laws of table tennis, to develop more scientific and effective training methods. At the same time, it is also necessary to strengthen communication and feedback with students, adjust training plans promptly, and ensure the pertinence and effectiveness of training methods. In summary, current training methods need to be further optimized and improved to better meet students’ learning needs and improve training effects.

7.4.3. Training Environment

Table 11 shows that the evaluation scores of various aspects of the training environment are generally low, with an average of 2.40, which is described as “Disagree”, indicating that students are not satisfied with the training environment as a whole. Among them, the score of “good sanitary conditions” is relatively high (2.47), while other scores such as “music selection is suitable for table tennis training environment” and “air circulation in the training venue” are relatively low.

Table 11. The Assessment of Training Environment

	Mean	SD	Descriptive/Interpretation	Rank
1. The music selections are suitable for a table tennis training environment.	2.41	0.81	Disagree/ Slightly Manifested	3.5
2. The air circulation in the training venue is good.	2.33	0.80	Disagree/ Slightly Manifested	6.5
3. The lighting inside the stadium is bright and sufficient.	2.41	0.82	Disagree/Slightly Manifested	3.5
4. The placement of the table is reasonable.	2.43	0.75	Disagree/ Slightly Manifested	2
5. The temperature inside the stadium is suitable.	2.33	0.77	Disagree/Slightly Manifested	6.5
6. There are appropriate rest areas provided in the sports hall.	2.39	0.82	Disagree/Slightly Manifested	5
7. The hygiene condition of the sports arena is maintained in good condition.	2.47	0.74	Disagree/Slightly Manifested	1
Overall	2.40	0.56	Disagree/Slightly Manifested	

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

This result means that there are some problems with the current training environment, such as the music selection may not meet the students' preferences or training needs, the venue ventilation conditions are poor, and some hardware facilities such as lighting and temperature control may not meet students' expectations. To improve the training effect, it is necessary to pay attention to and improve the training environment to ensure that it meets the requirements of table tennis training and provides students with a more comfortable and suitable training space.

In summary, the current training environment needs to be further improved and optimized to better meet students' training needs and improve the quality of training.

7.4.4. Individual Differences

Table 12 shows that students generally have a low assessment of the impact of individual differences in table tennis training, with a mean value of 2.41, which is described as "Slightly Manifested". Among them, "Response speed directly affects game performance" has a relatively high score (2.44), while "Different students require personalized teaching methods" has the lowest score (2.37).

This result means that individual differences do exist in table tennis training, but students generally believe that the impact of these differences on training effects is not very significant. However, reaction speed has received relatively high recognition as a factor that directly affects game performance. At the same time, students also realize that different students have different learning styles and require personalized teaching methods.

In summary, individual differences in table tennis training cannot be ignored, especially in terms of reaction speed and personalized teaching methods. Teachers should fully consider the individual differences of each student and develop more targeted training plans to maximize the learning effect of each student.

Table 12. The Assessment of Individual Differences

	Mean	SD	Descriptive/Interpretation	Rank
1. Different levels of interest and investment in table tennis training.	2.40	0.82	Disagree/Slightly Manifested	5
2. Physical fitness and endurance can affect the effectiveness of technical training.	2.40	0.77	Disagree/Slightly Manifested	5
3. Individual coordination ability has an impact on the speed and quality of mastering table tennis skills.	2.40	0.85	Disagree/Slightly Manifested	5
4. Reaction speed will directly affect their performance in the competition.	2.44	0.80	Disagree/Slightly Manifested	1
5. Hand-eye coordination ability can affect their accuracy in hitting the ball.	2.42	0.79	Disagree/Slightly Manifested	2
6. Emotions and psychological states can have an impact on the effectiveness of technical training.	2.41	0.77	Disagree/Slightly Manifested	3
7. Different students have different learning styles and require personalized teaching methods.	2.37	0.77	Disagree/Slightly Manifested	7
Overall	2.41	0.57	Disagree/Slightly Manifested	

