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The shallows of the grasp of the tendency of the development of art education and the countermeasures to the construction of art curriculum

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ABSTRACT

Art education is one of the most indispensably important branches of education. Since the 21st century, education has developed quickly. And as the enrollment increases, the development of art education profession quickens rapidly. However, many problems have risen at the same time. By the analysis of the current situation of art education, this paper will figure out the tendency of its development and according to the tendency, we will try to establish the art curriculum. After the calculation of Analytical Hierarchy Process, we will find out the countermeasures and give advice on the curriculum based on the calculation of the summarizing of the countermeasures..

KEYWORDS

Art education; Development tendency; Countermeasures to the establishment of the curriculum; AHP.



INTRODUCTION

The word “art education” first appears in Germany in the 19th century. And since the appearance of the word “fine art”, art education rises as well. At early of the 21st century, the UNESCO has put forward that if there were no education, it would be difficult for developing countries to benefit from the global knowledge-based economy. And with this, China’s art education is facing lots of problems. Thus, how to reform art education, how to establish art curriculums, and how to integrate with the world are the significant problems in our country.

Although the education level and quality have greatly improved after the scale expansion of the college enrollment, the rapid development has also bring up many problems. Scholars have make researches on this and put forward some countermeasures. Among them, Sun Jun has made introduction and analysis on art education in Xinjiang and has given out suggestion. Lin Yun and others have also made researches on the development and current situation of art education and present some solutions from four aspects. Xu Chang, in her paper *A Shallows of the Current Situation of Linear Art Education and Countermeasures*, says that art education has indispensable special function, and that the aim of art education is the cultivation of students’ comprehensive quality but not talents cultivation. And Lu Chao thinks that high art education tends to adjust and strengthen in real time and besides, it can adapt to the requirements of social development and propose relevant countermeasures according to the construction of art curriculums.

High art education is developing quickly, especially after the scale expansion of the college enrollment. There has been an amazing increase in the number of teachers and students of art education profession. Actually, high art education is meant to cultivate integrated talents who is with advanced thoughts and ideas, creative ability and the requirements to the tendency of the society and art development.

THE DEVELOPING TENDENCY OF ART EDUCATION

Current situation of art education

In the impartment of China’s high art education, art aesthetic approaches, creating tools, and the value of art are always ignored. It leads to the result that art education is a kind of skill, not quality. Art education which major in the grasp of skill is the ignorance of the overall development. In spite of art skills, there is still a lack of the basic art accomplishment in art value, art scanning, and art culture. Besides, elite art education focuses only on the art subject but ignores the mutual relationship between art and other subjects in the aspect of curriculum design. Meanwhile, this kind of elite art education can stimulate students’ self-initiated consciousness, which results in the art cognitive convergence. It makes inhibiting effect on students’ personalized development.

The art education in China, which implies cramming method in teaching, has long been effected by the drawbacks in education. Therefore, the whole learning atmosphere is grave and it hinders the personalized development and the improvement of art creation. Besides, the sole cramming method will restrict students’ thinking on art and make students think that art history is deep in length and has no connection to other natural discipline and social science.

There has been much irrationality in the teaching methods. Teachers only teach knowledge and don’t seek for proper methods. And students just simply receive knowledge from teachers but don’t logically think about how they can get it. There is no doubt that knowledge is important. However, teaching students how to learn can truly train students’ capability and students can development their art field with learning methods based on their own interests.

The courses of the art education in colleges and universities are not reasonable. We can see that from two aspects. One is the simplicity of the courses, which only pays attention to the design of the art major courses instead of including other subjects. The other is the proportion of the courses is not reasonable. In general, the art education consist public elementary courses, major courses and the related practicums. The proportion of the public elementary courses is rather low. The art education pays attention to the practical education but the proportion of practicums is low and the ways are simple.

Besides, there are some other problems existing in art education. For example, we pay attention to the skills while ignoring the theory. The faculty force is not enough and we have less chance to communicate with the international art education.

