

# Sports Teaching Environment Affecting Academic Transition among Retired Athletes in Anhui, province, China

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**Abstract:** Retired athletes are an important guarantee force for college physical education teacher resources. This study uses literature, questionnaire and mathematical statistics as research methods, and takes retired athletes teachers in colleges and universities in Anhui province as research objects, aiming at studying the physical education teaching environment of retired athletes' academic transformation. In view of the problems existing in reality, the suggestions are as follows:(1)Improve policies and institutions, and improve the multi-level security system (2)Strengthen career planning and cultivate self-awareness.(3)Strengthen scientific research literacy and widely use resources to achieve growth.(4) Improve the development mechanism of teachers' teaching ability and mobilize teachers' enthusiasm for self-improvement.(5)Construct incentive mechanism for professional ability development and improve promotion system.(6) Strengthen re-education and training system to improve teaching ability.

**Keywords:** Retired athletes; College teachers; Academic transformation; Physical education teaching environment.

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## 1. Introduction

The research on the transition of retired athletes to college physical education teachers is one of the hot topics in the development of education. With the continuous improvement of physical education in colleges and universities, it has become an important career choice for retired athletes to become physical education teachers. In Li Weimin's study (2020), the average age of retired athletes is 24.7 years old. There are various reasons for athletes to retire, mainly including age, injury, competitive state and other factors. As the athletes grow older, their competitive ability gradually declines and they can no longer maintain a high level of performance. In addition, long-term training and competition can also cause athletes to accumulate a large number of injuries, affecting their careers. Other athletes may choose to retire early for personal or family reasons. Notice on Effectively Selecting School Physical Education Teachers and Coaches from Retired Athletes of Excellent Sports Teams of Anhui Province (2022), it is clearly stipulated that retired athletes are encouraged to transition into college physical education teachers. Retired athletes have accumulated professional sports experience in their sports career, which can inject new vitality and motivation into the cause of physical education in colleges and universities. Therefore, it is urgent to study the current situation, causes and influencing factors of academic transformation and teaching ability of physical education teachers in colleges and universities with retired athletes in transition, so as to provide strong support

for optimizing the development of college education in our country.

## 2. METHODOLOGY

### 2.1. Questionnaire survey method

According to the content and purpose of the study, 170 teachers of retired athletes from 20 relevant schools were selected as the investigation objects, and the field questionnaire was conducted on the academic transformation of retired athletes and the physical education teaching environment.

### 2.2. Mathematical statistics

The relevant data obtained from the previous literature review and questionnaire survey were summarized and analyzed to provide strong data support for this study.

## 3. RESULTS, INTERPRETATION AND DISCUSSION

the majority of the respondents hold the position of Instructor in academia, accounting for exactly half of the group. Associate Professors make up 27.06%, Teaching Assistants are 16.47%, and Administrators 2.94%. At the lower end, Professional Coaches and Professors hold the smallest shares, with 1.18% and 2.35% respectively. These roles combined make up the total academic positions of the survey participants.

**Table 1.** Assessment of Academe Transition - Employment

Indicators	Mean	SD	Rank	Verbal Description/ Interpretation
1.It was easy for me to get an employment in the academe after my sports career.	3.70	0.74	4	High
2.There were a lot of employment opportunity for me in the academe after my sports career.	3.39	0.70	5	Moderate
3.I believe that I have the right qualifications to be employed in the academe.	3.71	0.60	3	High
4.My experience as an athlete helped me gained employment in the academe	3.92	0.54	2	High
5.I have clear career plan in the academe.	4.06	0.57	1	High
Employment	3.76	0.46	-	High

Scale: 1-1.50: Very Low; 1.51-2.50: Low; 2.51-3.50: Moderate; 3.51-4.50: High; 4.51-5.00: Very High

Overall employment transition into academia is considered high, with a composite mean of 3.76 and the lowest SD of 0.46, suggesting a high level of agreement and the most

consistency across responses among all the indicators. However, this overall employment indicator is not assigned a specific rank in the table.