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

7.4.5. Self-Inspection

Table 13 shows that the mean values of all seven indicators are between 2.37 and 2.44, all showing "slightly obvious". Among them, the highest value is 2.44, which appears in the two items "the time arrangement of each training is reasonable" and "the quality and requirements of training can be improved"; the lowest value is 2.37, which appears in the two items "the coach is satisfied with his professional guidance during the training process" and "the overall training effect and service quality are satisfactory". The overall mean is 2.41 and the standard deviation is 0.56. These data show that the participants are generally slightly satisfied with the current training content, facilities, time arrangement, skill improvement, overall effect, and service quality, and have not yet reached a higher level of satisfaction. The results show that there is still a lot of room for improvement in many aspects of current training, especially the need to further improve the professionalism of coach guidance and the overall training effect to better meet the needs of trainees.

Table 13. The Assessment of Self-Inspection

	Mean	SD	Descriptive/Interpretation	Rank
1. The coaches are satisfied with their professional guidance during the training process.	2.37	0.81	Disagree/Slightly Manifested	6.5
2. The training content improves table tennis skills.	2.42	0.82	Disagree/Slightly Manifested	3.5
3. The facilities and hygiene conditions of the training venue.	2.42	0.79	Disagree/Slightly Manifested	3.5
4. The timing of each training session is reasonable.	2.44	0.81	Disagree/Slightly Manifested	1.5
5. There is a significant improvement in one's table tennis skills.	2.39	0.80	Disagree/Slightly Manifested	5
6. The overall training effect and service quality are satisfactory.	2.37	0.79	Disagree/Slightly Manifested	6.5
7. Can improve training quality and requirements.	2.44	0.79	Disagree/Slightly Manifested	1.5
Overall	2.41	0.56	Disagree/Slightly Manifested	

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

Table 14 shows that among the various assessments of technical learning, the setting of learning goals has the highest score (2.48), while the training method has the lowest score (2.39). The overall average is 2.41, and the descriptions of all evaluation items are "Slightly Manifested", indicating that these aspects are reflected in technical learning to a certain extent, but not significantly.

This result means that in the technical learning process, although the learning goals are relatively clear, aspects such as training methods, training environment, individual differences and self-examination still need to be strengthened. Training methods may not fully match students' learning needs and characteristics, resulting in less significant learning effects. At the same time, optimization of the training environment and consideration of individual differences are also keys to improving technical learning effects. In addition, students' awareness of self-examination and reflection also need to be further enhanced.

To sum up, technical learning needs to comprehensively consider multiple aspects, especially strengthening the innovation of training methods, optimizing the training environment, paying attention to individual differences, and cultivating students' self-examination abilities, so as to comprehensively improve the effect of technical learning.

At the same time, although the setting of learning goals is relatively clear, it may lack sufficient flexibility and pertinence in actual operations, causing the learning effect to fail to meet expectations.

Table 14. The Assessment of Technical Learning

	Mean	SD	Descriptive	Rank
Learning Objectives	2.48	0.63	Disagree/Slightly Manifested	1
Training Method	2.39	0.56	Disagree/Slightly Manifested	5
Training Environment	2.40	0.56	Disagree/Slightly Manifested	4
Individual Differences	2.41	0.57	Disagree/Slightly Manifested	2.5
Self-Inspection	2.41	0.56	Disagree/Slightly Manifested	2.5

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

7.5. Difference in the Assessment of Theoretical Learning Among Students Majoring in Table Tennis

Table 15 shows that sex, age, and grade do not show significant differences in the assessment of theoretical learning. Mean scores for men and women were similar, and statistical tests showed that the sex differences were not significant. Similarly, students in the two age groups of 18-21 and 22-25 did not show significant differences in the performance of theoretical learning. Although the assessment means fluctuated between grades, overall the differences were not significant. However, it is worth noting that the assessment means differ between schools. Although the results of the statistical test indicate that the difference between schools does not reach the significance level (Sig value is 0.069, close to the significance threshold), this trend may suggest it reflects the subtle differences in educational resources, teaching methods, or student group characteristics between different schools. Overall, the theoretical learning assessment results of table tennis majors show a relatively consistent trend.