The tendency of the art education development

The field of the art education is very large. In general, we can say that if something is about vision design then is about the field of art. The aim of the art education is to improve the art skills, in the same time, improve the personal value and the view knowledge. The art education is mainly to improve people's expression and the communication towards the question in art with the help of the learning and cultivating of art.

The foreign art, especially those in European countries, Japan, Korea and so on, have got improved in the art education and the design of the related subjects. In America, the art education system has come into being based on the culture of the country and the unique feature of nation. The art education in America requires students to pay attention to the art and artists in life in order to inspire the divergent thinking and focus on the creativity of art based on the theory. In Japan, the art education focuses on the full scale development of the students and the personal development in art. At the same time, Japan protects its own art culture and communicates with the international countries. So we can see the art education pays attention to the long time and full scale development of the students in art and it can get the support of the government and strong faculty force.

In conclusion, the tendency of the future art education has the following points: 1. The proper view of art, the focus on the humanistic connotations 2. The creativity of students, the improving ability 3. The deep practice in the art education 4. The diversified teaching, the closeness between art and other subjects 5. the individual and the full scale development

THE WAYS FOR THE CONSTRUCTION OF ART EDUCATION

Base on the problems of the art education and the development tendency and in virtue of the foreign art education, this passage brings forth the countermeasures from the aspects of the relevant policies, folk cultures and college's education. The government set up relevant policies to support the art education and the colleges should keep the right view of art, improve the ideas of the education, enhance the faculty forces, diversify the courses, afford the practice and theory lessons of art with the help of the folk culture, improve the relationship between the art and the society.

According to the construction of the art courses, this passage offers some suggestions: 1. Set up the right art education ideas and focus on the education of the humanistic connotations 2. Set up the art discussion, encourage the individual and full scale development 3 increase the class period of the art practice class 4 diversify the content of the courses in a reasonable proportion, and enhance the contact between art and other subjects 5 improve the methods of the education, inspire the divergent thinking and improve the ability of creation We put the last five points of suggestions in schemes. After the great clarity, we analyze them according to the levels and then give the quantized value. Base on the tendency of the art education and the present embezzlement in art education, we construct the scheme of the course as TABLE 1.

TABLE 1 : The construction chart of the art course

Aim	The tendency of the art education development	Countermeasures
The construction of the art courses	The proper view of art, the focus on the humanistic connotations	Set up the right art education ideas
	The creativity of students, the improving ability	Set up art discussions
	Increase the percentage of the internship and practice	Increase the class period of the art practice class
	enhance the contact between art and other subjects	Diversify the content of the course in due proportion
	encourage the individual and full scale development	Improve the methods of the education

HIERARCHY PROCESS

American scholar Saaty raised principles of mathematical analysis on complicated system—the Analytic Hierarchy Process (AHP). This process can transmit the problem to a useful mathematical method in quantitative research. There is four main process in Analytic Hierarchy Process as follow.

Step 1: the found up of the hierarchical structure

The first step in Analytic Hierarchy Process is the structure of the hierarchical, and it mainly include three tiers:

Objective tier (T), the problem to solved in the end.

Standard tier (C_m), the limited condition referenced in goal achievement

Project tier (p_n), make the hierarchical structure as Figure 1 based on TABLE 1.

