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## Multiple response analysis-based chinese basketball reserve talents' cultivation

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### ABSTRACT

Basketball as one of Chinese developing "three major balls" undertakings, its development has always fell behind some developed countries, its performance in each kind of large-scale competitions cannot meet national people's expectations all the time, the cause is its reserve talents supply obviously cannot meet basketball development. The paper makes multiple response analysis of Chinese basketball reserve talents cultivation operating mechanism with above status; it gets Chinese basketball reserve talents cultivation operation mechanism and Chinese basketball reserve talents cultivation objective mutual relations. Chinese basketball reserve talents cultivation operating mechanism makes feedback to Chinese basketball reserve talents cultivation objective, meanwhile Chinese basketball reserve talents cultivation objective plays orientation roles in Chinese basketball reserve talents cultivation operating mechanism.

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### KEYWORDS

Security mechanism;  
Multiple response;  
Operation mechanism;  
Dynamic mechanism.

### INTRODUCTION

At present, Chinese basketball have certain development, but it still has many shortcomings. Since Yao Ming entering into NBA, CBA is also quickly known and focused by national people, and now, another Chinese new star will also joint in NBA federation, therefore Chinese basketball has also been further developed.

In Chinese CBA, there are many potential young people, they surely will constantly make efforts to impel Chinese basketball development, though now Chinese basketball development is a little slow, and after all, it develops forward according to normal trajectory. But, due to Chinese compares with other countries, they

have big differences in physical quality, together with technical shortcomings and all kinds of corresponding coach systems and trainings being unprofessional and so on, it causes Chinese basketball still has a long way to go in future.

From Zhong Fu-Chun article "American colleges and universities as well as sports", we can see that American competitive sports (relative sports) reserve talents mainly rely on education system. By long-term system changing and reforming, it has gradually formed "University—middle school—primary school" one package basketball reserve talents cultivation mode. From Wang Qin-Wei and others' introduction about Australian basketball reserve talents cultivation system, it gets that Australian basketball basic level reserve tal-

ents cultivation organization is mainly community club, cultivation basketball high level athletes' middle layer sports organization is "state sports association" and "state sports school", federal government mainly takes charge high level athlete's cultivation.

With Chinese reforming deepening, basketball reserve talents cultivation is developing towards diversification and marketization orientations, Chinese basketball reserve talents are obviously not enough to better cultivate excellent reserve talents for country. Thereupon, it makes multiple influence analysis of Chinese basketball reserve talents cultivation mechanism, meanwhile it also based on the conditions of our country and finds our country basketball development adapted reserve talents cultivation system.

**MODEL ESTABLISHMENTS**

NBA lets many people in the world to be mad with basketball, its basketball connotation and spirits have also been greatly rendered and nearly perfect explanation. It inspires groups of excellent professional basketball players according to their understanding on basketball, together with passion and love to basketball, and dedicates to audiences wonderful competitions. Figure 1 is basketball wonderful moments.

Cultivate excellent basketball players need corresponding basketball reserve talents system. Take Chinese Beijing basketball reserve talents cultivation system as an example; it includes the school system, sports school system and social forces running system. Concrete basketball reserve talents cultivation system is as

Figure 2.

Corresponding basketball reserve talents cultivation system, it has corresponding operation mechanism so can combine with talents cultivation objective and better cultivate qualified reserve talents.

**Define multiple response factors**

Chinese basketball reserve talents cultivation operation mechanism includes 1, Dynamic mechanism, 2, Integration mechanism, 3, Incentive mechanism, 4, Control mechanism, 5, Security mechanism.

Take above five items as multiple response factors, and then analyze them one by one.

**Multiple response factors analysis**

Factor one, Dynamic mechanism

Chinese basketball reserve talents cultivation operation mechanism dynamic mechanism investigation table includes (Through the sports to university, the entrance examination, Promote health, becoming an excellent athlete, others), investigate on high school men's 142 basketball players training participated motivation investigation, it gets TABLE 1.