Table 15. Difference In The Assessment of Theoretical Learning Among Students Majoring In Table Tennis

		Mean	SD	F	Sig	Decision	Interpretation
Sex	male	2.4571	.55237	1.096	0.274	Not Significant	Accept NULL
	female	2.3896	.52557				
Age	18-21	2.4129	.54735	-0.082	0.935	Not Significant	Accept NULL
	22-25	2.4180	.53183				
Grade	Freshman	2.3982	.60616	0.498	0.684	Not Significant	Accept NULL
	Sophomore	2.4728	.52460				
	Junior	2.3964	.43307				
	Senior	2.3828	.53143				
	Total	2.4162	.53645				
school affiliation	Tianshui Normal University	.51594	.05733	2.385	0.069	Not Significant	Accept NULL
	Northwest Normal University	.56799	.06125				
	Northwest Minzu University	.48478	.06013				
	Lanzhou University of Technology	.54716	.05935				
	Total	.53645	.03013				

Legend: 3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

7.6. Relationship Between Theoretical Learning and Technical Learning on The Assessment Student Respondents Majoring in Table Tennis

Table 16 shows the correlation between theoretical learning and technical learning of table tennis major students in multiple dimensions. The results show that the correlation between theoretical learning and technical learning is not significant in terms of learning motivation, learning environment, learning evaluation, or learning methods. Specifically, there is no obvious relationship between various factors in learning motivation, learning environment, learning evaluation, and learning methods (such as learning goals, training methods, training environment, individual differences, and self-examination) and theoretical learning and technical learning. Correlation. This result shows that in the study of table tennis majors, theory and technology may be relatively independent and have less direct influence on each other. However, this does not mean that they are unimportant, but rather that their impact on overall student learning outcomes may need to be explored from other perspectives. Therefore, in educational practice, the characteristics of theoretical learning and technical learning should be comprehensively considered to promote the all-round development of students.

Table 16. Relationship Between Theoretical Learning And Technical Learning On The Assessment Student Respondents Majoring In Table Tennis

Theoretical Learning	Technical Learning	R	Sig	Decision	Interpretation
Learning Motivation	Learning Objectives	-0.008	0.884	Not Significant	Accept NULL
	Training Method	-0.009	0.874		
	Training Environment	0.008	0.893		
	Individual Differences	-0.036	0.517		
	Self-Inspection	0.011	0.842		
Learning Environment	Learning Objectives	-0.015	0.796	Not Significant	Accept NULL
	Training Method	-0.007	0.901		
	Training Environment	0.02	0.727		
	Individual Differences	-0.047	0.408		
	Self-Inspection	-0.005	0.926		
Learning Evaluation	Learning Objectives	0.042	0.458	Not Significant	Accept NULL
	Training Method	0.049	0.382		
	Training Environment	0.063	0.263		
	Individual Differences	0.03	0.593		
	Self-Inspection	0.073	0.197		
Learning Methods	Learning Objectives	-0.019	0.742	Not Significant	Accept NULL
	Training Method	-0.014	0.805		
	Training Environment	0.006	0.919		
	Individual Differences	-0.016	0.772		
	Self-Inspection	0.014	0.807		
Learning Resources	Learning Objectives	-0.041	0.47	Not Significant	Accept NULL
	Training Method	-0.021	0.706		
	Training Environment	-0.017	0.76		
	Individual Differences	-0.084	0.136		
	Self-Inspection	-0.01	0.862		

Legend :3.50-4.00 Strongly Agree/ Highly Manifested, 2.51-3.50 – Agree/Manifested, 1.51-2.50- Disagree/Slightly Manifested 1.00-1.50 – Strongly Disagree/ Not Manifested

7.7. The Development Plan Can Be Proposed Based On The Research Results

Based on the above-mentioned research results in the field of table tennis, the researcher can put forward the following four suggestions to promote students' table tennis learning effects, analyzing them from two aspects: theoretical learning and technical learning:

1. Integrate theoretical learning and technical learning:

It is recommended to closely integrate theoretical learning with technical learning to avoid the disconnect between the two. For example, when teaching technical movements, relevant theoretical knowledge can be interspersed to help students understand the principles and strategies behind the techniques. At the same time, technical demonstrations and case studies can also be introduced in theoretical classes to make abstract theoretical knowledge concrete.