**Table 2.** Assessment of Academe Transition - Placement

Indicators	Mean	SD	Rank	Verbal Description/ Interpretation
1.I am familiar with the placement of retired athlete teachers in our school.	4.59	0.52	2	Very High
2.I am satisfied with the placement program for retired athletes in the academe	4.54	0.52	4	Very High
3.I think the placement of retired athletes in the academe is stable	4.59	0.59	2	Very High
4.I think that I am placed in the right position for my academic career	4.39	0.72	5	High
5.I am able to contribute properly in my position because of my experience as a retired athlete	4.72	0.45	1	Very High
Placement	4.57	0.38	-	Very High

Scale: 1-1.50: Very Low; 1.51-2.50: Low; 2.51-3.50: Moderate; 3.51-4.50: High; 4.51-5.00: Very High

The composite measure for Placement, which combines the individual aspects of placement satisfaction, has a mean of 4.57 and the lowest SD of 0.38, indicating a very high level of agreement and the most consistency across responses in

this category. It suggests that, overall, the participants view their transition into academic placement very positively, although this composite indicator is not given a specific rank in the table.

**Table 3.** Assessment of Academe Transition - Promotion

Indicators	Mean	SD	Rank	Verbal Description/ Interpretation
1.I am very familiar with the promotion scheme in the academe for retired athlete.	4.71	0.48	4	Very High
2.I think the teacher promotion mechanism is reasonable and fair.	4.44	0.61	5	High
3.I think my experience as a retired athlete is a factor for professional title promotion in the academe.	4.75	0.47	2	Very High
4.I think academic achievement is an important factor for professional title promotion in the academe.	4.76	0.44	1	Very High
5.I think that I can be promoted in my academic career.	4.72	0.49	3	Very High
Promotion	4.68	0.34	-	Very High

Scale: 1-1.50: Very Low; 1.51-2.50: Low; 2.51-3.50: Moderate; 3.51-4.50: High; 4.51-5.00: Very High

The overarching category of Promotion, which encompasses all aspects of promotion perceptions, attains a mean score of 4.68 and the lowest SD of 0.34. This suggests that, overall, there is a very high level of agreement with very

little variation among the respondents' views on their promotional prospects in academia, signifying strong positive consensus. However, the Promotion category does not have a rank assigned in the table.

**Table 4.** Differences in Academe Transition based on Demographic Profile

Profile	Variables	Mean	SD	Stat. Value	P-Value	Interpretation/ Decision
Age	30 years old and below	4.27	0.28	F= 0.91	0.44	Not significant/ Accept H0
	31-35 years old	4.35	0.31			
	36-40 years old	4.31	0.27			
	above 40 years old	4.39	0.37			
Sex	Male	4.29	0.30	T= -2.99	0.00	Significant/ Reject H0
	Female	4.45	0.31			
Educational Attainment	Bachelor's Degree	4.23	0.20	F= 0.44	0.65	Not significant/ Accept H0
	Master's Degree	4.34	0.31			
	Doctorate Degree	4.35	0.35			
Length of Career in Sports	0-5 years	4.30	0.23	F= 2.30	0.08	Not significant/ Accept H0
	6-10 years	4.32	0.29			
	11-15 years	4.30	0.33			
	more than 15 years	4.49	0.41			
Sports Specialization	rack and Field	4.34	0.33	F= 0.18	0.97	Not significant/ Accept H0
	Ball Sports	4.32	0.27			
	Dance	4.37	0.34			
	Aquatic	4.33	0.27			
	Martial Arts	4.36	0.30			
	Others	4.29	0.42			
Sports Level	International Level	4.77	0.29	F= 6.98	0.00	Significant/ Reject H0
	National Level	4.34	0.36			
	Level 1	4.41	0.28			
	Second Class	4.26	0.29			
Position in the Academe	Professional Coach	3.63	0.42	F= 12.47	0.00	Significant/ Reject H0
	Teaching Assistant	4.25	0.23			
	Instructor	4.25	0.26			
	Associate Professor	4.49	0.30			
	Professor	4.95	0.06			
	Administrator	4.43	0.20			

\*Significant at 0.05; Other Sports Specialization: gymnastics, fitness, etc.

The transition experience differs significantly between males and females, with mean scores of 4.29 (SD=0.30) for males and 4.45 (SD=0.31) for females. The t-statistic value is -2.99 with a p-value of 0.00, indicating a significant difference and resulting in the rejection of the null hypothesis. Zhou Huijuan (2019) also pointed out in her research that there is a big gap in the employment of PE teachers due to gender differences. Because women's sensory organs, language and other aspects are more developed, women do better than men in the language expression of the basic qualities of teachers, communication with students, care for students and so on. In addition, careful and meticulous work is the advantage of female physical education teachers. Therefore, there are great differences between retired athletes of different genders when they transition to academics.