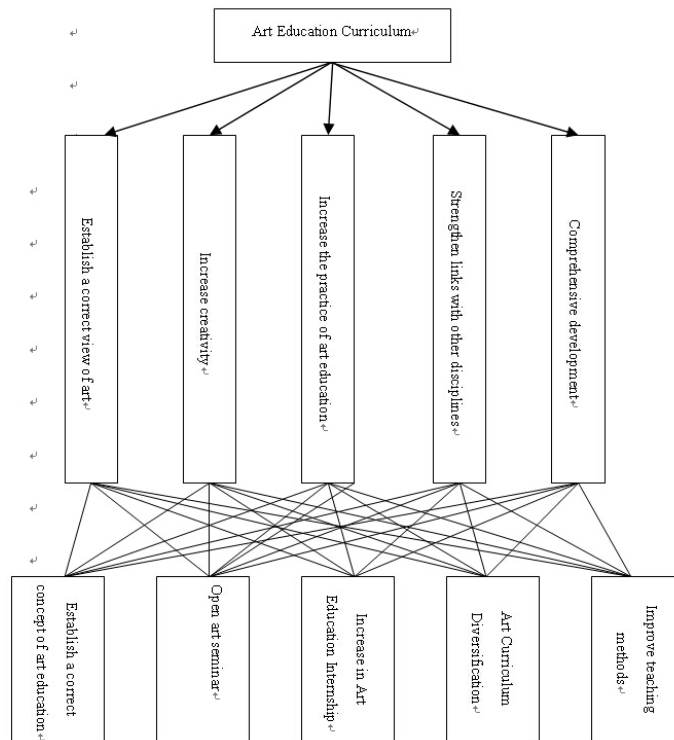


Figure 1 : hierarchical structure

Step 2: construction the judgment matrix

In the hierarchical structure of the system project lies a standard or a target corresponding n conditions $C = (C_1, C_2, \dots, C_n)$ in the last hierarchies. We use a_{ij} to express the result in C_i, C_j significance compare, and put the structure in the form of matrix. Then we can get the judgment matrix as follow.

$$A = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1j} \\ a_{21} & a_{22} & \dots & a_{2j} \\ \vdots & \vdots & \ddots & \vdots \\ a_{i1} & a_{i2} & \dots & a_{ij} \end{pmatrix}$$

And the implications of the numbers is in TABLE 2 as follow.

TABLE 2 : The implications in scale 1~9

Scale	Implications
1	Two factors are the same importance in the target of the last hierarchies
3	One factor is important than the one after it a little
5	One factor is more important than the one after it
7	One factor is very important than the one after it
9	One factor is extremely important than the one after it
Even numbers	The importance is between the two odd numbers
Reciprocal	The order of the comparison among the factors

Step 3: Inspection of the consistency

The CI in Analytic Hierarchy Process implicate the consistency index of the matrix, and CR implicate the consistency rate of the matrix. And only through the inspection, can we compute the consistency of two indexes in the matrix.

$$CI = \frac{\lambda_{\max} - n}{n - 1}$$

The n stand for the order of the judgment matrix.

$$CR = \frac{CI}{RI}$$

The RI stand for the value of the Random Consistency Index in TABLE 3 as follow.

TABLE 3 : Value of RI

n	1	2	3	4	5	6	7	8	9	10	11
RI	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49	1.51

The weight in standard tier is α_m , the weight of the corresponding factor in project tier is β_{nm} , then the weight of the project in the project tier is:

$$w_i = \sum_{j=1}^m \alpha_j \beta_{ij}$$

The consistency rate is:

$$CR = \frac{\sum_{j=1}^m \alpha_j CI_j}{\sum_{j=1}^m \alpha_j RI_j}$$

When $CR \geq 0.1$, the inconsistency of the matrix cannot be accept. When $CR < 0.1$, the inconsistency of the matrix can be accept.

Step 4: Calculation of the weight vector and the eigenvalue of maximum

Calculation of the weight vector. Judge one tier in matrix A have n factors in hypothesis, and n factors are all the factors.

First, normalization all the column vector in A and get the matrix D:

$$D = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & \dots & a_{nn} \end{pmatrix} \bullet \begin{pmatrix} 1/\sum_{i=1}^n a_{i1} & 0 & \dots & 0 \\ 0 & 1/\sum_{i=1}^n a_{i2} & \dots & 0 \\ 0 & \vdots & \ddots & \vdots \\ 0 & 0 & \dots & 1/\sum_{i=1}^n a_{in} \end{pmatrix}$$