According to above data, it makes corresponding



Figure 1 : The wonderful moments of basketball

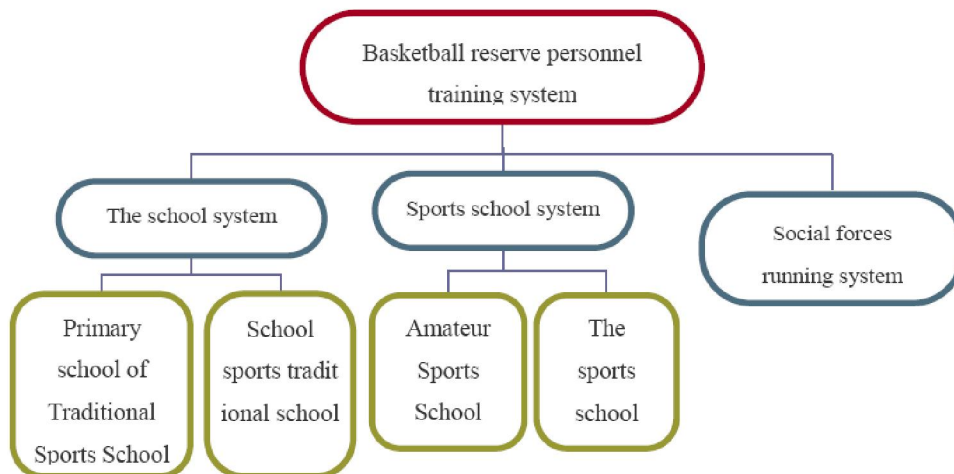


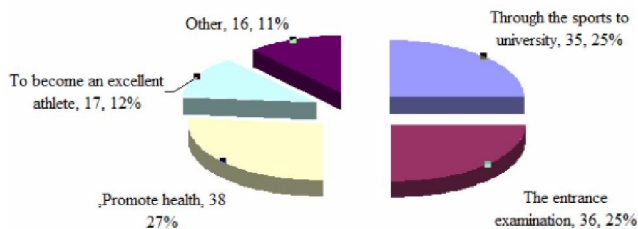
Figure 2 : Basketball reserve personnel training system

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**TABLE 1: High school men's basketball players' training participated motivation investigation table**

Option	Number of	
	Selective people	Percentage
Through the sports to university	35	24.64789
The entrance examination	36	25.35211
Promote health	38	26.76056
Becoming an excellent athlete	17	11.97183
Others	16	11.26761
Total	142	100

(Data sources: basketball reserve talents cultivation status investigation and analysis)



**Figure 3 : Basketball athletes training motivation**

pie Figure 2.

From above Figure 2, it is clear that largest proportion of basketball reserve talents motivation is Through the sports to university, The entrance examination and Promote health, which respectively accounts for totality 25%, 25% and 27%. Only 12% people want to become an excellent basketball player. From their motivation, it is clear that for Chinese basketball's reserve talents motivation orientation, only a little part is to become an excellent basketball player to improve Chinese basketball level. Mostly are for studies, which impacts on Chinese basketball reserve talents abilities improvement to a great extent.

Factor two, Integration mechanism

Integration mechanism, mainly is analyzing basket-

ball coaches' ages and educational backgrounds. It makes statistics of all level of sports school and amateur sports school fifty-two basketball coaches' ages, distribution is as TABLE 2.

For basketball coach ages distribution, corresponding make Figure 3.

From above Figure 3, it is clear that basketball coaches age distribution mainly concentrates among 30-39years old, which accounts for 57% of totality more than a half, it is clear that Chinese basketball coaches are still very young.

Basketball coaches' education background distribution is as TABLE 3.

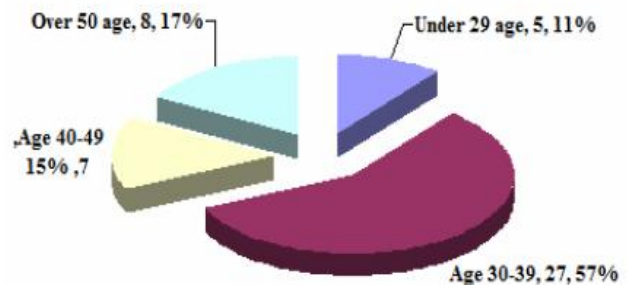
Correspondingly make pie figure, Figure 4 is the youth team coach degree distribution, Figure 5 is the early youth team coach degree distribution.