The sports level, however, shows a significant difference, particularly for those at the International Level, with a high

mean score of 4.77 and SD of 0.29. The F-value of 6.98 and a p-value of 0.00 indicate a significant difference, leading to the rejection of the null hypothesis. Finally, the position in the academe shows significant differences in transition experiences. Notably, Professors have the highest mean score of 4.95 with a very low SD of 0.06, while Professional Coaches have the lowest mean score of 3.63. The F-value of 12.47 and a p-value of 0.00 strongly suggest significant differences. Teachers with different academic status have significantly different influences in the sports field, resulting in a large gap in teaching and research ability. The higher the academic status, the easier it is to change jobs.

In summary, while age, educational attainment, length of career in sports, and sports specialization do not significantly affect the academe transition experience, sex, sports level, and current academic position do, with particularly positive transition experiences reported by those at higher levels of sports and academic positions.

**Table 5.** Post-Hoc Analysis of Academe Transition vis-à-vis Sports Level

Profile	Variables	Mean Difference	p-value
International Level	National Level	0.43*	0.02
	Level 1	0.36*	0.04
	Second Class	0.52*	0.00
National Level	International Level	-0.43*	0.02
	Level 1	-0.06	0.79
	Second Class	0.08	0.62
Level 1	International Level	-0.36*	0.04
	National Level	0.07	0.79
	Second Class	0.15*	0.01
Second Class	International Level	-0.52*	0.00
	National Level	-0.08	0.62
	Level 1	-0.15*	0.01

\*Significant at 0.05

In summary, the post-hoc analysis suggests that there are significant differences in the academe transition experience among retired athletes, most notably between those who competed at the International Level and all other levels. The International Level athletes report a more favorable transition experience compared to their counterparts at lower levels of

sports competition. This research result is very similar to the research of Xing Rui (2023), that is, the higher the sports level of athletes, the stronger their own special quality, their own control ability, the overall ability is more prominent, and they are more competitive in the market when athletes retire and transition.

**Table 6.** Post-Hoc Analysis of Academe Transition vis-à-vis Position in the Academe

Profile	Variables	Mean Difference	p-value
Professional Coach	Teaching Assistant	-0.62*	0.02
	Instructor	-0.62*	0.02
	Associate Professor	-0.86*	0.00
	Professor	-1.32*	0.00
	Administrator	-0.79*	0.01
Teaching Assistant	Professional Coach	0.62*	0.02
	Instructor	0.00	1.00
	Associate Professor	-0.24*	0.00
	Professor	-0.70*	0.00
	Administrator	-0.17	0.77
Instructor	Professional Coach	0.62*	0.02
	Teaching Assistant	0.00	1.00
	Associate Professor	-0.24*	0.00
	Professor	-0.70*	0.00
	Administrator	-0.17	0.72
Associate Professor	Professional Coach	0.86*	0.00
	Teaching Assistant	0.24*	0.00
	Instructor	0.24*	0.00
	Professor	-0.46*	0.02
	Administrator	0.07	0.99

\*Significant at 0.05

The results indicate a trend where individuals in higher academic positions generally perceive their transition to academia as more favorable compared to those in lower positions. Specifically, Professors and Associate Professors

have significantly better transition experiences than those in positions such as Professional Coach, Teaching Assistant, and Instructor.

**Table 7.** Assessment of Sports Teaching Environment – Protection

Indicators	Mean	SD	Rank	Verbal Description/ Interpretation
1.I think that my tenure in the academe is secured.	4.81	0.41	1	Very High
2.I think that I have the opportunity for improvement in the academe.	4.58	0.53	5	Very High
3.I am satisfied with my remuneration in the academe.	4.81	0.42	1	Very High
4.I think that I will retire in the academe.	4.72	0.50	4	Very High
5.My overall wellbeing is taken care of in the academe	4.78	0.42	3	Very High
Protection	4.74	0.32	-	Very High

Scale: 1-1.50: Very Low; 1.51-2.50: Low; 2.51-3.50: Moderate; 3.51-4.50: High; 4.51-5.00: Very High

College students as the future of the country, teachers as the main body of the school, teachers have the bounden responsibility to train students, the state in the security of teachers invested in the funds, policies, energy, more and more full. Miao Hanshen's (2023) research also shows that universities have good protection for retired athlete teachers. The specific performance is: retired athlete teachers have

formal establishment or formal contract in colleges and universities, teachers enjoy social insurance, pension insurance, medical insurance, unemployment insurance and industrial injury insurance, and colleges and universities pay social insurance categories for retired athletes who work as college physical education teachers.