Summation in tiers of the matrix:

$$E = D \bullet (1 \ 1 \ \dots \ 1)_{1 \times n}^T$$

$$E = (e_{11} \ e_{12} \ \dots \ e_{1n})^T$$

And normalization matrix E as the weight vector:

$$W = (w_1 \ w_2 \ \dots \ w_n)^T = \left(e_{11} / \sum_{i=1}^n e_{i1} \ e_{12} / \sum_{i=1}^n e_{i2} \ \dots \ e_{1n} / \sum_{i=1}^n e_{in} \right)^T$$

The calculation of the eigenvalue of maximum, the weight vector corresponding the maximum eigenvalue, then we get:

$$AW = \lambda_{\max} W$$

$$\lambda_{\max} = \frac{1}{n} \sum_{i=1}^n \frac{(AW)_i}{w_i}$$

THE HIERARCHY PROCESS IN THE ART EDUCATION ESTABLISHMENT OF THE CURRICULUM

The calculation of the weight in the criterion tier

According to the hierarchical structure in Figure 1, construction the judgment matrix and calculate the criterion weight and the inspection index of the consistency. The result is in TABLE 4 as follow:

TABLE 4 : The result of the criterion tier calculation

T	C ₁	C ₂	C ₃	C ₄	C ₅
C ₁	1	4	4	3	2
C ₂	1/4	1	1	1/2	1/2
C ₃	1/4	1	1	1/2	1/3
C ₄	1/3	2	2	1	1/3
C ₅	1/2	2	3	3	1
W	0.409	0.096	0.088	0.146	0.260
λ			5.116		
CR			0.026		

We can get $CR < 0.1$ in TABLE 4, the passed the inspection. The result shows that the weight of benefit in physical and psychological health is 0.354, the weight of improving the quality of moral education is 0.161, the weight of improving ability to resist sharp competition is 0.132, and the weight of inherit the Wushu culture is 0.354.

The weight of the project tier and the confirm of the execute solution

Construction the judgment matrix base on different projects for the importance comparison to the criterion tier, and make the consistency inspection. Then, calculate the weight in the project tier, construction reasonable project to implement the measures as TABLE 5-9.

TABLE 5 : The importance weight of project P to criterion C₁

C ₁	P ₁	P ₂	P ₃	P ₄	P ₅
P ₁	1	7	3	8	2
P ₂	1/7	1	1/3	1	1/3
P ₃	1/3	3	1	2	1/2
P ₄	1/8	1	1/2	1	1/4
P ₅	1/2	3	2	4	1
W	0.474	0.066	0.150	0.065	0.245
λ			5.04		
CR			0.009		

TABLE 6 : The importance weight of project P to criterion C₂

C ₂	P ₁	P ₂	P ₃	P ₄	P ₅
P ₁	1	1/6	2	1/2	1/4
P ₂	6	1	9	4	2
P ₃	1/2	1/9	1	1/3	1/5
P ₄	2	1/4	3	1	1/2
P ₅	4	1/2	5	2	1
W	0.077	0.481	0.047	0.135	0.260
λ			5.03		
CR			0.006		

TABLE 7 : The importance weight of project P to criterion C₃

C ₃	P ₁	P ₂	P ₃	P ₄	P ₅
P ₁	1	1/2	1/5	3	1
P ₂	2	1	1/2	5	3
P ₃	5	2	1	9	5
P ₄	1/3	1/5	1/9	1	1/2
P ₅	1	1/3	1/5	2	1
W	0.115	0.249	0.491	0.048	0.096895
λ			5.03		
CR			0.007		

TABLE 8 : The importance weight of project P to criterion C₄

C ₄	P ₁	P ₂	P ₃	P ₄	P ₅
P ₁	1	1/3	3	1/4	3
P ₂	3	1	5	1/2	5
P ₃	1/3	1/5	1	1/8	1
P ₄	4	2	8	1	7
P ₅	1/3	1/5	1	1/7	1
W	0.134	0.287	0.054	0.470	0.055442
λ			5.06		
CR			0.014		