From above Figure 4, 5 comparison, we can get: The early youth team coach degree is obviously higher than the youth team coach degree, which shows Chi-

**TABLE 2 : Basketball coaches' age distribution**

Ages interval	Below 29 years old	30-39years old	40-49years old	Above 50Years old
Number of people	5	27	7	8
Percentage%	10.6	57.4	15	17

(Data sources: Chinese competitive basketball reserve talents' cultivation operating mechanism research questionnaire survey)



**Figure 4 : The age distribution of the basketball coach**

**TABLE 3 : Coaches' education background distribution**

Education background	Youth team	Percentage%	Early youth team	Percentage%
Graduate student	0	0	3	9.7
Undergraduate course	12	46.2	20	64.5
Junior college education	13	50	8	25.8
College the following	1	3.8	0	0
Total	26	100	31	100

(Data source: Chinese competitive basketball reserve talents cultivation operation mechanism researched questionnaire)

TABLE 4 : Before1980 Chinese sports funding status(unit: ten thousand Yuan)

Institution	“First five years”Period	“Second five years”Period	Three years’ adjusting period	“Third five years”Period	“Fourth five years”Period	“Fifth five years”Period	Total
Central	3164	13365	4898	3838	5558	13562	44385
Local	6434	3186	18166	20061	58975	107067	213889
Society	0	0	0	0	0	0	0

(Data source: According to national sports commission planning and finance section compilation, “Sports undertakings statistical yearbook” 994: 102)

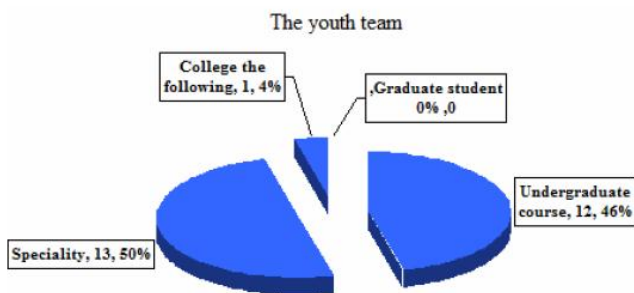


Figure 5 : The youth team coach degree distribution

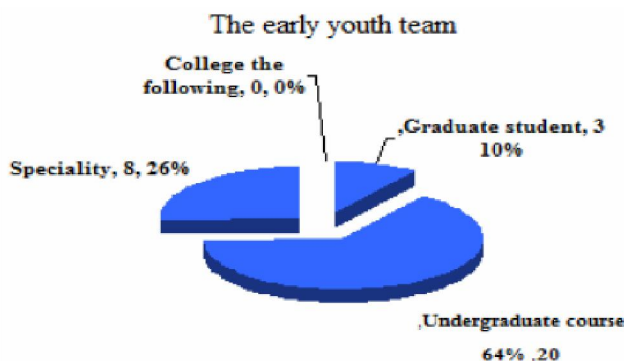


Figure 6 : The early youth team coach degree distribution  
nese basketball reserve talents cultivation focuses on basic level selection.

Factor three, Incentive mechanism

For incentive mechanism, we mainly research on sports funding status as TABLE 4.

Correspond to above data TABLE 4, it makes “two axes- bar chart” as Figure 6.

From above data, it is clear that local financing appropriation’s funding to sports is obviously higher than central. And central sports appropriation’s funding constantly fluctuates, while local financial appropriation is rising by years and has big rising ranges.

Correspond to above data TABLE 5, it makes” two axes- bar chart” as Figure 7.

From above data, it is clear that: Social investment started sports funding from year 1993, better operational investment way is “social investment’s operating income”.

Factor four, Control mechanism

For control mechanism, we adopt “quaternity” mode to analyze, Figure 8 is Chinese basketball reserve talents control mechanism model.

From control mechanism model, we can get: Laws, regulations, policies etc. constraint athletic basketball reserve personnel subject ; Inter organizational, individual and Athletic basketball reserve personnel subject relationships “mutual regulation”; The organization,

TABLE 5 : Year1981-1996 Chinese sports funding status(Unit: ten thousand Yuan)

Year	National finance			Social Investment		
	Central	Local	Total	Social contribution	Operating income	Total
1981-1985	30532	226112	256644	0	0	0
1986-1990	56625	543166	599791	0	0	0
1991	13184	153392	166576	0	0	0
1992	14100	172400	186500	0	0	0
1993	18600	190800	209400	2192.5	76260.5	78453
1994	15309	187045.6	202354.6	4185.5	67394.6	71580.1
1995	22567.6	216235.6	238803.2	3664.9	77820.5	81485.4
1996	20945	263229.2	284174.2	4737.3	99789.3	104526.6

(Data source: “Sports undertakings statistical yearbook”, year 1994 01995-1998 arrangement compiling)