**Table 8.** Assessment of Sports Teaching Environment – Professional Ability

Indicators	Mean	SD	Rank	Verbal Description/ Interpretation
1.My professional ability as a retired athlete is important in my career in the academe.	4.85	0.36	1	Very High
2.I can contribute in the advancement of sports education because of my experience as a retired athlete.	4.76	0.43	5	Very High
3.As a professional athlete, I think that my knowledge and skills is an advantage in the academe.	4.84	0.37	2	Very High
4.I think that I have a good teaching skill.	4.84	0.39	2	Very High
5.I incorporate the strategies as an athlete in my teaching career.	4.82	0.39	4	Very High
<b>Professional Ability</b>	<b>4.82</b>	<b>0.26</b>	<b>-</b>	<b>Very High</b>

Scale: 1-1.50: Very Low; 1.51-2.50: Low; 2.51-3.50: Moderate; 3.51-4.50: High; 4.51-5.00: Very High

The athletes' special sports growth experience, practice solid sports skills, and develop the spirit of unyielding sports, which coincides with the needs of physical education teachers' professional positions. In terms of special skills, perfect special technical ability and standard action demonstration ability can help them have strong business ability in teaching, mainly reflected in accurate demonstration

actions. Correct, smooth and free demonstration actions can make students grasp the key points faster. In addition, pre-service training after retirement can deepen the theoretical knowledge and teaching ability of retired athletes. Li Juan's (2022) study also confirmed that retired athletes have excellent professional ability. Therefore, outstanding professional ability is the greatest advantage of athletes, and it is also an important capital to ensure the transformation.

**Table 9.** Assessment of Sports Teaching Environment – Training

Indicators	Mean	SD	Rank	Verbal Description/ Interpretation
1.My school has a special training program for retired athletes who transitioned in the academe.	4.11	0.53	5	High
2.I am contented in the trainings provided by the institution to retired athletes.	4.15	0.55	4	High
3.I think that the trainings offered by the institution are effective	4.16	0.67	3	High
4.I think that I need more training in terms of academic qualifications.	4.83	0.39	1	Very High
5.I think that my knowledge and skills in the academic transition still needs improvement.	4.81	0.39	2	Very High
<b>Training</b>	<b>4.41</b>	<b>0.35</b>	<b>-</b>	<b>High</b>

Scale: 1-1.50: Very Low; 1.51-2.50: Low; 2.51-3.50: Moderate; 3.51-4.50: High; 4.51-5.00: Very High

To sum up, there are still some gaps in the effectiveness and satisfaction of retirement sports training in schools. According to the characteristics of comprehensive quality of retired athletes, in practice, we should focus on the training of theoretical knowledge, scientific research ability and innovative spirit of retired athletes. In the aspect of theoretical knowledge training, it focuses on PE teaching, training, exercise physiology and planing. In terms of scientific research ability training, the primary training should be carried out according to the types of scientific research projects, reporting requirements, reporting skills, scientific research tasks and awards; In the spirit of innovation training, it is necessary to train retired athlete teachers to have the consciousness of advancing with The Times, accurately grasp the characteristics of teaching, always stand in the forefront of practice, understand the latest development trend of the

project taught, and actively apply what they have learned to teaching and training.

**Table 10.** Summary of Assessed Sports Teaching Environment

Indicators	Mean	SD	Rank	Verbal Description/ Interpretation
Protection	4.74	0.32	2	Very High
Professional Ability	4.82	0.26	1	Very High
Training	4.41	0.35	3	High
<b>Sports Teaching Environment</b>	<b>4.66</b>	<b>0.25</b>	<b>-</b>	<b>Very High</b>

Scale: 1-1.50: Very Low; 1.51-2.50: Low; 2.51-3.50: Moderate; 3.51-4.50: High; 4.51-5.00: Very High

To sum up, retired athlete teachers rely on their excellent professional ability and have good living, material and economic security in the career development of colleges and

universities. However, most of them are not satisfied with their own status and ability, and hope to receive more professional training and academic upgrading, so as to make themselves more excellent.

