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Dance event aesthetic and aesthetic education value analysis

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ABSTRACT

For dance such sports event research, muscle selection in performance and dance compilation perfect fused event, it mainly tests sportsman aesthetic ability, and therefore the paper makes research according to aesthetic ability. The paper carries out weight analysis of dance from spirit of cooperation, fitness, aesthetic values and innovation capacity four aspects, and gets dance aesthetic value weight, aesthetic education value occupies 44.5%, while physical value occupies 40.0%. Of course, dance also owns certain entertainment values, by weight result, it illustrates that to dance such sports event, and aesthetic education value occupies great proportions. Any art development cannot do without social concerns, it hope that more people to participate in, focus on dance, focus on such art, and give new interpretation with new perspective.

KEYWORDS

Dance; Aesthetic education; Aesthetic education value; AHP analysis; Physiological function.



INTRODUCTION

Competitive sports divide into physical ability and technology, especially for technological sports that have higher atmosphere of aesthetics. In competitive sports, dance and others particularly reflect aesthetic education values importance. Dance mainly spreads in the folk, is used for people’s body building and character molding. Therefore motions of them are mostly simple and easy to learn, and rhythm is slower, is adapt to people of all ages. It’s mainly types can divide into aero-latino, hip-hop, kickboxing, soft dance and aerobics and so on.

Dance is a kind of performing arts that expresses emotions by human body motions, “dance appreciation” takes dances performing works as main appreciation objects, is a kind of aesthetic activity that is generated by appreciators through appreciating works displayed human body dynamic beauty. Dance appreciation course fits for university students’ characteristics and hobbies, and also is a kind of health and elegant artistic activity that is full of education significance, so is loved by universities students. It can be regarded as an important path that higher learning institutions aesthetic education implementation, it has very important significances in promoting university students aesthetic taste, artistic culture, spirit of innovation and practical ability.

By lots of classic dance works appreciation and dance art practical training, it can promote students’ dance aesthetic ability, build students’ own aesthetic feelings, and let students’ comprehensive strength to be comprehensive promoted.

MODEL ESTABLISHMENTS

Aesthetic analysis of dance

Firstly the paper carries out research on aesthetic level and physical exercises contained factors according to dance such sports event, as TABLE 1 shows.

TABLE 1 : Contained factors

Aesthetic level U_1	Physical training U_2
Formation design u_{11}	Endurance u_{21}
Music aesthetics u_{12}	Flexibility u_{22}
Motion aesthetics u_{13}	Strength u_{23}
Team uniform design u_{14}	Speed u_{24}
Members training u_{15}	

It gets factor set, result is as TABLE 2:

$$U_1 = \{u_{11}, u_{12}, u_{13}, u_{14}\}$$

$$U_2 = \{u_{21}, u_{22}, u_{23}, u_{24}\}$$

TABLE 2 : Two principal research factors importance degrees ranking statistics

Classification	Rank 1	Rank 2	Rank 3	Rank 4
Aesthetic level U_1	23	7	4	0
Physical training U_2	0	9	13	12

It gets evaluation set:

$$U_1 = \{23, 7, 4, 0\}$$

$$U_2 = \{7, 18, 8, 0\}$$

Therefore, aesthetic level in dance such event, aesthetic value is relative recognized.

Fuzzy evaluation model establishment

This paper adopts fuzzy comprehensive evaluation, it considers multiple factors on that condition, to realize objective layer, and it establishes factor set, judgment set, and constructs evaluation indicator system. Set performance measuring indicator system evaluation set U and selection ranking domain V.

Apply the method, establish evaluation set:

$$U = \{U_1, U_2\}$$

$$U_1 = \{U_{11}, U_{12}, U_{13}, U_{14}, U_{15}, U_{16}\}$$

$$U_2 = \{U_{21}, U_{22}\}$$

According to general evaluation system, define selection ranking domain:

$$V = \{V_1, V_2, V_3, V_4, V_5\} = \{\text{excellent}, \text{good}, \text{medium}, \text{qualified}, \text{bad}\}$$

Construct hierarchical structure

The paper bases on analytic hierarchy process, it makes quantization on dance. Establish target layer, criterion layer and scheme layer relations.

Target layer: Technological sports event.

Criterion layer: scheme influence factors, c_1 is physical exercise, c_2 is spirit of cooperation, c_3 is aesthetic ability, c_4 is innovation capacity.

Scheme layer: A_1 is aesthetic education value, A_2 is physical value, A_3 is entertainment value, it gets hierarchical structure.

Construct judgment (paired comparison) matrix

The paper takes TABLE 3 showed 1~9 scale table as evidence, carry out weight analysis.

TABLE 3 : 1-9 scale table

Scale a_{ij}	Definition
1	factor i and factor j have equal importance
3	factor i is slightly more important than factor j
5	factor i is relative more important than factor j
7	factor i is extremely more important than factor j
9	factor i is absolute more important than factor j
2 4 6 8	Indicates middle state corresponding scale value of above judgments
Reciprocal	If factor i and factor j are relative weak, obtained judgment is reciprocal

At first, solve judgment matrix, according to above principle, reference 1~9 scale setting, and according to experts experiences and refer to lots of documents, it gets paired comparison matrix that are respective as TABLE 4-6.