2. Utilize artificial intelligence and sensing devices:

Introducing artificial intelligence and sensing devices to assist students' technological learning. By collecting and analyzing students' technical movement data, teachers can more accurately assess students' technical levels and provide students with personalized learning suggestions. In addition, virtual reality (VR) or augmented reality (AR) technology can be used to simulate real competition scenarios, allowing students to practice technology in a virtual environment and improve learning effects.

3. Strengthen basic teaching and training:

For young table tennis players, it is recommended to strengthen basic teaching and training. Basic skills are the basis for subsequent technical learning, so it is important to ensure that students master the correct posture, pace and hitting action. Through repeated practice and consolidation of basic skills, a solid foundation can be laid for students' subsequent technical learning.

4. Integrate ideological and political courses with physical education:

Integrate ideological and political elements into the table tennis course teaching to cultivate students' sportsmanship and moral qualities. For example, you can tell the story of the struggle and competitive spirit of table tennis players to inspire students' patriotic emotions and collective sense of honor. At the same time, through teamwork and competition practice, students' collaboration skills and competitive awareness are cultivated, and learning effects and competition results are improved.

These suggestions are designed to promote students' table tennis learning effects from both theoretical learning and technical learning, help students better master table tennis skills, and improve competition performance.

8. Conclusions

Based on the indicated findings, the following conclusions were drawn from the results of the study:

(1) Students are satisfied with current theoretical learning resources. However, they are generally dissatisfied in terms of learning motivation, learning methods, learning environment, and learning evaluation. This contradiction reflects some urgent problems that need to be solved in the current learning environment, such as how to effectively stimulate students' learning motivation, how to provide more suitable learning methods, how to create a more favorable learning environment, and how to establish a more fair and objective learning evaluation system.

(2) The finding provides teachers with a new perspective on thinking, that is, they need to pay more attention to individual differences when optimizing learning environments and methods.

(3) To improve the effect of technological learning, teachers need to focus on and strengthen the innovation of training methods and optimize the learning environment. At the same time,

they should also focus on cultivating students' self-examination and reflection abilities so that they can better adapt to different learning environments and challenges.

(4) In educational practice, the characteristics of theoretical learning and technical learning should be comprehensively considered, and the balance and integration between the two should be sought to promote the all-round development of students. This means that teachers need to pay attention to the teaching of theoretical knowledge and technical skills at the same time, as well as the improvement of students' comprehensive abilities in the process.

9. Recommendations

Based on the above conclusions, the following recommendations can be made:

(1) To improve students' learning experience and effect, first of all, teachers should have a deep understanding of students' needs, design attractive teaching content and activities, introduce diversified teaching methods, encourage students to learn independently and show their results, to stimulate their interest and motivation in learning.

(2) The learning environment is crucial for students' learning. Teachers should create a positive and supportive environment, provide necessary learning resources, and strengthen the interaction and cooperation between teachers and students and students. At the same time, establish a fair and objective evaluation system, encourage students to participate in the evaluation, and help them recognize and improve their shortcomings.

(3) Every student is unique. Teachers should respect students' differences and provide personalized learning support. Through customized learning plans, tutoring, and guidance, meet the different needs of students and encourage them to develop their interests and specialties.

(4) In the study of table tennis, theory and technology complement each other. Teachers should seek a balance between the two, focus on the teaching of theoretical knowledge and technical skills, and encourage students to apply theoretical knowledge in practice to improve their practical ability. In addition, pay attention to the development of students' comprehensive abilities and cultivate table tennis professionals with comprehensive qualities.

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