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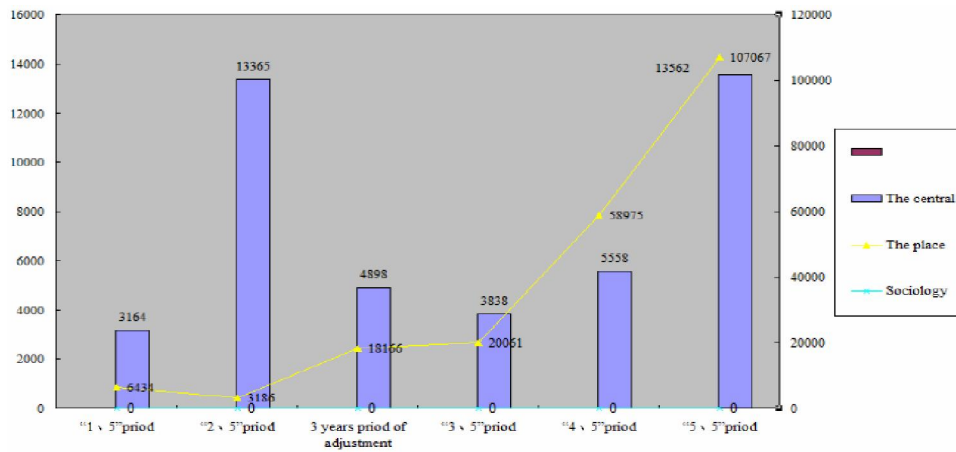


Figure 7 : Before 1980 China's sports undertaking outlay

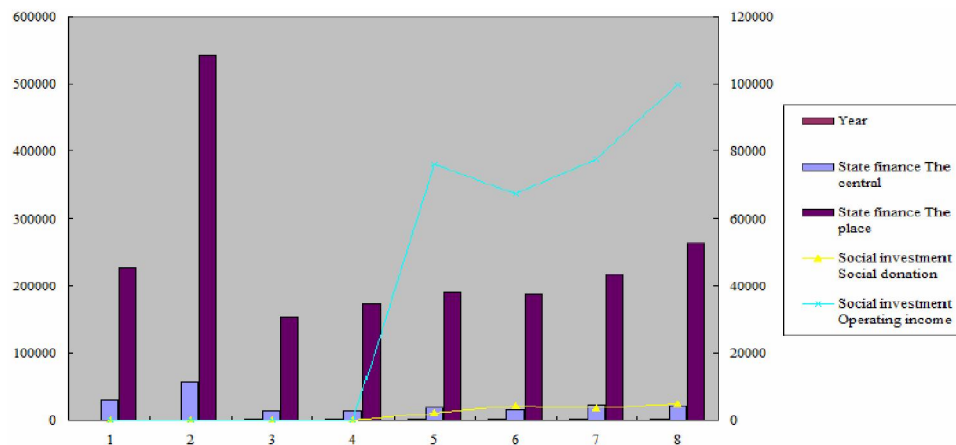


Figure 8 : Funds of sports of China in 1981-1996

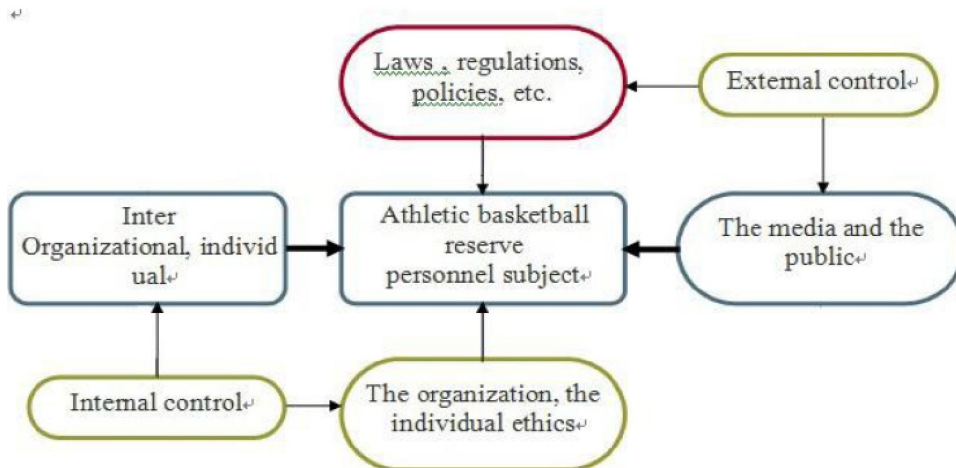


Figure 9 : The model of Chinese basketball reserve control mechanism

the individual ethics and athletic basketball reserve personnel subject relations is “self-regulation”; The media and the public play monitoring roles in athletic basketball reserve personnel subject.