TABLE 4 : Comparison matrix one

G	c_1	c_2	c_3	c_4
c_1	1	1/3	3	3
c_2	31/8	1	5	5
c_3	1/3	1/5	1	1
c_4	1/3	1/5	1	1

TABLE 5 : Comparison matrix two

c_1	A_1	A_2	A_3	c_2	A_1	A_2	A_3
A_1	1	1	1/3	A_1	1	5	5
A_2	1	1	1/3	A_2	1/5	1	5
A_3	3	3	1	A_3	1/5	1/5	1

TABLE 6 : Comparison matrix three

c_3	A_1	A_2	A_3	c_4	A_1	A_2	A_3
A_1	1	5	8	A_1	1	5	8
A_2	1/5	1	5	A_2	1/5	1	5
A_3	1/8	1/5	1	A_3	1/8	1/5	1

Hierarchical single arrangement and its consistency test

Use consistency indicator to test :

In assumed comparison matrix, λ_{max} is maximum feature value, n is comparison matrix order:

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

CI Value gets smaller; it indicates that judgment matrix gets closer to completely consistent. CI gets bigger, then it shows that known degree is lower.

Consistency test

Hierarchical single arrangement and its consistency test. Use consistency indicator to test : $CI = \frac{\lambda_{max} - n}{n - 1}$. Among

them, λ_{max} is comparison matrix maximum feature value; n is order of comparison matrix. CI value gets smaller, and then judgment matrix gets closer to complete consistency. On the contrary, judgment matrix deflected complete consistency degree will get bigger as TABLE 7.

TABLE 7 : RI value

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

(1) For judgment matrix A , $\lambda_{max}^{(0)} = 4.073, RI = 0.9$

$$CI = \frac{4.075 - 4}{4 - 1} = 0.23$$

$$CR = \frac{CI}{RI} = \frac{0.23}{0.90} = 0.026 < 0.1$$

It shows A inconsistency extent is within permissible range, now it can use A feature vector to replace weight vector.

Fuzzy consistency judgment matrix construction

Carry out binary comparison with indicator C_i and C_j , as following shows:

If $C_i < C_j$, it takes $r_{ij}=1, r_{ji}=0$;

If $C_j > C_i$, it takes $r_{ij}=0, r_{ji}=1$;

If $C_i = C_j$, it takes $r_{ij} = r_{ji} = 0.5$.

(1) Firstly for criterion B_1 , it provides its included 8 indicators to important binary comparison qualitative permutation matrix as:

$$R = \begin{bmatrix} 0.5 & 0 & 0.5 & 1 & 1 & 1 \\ 1 & 0.5 & 1 & 1 & 1 & 1 \\ 0.5 & 0 & 0.5 & 1 & 1 & 1 \\ 0 & 0 & 0 & 0.5 & 0.5 & 1 \\ 0 & 0 & 0 & 0.5 & 0.5 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0.5 \end{bmatrix}$$

According to theorem, it tests matrix, it solves each indicator weight :

$$R_1 = \begin{bmatrix} 0.5 & 0 & 0.5 & 1 & 1 & 1 \\ 1 & 0.5 & 1 & 1 & 1 & 1 \\ 0.5 & 0 & 0.5 & 1 & 1 & 1 \\ 0 & 0 & 0 & 0.5 & 0.5 & 1 \\ 0 & 0 & 0 & 0.5 & 0.5 & 1 \\ 0 & 0 & 0 & 0 & 0 & 0.5 \end{bmatrix}$$

According to established relative membership relation, the paper gets relative membership vector:

$$\omega_{10} = (0.7 \ 1 \ 0.7 \ 0.36 \ 0.36 \ 0.09)$$

After normalization:

$$\omega_1 = (0.22 \ 0.31 \ 0.22 \ 0.11 \ 0.11 \ 0.03)$$

(2) For criterion B_2 :

$$R_2 = \begin{bmatrix} 0.5 & 1 \\ 0 & 0.5 \end{bmatrix}$$

$$\omega_{20} = (1 \ 0.33)$$

After normalization:

$$\omega_2 = (0.75 \ 0.25)$$

(3) Relative to objective layer A, for criterion layer B, it provides binary comparison ordered consistency judgment matrix :

$$R = \begin{bmatrix} 0.5 & 1 \\ 0 & 0.5 \end{bmatrix}$$

$$\omega = (1 \ 0.33)$$

After normalization:

$$\omega = (0.75 \ 0.25)$$

(4)Synthesize (1)—(3) calculation indicator to objective layer weight q_{ij} :

$$q_{ij} = \omega_i * \omega_{ij} \text{ (when } i = 1; j = 1, 2, 3, 4, 5, 6 \text{ ; when } i = 2, j = 1, 2)$$

Calculate weight comprehensive ordering vector

At first, calculate all experts provided judgment matrix weight vectors. According to multiple experts provided judgment matrix:

$$Ak = (\alpha k_{ij})_{n \times n},$$

According to above steps, establish weight vector:

$$wk = \{w_{k1}, w_{k2}, w_{k3}, \dots, w_{kn}\} (k = 1, 2, \dots, x)$$

Here, k represents one expert from them, x represents total number of experts, j represents one objective layer one indicator, n is total number of one objective layer indicators.