TABLE 9 : The importance weight of project P to criterion C₅

C ₅	P ₁	P ₂	P ₃	P ₄	P ₅
P ₁	1	3	5	7	1/3
P ₂	1/3	1	2	2	1/9
P ₃	1/5	1/2	1	3	1/6
P ₄	1/7	1/2	1/3	1	1/9
P ₅	3	9	6	9	1
W	0.258	0.088	0.076	0.040	0.538549
λ			5.233		
CR			0.052		

The inspection value of every judgment matrix $CR < 0.1$, and combine the consistency inspection value $CR < 0.1$. Therefore, the consistency of the analytical hierarchy process judgment matrix met with the calculation request. We calculate the final weight of the project through the total rank as TABLE 10.

TABLE 10 : Total weight of Project tier

Standard tier	Project tier	weight	Rank of Project weight
The construction of the art courses	Set up the right art education ideas	0.29	1
	Set up art discussions	0.17	3
	Increase the class period of the art practice class	0.15	4
	Diversify the content of the course in due proportion	0.17	3
	Improve the methods of the education	0.27	2

CONCLUSION

We can conclude from the construction of the art courses project through the analytical hierarchy process that the comprehensive advantage project in the construction of the curriculum project is set up the right art education ideas and improve the methods of the education. The sum of the weight in both of them is 0.56. And in consideration of the comprehensive advantage of them, we should pay attention to set up the right education ideas and improve the methods of the education firstly, and diversify the content of the course in due proportion, set up art discussions wildly, increase the class period of the practice class secondly.

According to the disadvantage of the art education in current situation, and also reference to the art development abroad, we summarized the tendency of art education development. We analyzed the art

courses in mathematic method, based on the tendency of art education. And we have the conclusion of set up the right art education ideas, improve the methods of the education, diversify the content of the course in due proportion, set up art discussions, and increase the class period of the art practice class can help the art education catch the step of the tendency of art education development. And we also made an emphasis calculation to the five advised project in construction of the courses, and get the weights of the five advises, provided the references to the construction of the art courses.

REFERENCES

- [1] Xiao Huan-yu, Weng Zhi-qiang, Chen Yu-zhong; Basic Characteristics of Social and Sports Population Structures of Contemporary China. *Journal of Shanghai Physical Education Institute*, **29(2)**, 10-14 (2005).
- [2] Xiao Huan-yu, Fang Li; Concept, Classification and Statistical Criteria of Sports Population. *Sports Science Research*, **26(1)**, 7-10 (2005).
- [3] Miao Zhi-wen, Qin Chun-lin; Sociological analysis of contemporary Chinese sports population structures. *Journal of Physical Education*, **13(1)**, 119-121 (2006).
- [4] Yan De-yi; Development of sports for all under circumstance of building well-off society. *Journal of Wuhan Institute of Physical Education*, **40(1)**, 15-19 (2006).
- [5] Guo Hong; Summary on Chinese Sports Population Research since 1980s. *China Sport Science and Technology*, **43(3)**, 36-40 (2007).
- [6] Li Hong, Xue Hai-hong, Feng Wu-long; Sociological Analysis of Comparison of Chinese Population with the Sports Population of Chinese. *Journal of Xi'an Institute of Physical Education*, **24(4)**, 25-28 (2007).
- [7] Chen Po, Qin Zhong-Mei, Yin Ying, Xia Chong-De; Correlation Analysis of Current Situation of Regional Athletics Sports Development and Society Population Structure in China. *Journal of Beijing Sport University*, **30(12)**, 1610-1613 (2007).
- [8] Xue Jin-xia, Wang Jing-tong; Analysis on Development Level of Competitive Sports of Eastern China in the "Eleventh Five-Year" Period. *Bulletin of Sport Science & Technology*, **19(4)**, 57-59 (2011).
- [9] Li Lin, Yang Jie, Yang Tian, Xu Lie-hui; A Research on the Sustainable Development of Evaluation Index System of Regional Sports Industry. *Journal of Beijing Sport University*, **9**, (2010).