**Table 11.** Differences in Sport Teaching Environment based on Demographic Profile

Demographic Profile	Category	Mean	SD	Stat. Value	P-Value	Interpretation/ Decision
Age	30 years old and below	4.64	0.23	F=0.15	0.93	Not significant/ Accept H0
	31-35 years old	4.65	0.26			
	36-40 years old	4.68	0.23			
	above 40 years old	4.65	0.27			
Sex	Male	4.65	0.24	t=-0.69	0.49	Not significant/ Accept H0
	Female	4.68	0.26			
Educational Attainment	Bachelor's Degree	4.65	0.22	F=0.01	0.99	Not significant/ Accept H0
	Master's Degree	4.66	0.25			
	Doctorate Degree	4.65	0.25			
Length of Career in Sports	0-5 years	4.74	0.15	F=1.92	0.13	Not significant/ Accept H0
	6-10 years	4.66	0.23			
	11-15 years	4.61	0.31			
	more than 15 years	4.62	0.27			
Sports Specialization	Track and Field	4.71	0.24	F=2.46	0.04	Significant/ Reject H0
	Ball Sports	4.64	0.23			
	Dance	4.70	0.19			
	Aquatic	4.67	0.21			
	Martial Arts	4.69	0.25			
	Others	4.47	0.35			
Sports Level	International Level	4.73	0.17	F=0.89	0.45	Not significant/ Accept H0
	National Level	4.60	0.30			
	Level 1	4.69	0.23			
	Second Class	4.65	0.25			
Position in the Academe	Professional Coach	4.27	0.47	F=2.31	0.06	Not significant/ Accept H0
	Teaching Assistant	4.66	0.25			
	Instructor	4.63	0.28			
	Associate Professor	4.70	0.18			
	Professor	4.85	0.06			
	Administrator	4.77	0.08			

Other Sports Specialization: gymnastics, fitness, etc.

When it comes to sex, the mean scores are almost identical, 4.65 for males and 4.68 for females, with comparable SDs. The t-statistic is -0.69 with a p-value of 0.49, indicating no significant difference in the sports teaching environment between males and females, thus the null hypothesis is accepted.

However, for sports specialization, the analysis reveals some significant differences. Track and Field athletes report a mean of 4.71, and the category "Others" reports a lower mean score of 4.47. With an F-value of 2.46 and a p-value of 0.04, this indicates a significant difference in the sports teaching environment experience based on specialization, leading to the rejection of the null hypothesis.

The sports level does not show significant differences in the mean scores, ranging from 4.60 to 4.73, and the F-value of 0.89 with a p-value of 0.45 leads to the acceptance of the null hypothesis.

To sum up, there is no significant difference in the impact of track and field, ball, dance, water, martial arts and other sports on the physical education teaching environment, while other sports have a significant impact, which may be because there are many types of other sports investigated, and the correlation between them is not strong, and the degree of dispersion is high, so there is a large difference.

**Table 12.** Post-Hoc Analysis of Sports Teaching Environment vis-à-vis Sports Specialization

Pairwise Comparison		Mean Difference	p-value
Track and Field	Ball Sports	0.07	0.80
	Dance	0.01	1.00
	Aquatic	0.04	1.00
	Martial Arts	0.02	1.00
	Others	0.24*	0.02
Ball Sports	Track and Field	-0.07	0.80
	Dance	-0.06	0.92
	Aquatic	-0.03	1.00
	Martial Arts	-0.05	0.93
	Others	0.18	0.13
Dance	Track and Field	-0.01	1.00
	Ball Sports	0.06	0.92
	Aquatic	0.03	1.00
	Martial Arts	0.01	1.00
	Others	0.23*	0.05
Aquatic	Track and Field	-0.04	1.00
	Ball Sports	0.03	1.00
	Dance	-0.03	1.00
	Martial Arts	-0.03	1.00
	Others	0.20	0.60
Martial Arts	Track and Field	-0.02	1.00
	Ball Sports	0.05	0.93
	Dance	-0.01	1.00
	Aquatic	0.03	1.00
	Others	0.23*	0.04
Others	Track and Field	-0.24*	0.02
	Ball Sports	-0.18	0.13
	Dance	-0.23*	0.05
	Aquatic	-0.20	0.60
	Martial Arts	-0.23*	0.04

\*Significant at 0.05; Other Sports Specialization: gymnastics, fitness, etc.