Factor five, (Security mechanism)

For security mechanism, it mainly researches on

basketball coaches' instruction way. TABLE 6 is perfected basketball reserve talents expert opinions investigation table.

Correspond to above investigation data, it makes “line-bar chart” as Figure 9.

In above Figure 9, horizontal coordinate 1 corre-



TABLE 6 : Perfected basketball reserve talents expert opinions investigation table

Option	Frequency	Percentage%
Develop power source, cultivate diversified forms	7	17.5
Incentive mechanism running flexible with diversity	6	15
Sound control and security mechanism	8	20
Perfect objective decision and implementation system	9	22.5
Integrate and coordinate multiple benefits	4	10
Establish talents cultivation early warning mechanism	4	10
Others	2	5
Total	40	100

(Data source: Chinese competitive basketball reserve talents’ cultivation operating mechanism research questionnaire survey)

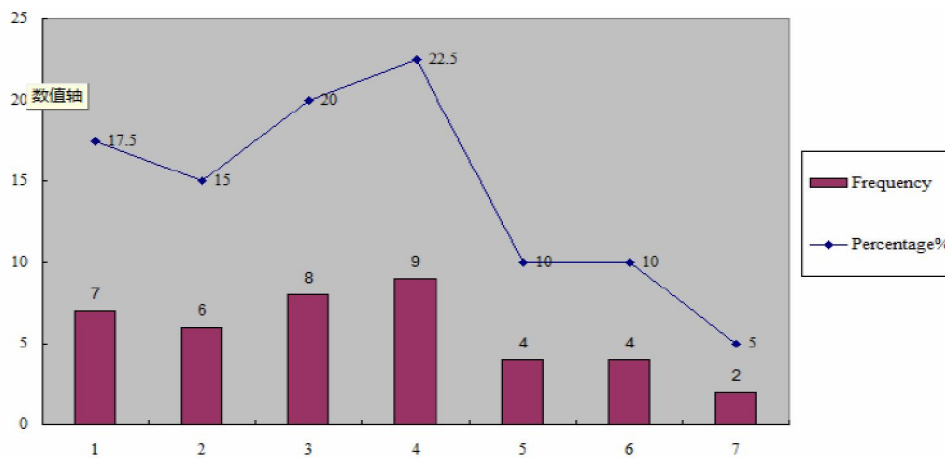


Figure 10 : Improve inventory expert opinion basketball reserve talents

TABLE 7: Future basketball reserve talents cultivation specification experts’ intention investigation table

Option	Frequency	Percentage%
Possess solid basketball special technology	10	15.15152
Excellent potential engagement in basketball special event	10	15.15152
Basketball special basic knowledge accumulation	8	12.12121
Sound non-intelligence affective development	6	9.090909
Excellent cultivation of ideological morality	5	7.575758
Strong sense of responsibility and sense of group honor	9	13.63636
Collective scientific cultural knowledge accumulation	8	12.12121
Wide interests and self-development ability	8	12.12121
Others	2	3.030303
Total	66	100

(Data source: Chinese competitive basketball reserve talents’ cultivation operating mechanism research questionnaire survey)

sponds to “Develop power source, cultivate diversified forms”, 2 corresponds to “Incentive mechanism running flexible with diversity”, 3 corresponds to “Sound control and security mechanism”, 4 corresponds to “Per-

fect objective decision and implementation system”, 5 corresponds to “Integrate and coordinate multiple benefits”, 6 corresponds to “Establish talents cultivation early warning mechanism”, 7 corresponds to “others”.

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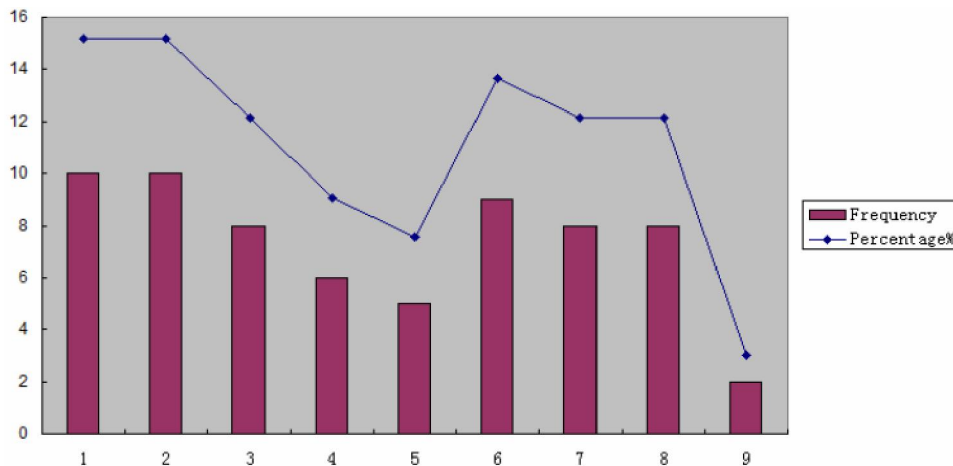