Again, calculate weight vector geometrical mean, according to formula:

$$W'j = \sqrt{W_{f1} \times W_{f2} \times \dots \times W_{fx}}$$

Among them, $W'j$ is x pieces of experts to some objective layer some indicator empowered weight value geometric mean.

Make normalization handling, according to formula:

$$w_j = \frac{w'f}{\sum_{j=1}^n W'f}$$

Among them, $W'j$ is some objective layer j indicator weight value after normalization handling with geometric mean. Therefore it gets weights that is composed of $W'j$, it gets hierarchical total arrangement TABLE, as Figure 1 show.

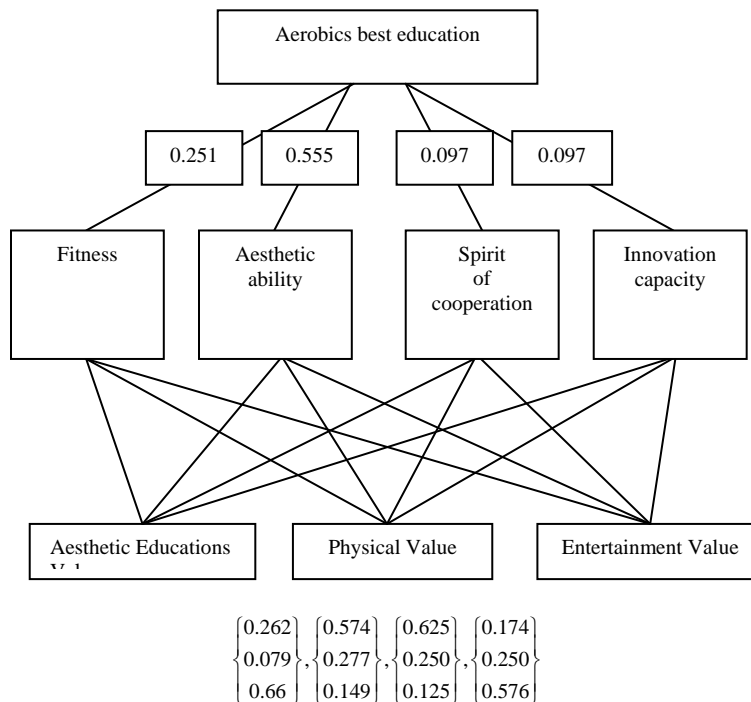


Figure 1 : Hierarchical structure chart

Calculation result is as following:

$$\omega^{(1)} = (\omega_1^{(1)}, \omega_2^{(1)}, \omega_3^{(1)}, \omega_4^{(1)})$$

$$= \begin{Bmatrix} 0.624 & 0.185 & 0.252 & 0.575 \\ 0.234 & 0.240 & 0.089 & 0.286 \\ 0.136 & 0.575 & 0.66 & 0.139 \end{Bmatrix}$$

It gets weight structure:

$$w = w^{(1)} w^{(0)}$$

$$= \begin{Bmatrix} 0.252 & 0.575 & 0.624 & 0.185 \\ 0.089 & 0.286 & 0.240 & 0.240 \\ 0.66 & 0.139 & 0.136 & 0.575 \end{Bmatrix} \begin{Bmatrix} 0.567 \\ 0.056 \\ 0.104 \\ 0.273 \end{Bmatrix}$$

$$= \begin{Bmatrix} 0.443 \\ 0.400 \\ 0.155 \end{Bmatrix}$$

CONCLUSION

Dance is a kind of aerobic exercise, and combines music with dance, it can promote participants physical and psychological as well as morality quality, especially can cultivate a person aesthetic standard and value. At present in dance, China puts special emphasis on dance motions compilation and innovation, and focuses on cultivating athletes' team ability, innovation ability and aesthetic ability. And combine with music and other fashion elements; make organic combination between sports and fashion. The paper carries out weight analysis of dance from spirit of cooperation, fitness, aesthetic values and innovation value four aspects, and gets dance aesthetic value weight, aesthetic education value occupies 44.5%, while physical value occupies 40.0%. Of course, dance also owns certain entertainment values, by weight result, it illustrates that to dance such sports event, and aesthetic education value occupies great proportions.

Dance is an art that is adept in expressing people's emotion, it has larger limitation in narrating things concrete concept aspect, and dance drama required to reflect certain drama contents that requires dance to have certain narrative ability. How to solve the contradiction, let them to arrive at unity of opposites is the key to dance drama creation can be succeeded or not. Therefore, it requires: on one hand, in talents selection it should properly consider dance expressive force limitation, don't arrange excessive deviated and complicated plots and tedious contents; on the other hand, it is required to have higher generalized, compact and concentrated features in dance drama artistic structure than other dramas forms, focus on plots and stories development and characters actions, put emphasis on detailed and profound description on characters' thoughts and feelings as well as inward world.

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