**Table 13.** Relationship between Academe Transition and Sports Teaching Environment

Variable	Bivariate Statistical Test	Protection	Professional Ability	Training	Sports Teaching Environment
Employment	Pearson r	0.25*	0.19*	0.11	0.23*
	Sig. (2-tailed)	0.00	0.01	0.15	0.00
Placement	Pearson r	0.45*	0.386*	0.33*	0.49*
	Sig. (2-tailed)	0.00	0.00	0.00	0.00
Promotion	Pearson r	0.57*	.46*	0.37*	0.59*
	Sig. (2-tailed)	0.00	0.00	0.00	0.00
Academe Transition	Pearson r	0.52*	0.42**	0.33*	0.53*
	Sig. (2-tailed)	0.00	0.00	0.00	0.00

\*Significant at 0.05

These results suggest that the aspects of Protection, Professional Ability, and the broader Sports Teaching Environment are significantly correlated with how well individuals transition to the academe. The stronger these elements, the more positive the transition tends to be perceived. Training, while also positively correlated with transition, shows significance in its relationship only with Placement, Promotion, and Academe Transition, but not with Employment, suggesting that training may have a more

## 4. Conclusion and Recommendations

### 4.1. Conclusion

- 4.1.1. **It can be seen that among the retired athletes teachers in colleges and universities, men are the main group with higher education level and academic status, but the sports level is weak, and the recruitment of high-level athletes should be strengthened thereafter.**
- 4.1.2. **Research shows that with the continuous emphasis of the state on education, the placement policies for retired athletes in colleges and universities are becoming more and more favorable, and the promotion mechanism is more reasonable, which is increasingly attractive to retired athletes. However, at the same time, the competition for the positions of physical education teachers in colleges and universities is becoming more intense.**
- 4.1.3. **With the large increase in the number of talents, retired athletes are more likely to succeed in the transformation of academic circles with higher sports grade, longer sports years and stronger competitive ability. In addition, compared with male athletes, female athletes are more likely to be admitted to colleges and universities as regular employees.**
- 4.1.4. **Retired athletes can rely on good professional ability and strong desire for further study to obtain comprehensive value protection from colleges and universities in terms of sports teaching environment.**
- 4.1.5. **There are many kinds of college sports, and the characteristics of each sport are different, and the influence and audience of each sport are quite different.**
- 4.1.6. **On this basis, a training framework can be constructed to strengthen the teaching quality and academic quality of retired athlete teachers, so as to improve the comprehensive quality of teachers.**

### 4.2. Recommendations

- 4.2.1. **Improve policies and institutions, and improve the multi-level security system**
- 4.2.2. **Strengthen career planning and cultivate self-awareness**
- 4.2.3. **Strengthen scientific research literacy and widely use resources to achieve growth**
- 4.2.4. **Improve the development mechanism of teachers' teaching ability and mobilize teachers' enthusiasm for self-improvement**
- 4.2.5. **Construct incentive mechanism for professional ability development and improve promotion system.**
- 4.2.6. **Strengthen re-education and training system to improve teaching ability**

## References

- [1] Li W M. (2020). Analysis on influencing factors of employment of retired athletes in Xinjiang. Martial arts

research (4), 131-133. The doi: 10.13293 / j.carol carroll nki WSKX. 008336.

- [2] To earnestly in the anhui provincial sports bureau. From our province outstanding sports teams of retired athletes selecting school physical education teachers and sports coaches about the work [EB/OL] (2022-02-08). <https://tiyu.ah.gov.cn/public/21751/120906531.html>
- [3] Zhou Huijuan, Ma Liang, Liu Zhuang, & Pan Zhaoyang. (2019). Research on female physical education view of physical education teachers in colleges and universities. Contemporary Sports Science and Technology, Vol. 9,(19), 104-105.
- [4] Xing Rui, Zhang Jing, Zhou Xing-Long, & Qu Feng. (2023). Study on the difference of movement characteristics of archers at different levels at the release stage: based on statistical parameter mapping. Chinese Sports Science and Technology (12), 3-9.
- [5] Miao Hanshen.(2023). Research on the Current Situation and Countermeasures of retired athletes transforming into Physical education teachers in colleges and Universities (Master's Thesis, Guangzhou University).
- [6] Li Juan.(2022). Analysis of professional ability and Promotion Strategy of retired athletes transformed into Physical education teachers (Master's Thesis, Tianjin Institute of Physical Education).