Figure 11 : Future basketball reserve personnel training specification expert intention

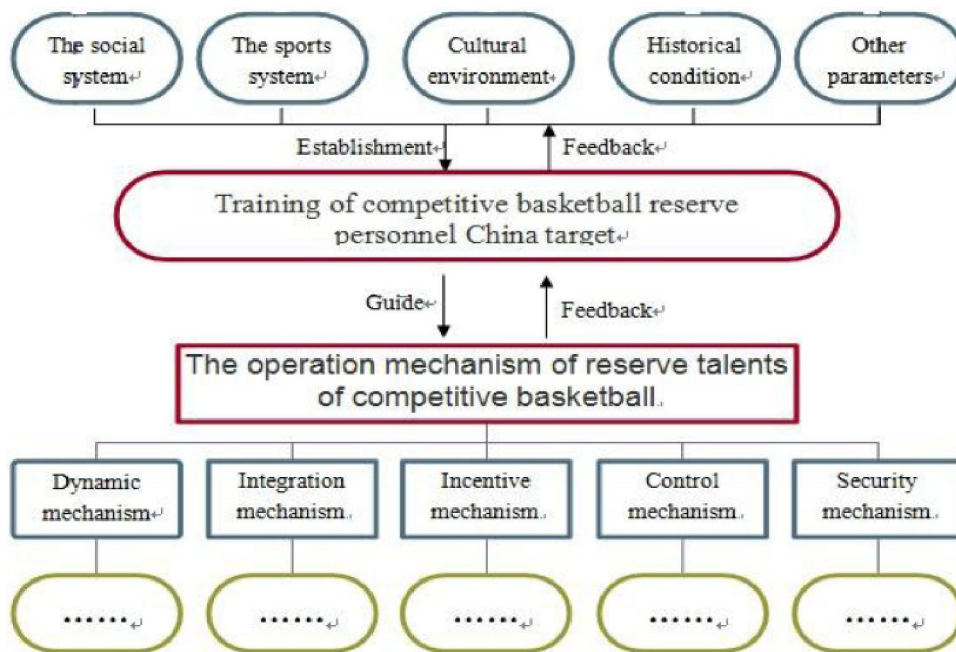


Figure 12 : Basketball reserve personnel training mechanism diagram

It is clear that experts are unified in calling for “Perfect objective decision and implementation system”.

For future basketball reserve talents cultivation, we makes investigation on experts expectation on them and sorts into TABLE 7 future basketball reserve talents cultivation specification experts’ intention investigation table.

Expression of horizontal coordinates corresponding numbers: 1 represents” Possess solid basketball special technology”, 2represents “Excellent potential engagement in basketball special event”, 3represents “Basketball special basic knowledge accumulation”, 4represents “Sound non-intelligence affective development”, 5represents “Excellent cultivation of ideological

morality”, 6represents “Strong sense of responsibility and sense of group honor”, 7represents “ Collective scientific cultural knowledge accumulation”, 8represents “Wide interests and self-development ability”, 9represents “others”.

From above, it is clear that experts make many feasible opinions on reserve talents cultivation mechanism.

CONCLUSION

Correspond to above five response factors analysis, we can get: Chinese basketball reserve talents cultivation operating mechanism makes feedback to Chinese basketball reserve talents cultivation objective,

meanwhile Chinese basketball reserve talents cultivation objective plays orientation roles in Chinese basketball reserve talents cultivation operating mechanism. Among them, corresponding relation is as Figure 11.

By this multiple response analysis of Chinese basketball reserve talents cultivation operating mechanism, we can clear understand that Chinese basketball reserve talents cultivation operating system each factor mutual effects. Only make mutual coordination with each factor, provide good reserve talents cultivation environment, Chinese basketball will be developed better and better.

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