

35 The theoretical study of Chinese and foreign table tennis technique innovation

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1 Introduction

The Chinese table tennis team has mastered the development law of the world table tennis technique – tactics and playing method since half a century ago. We advance along with the technique – tactics innovation in the world. We advance not only in practical innovation but also in theoretical innovation. At present, our country has twenty professional researchers on the table tennis theoretical science. Compared with Japan, Sweden, Germany and England etc, China has more professional researchers. Fifteen sport scientific researchers attended the first science representative congress in Rome in April, 1983. Most of them studied sport physiology, sport biomechanics and sport medicine. Only a Chinese representative studied sport training.

2 Methods

References method, Statistics method, Logistic method and Comparison method were used.

3 Results

Quantity and quality of Chinese researches are as well as, if not better than other countries' for many years. Many research outcomes are first carried out in the world. On the basis of an incomplete statistics, we has published 1245 foreign theses since 1959, 1193 technicality articles in science issues and technicality conferences, three professional articles and five books about the rudiment and middling training method since 1987. We published 1034 technicality articles from 1990 to 2002, which nearly total the articles published by foreign countries in seventy years (Table 1 and 2).

Table 1. Comparison of the total of Chinese and foreign references

Type of references	Year	Total	1990s'
English references	1929—2002	1193	406
Chinese references	1987—2002	1245	1034

Canada Discus Data Bank collected 1440 table tennis references of some countries in 1990s' excluding Japan, Korea and North Korea.

Table 2. The quantity of some countries' table tennis theses in 1990s'

Country	Quantity	Percentage	Country	Quantity	Percentage
China	1097	0.76	Scotland	1	0.07
England	194	0.135	Finland	1	0.07
France	85	0.06	Canada	1	0.07
Sweden	15	0.01	Italy	1	0.07
Germany	12	0.8	Portugal	1	0.07
Spain	10	0.7	Turkey	1	0.07
Russia	4	0.3	America	3	0.2
Australia	4	0.3			

Most of table tennis theoretical articles belong to China, England, France, Sweden, Germany and Spain. Only 23% of theses in 1990s' are works of foreign countries. 368 theses among 1140 theses studied the table tennis technique - tactics. Of 270 theses among 368 theses, 18.75% belonged to China. Of 75 theses among 368 theses, 5.2% belonged to such foreign countries as England, France, Sweden, Germany and Spain. The quantity of every one of these countries is 1% of the total. In addition, they studied only the rudiment application of the normal technique - tactics and expounded it. This proves that these countries have no more advanced table tennis researches.

By classifying and analyzing Chinese 1034 technicality articles in 1990s', we clearly know several characteristics of Chinese table tennis theoretical research.

- (1) Study table tennis from related subjects
- (2) The study scope should be wide and the study emphasis should be obvious. we should choose technique - tactics to break through, which coincides with the need of exercise practice.
- (3) We should apply theory to practice and improve the innovative application in order to better sport training level and performance.
- (4) 1034 articles including professional articles, training method articles

and equipment are written by 250 researchers. More than half of them are coaches who themselves take part in practice. These scientific outcomes are very practicable.

4 Conclusion

Theoretical researchers of Chinese table tennis choose themes from practice, applying abundant experiences into theory and then applying theory to practice again. They use practice to test theory and make more advanced theory. So, many professional researches have not only a certain theoretical level but also considerable practical value, and answer why innovation can make our technique – tactics training and others retain advanced for a long time from the theoretical level, which is very helpful to further development of table tennis in our country.