

## **Multi-Attribute Fuzzy Evaluation of the Teaching Quality of Dancesport Major**

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**Abstract**—The teaching quality of dancesport is affected by multiple factors. Facing uncertain information, there is not yet a perfect indicator system to evaluate the teaching quality of dancesport. This paper attempts to develop a multi-attribute fuzzy evaluation model for dancesport teaching quality. Firstly, the connotations of dancesport teaching quality were identified through theoretical analysis. Next, the evaluation indicator system for dancesport teaching quality was improved based on the connotations. After that, a multi-attribute fuzzy evaluation model was established, drawing on fuzzy theory and grey system theory. Finally, several suggestions were presented to improve the teaching quality of dancesport. The research results provide an effective way to accurately measure dancesport teaching quality.

**Keywords**—Teaching quality, dancesport, fuzzy analysis, multiple attributes

### **1 Introduction**

With the continuous development and progress of modern society, the development pace of modern education is constantly accelerating; in particular, the continuous deepening of quality-oriented education makes modern education lay more emphasis on the development of quality-oriented education [1-4]. As an important part of modern education, dancesport plays an important role in promoting the quality-oriented education, and the teaching quality of dancesport major has gradually become an important feature of the quality of quality-oriented education [5-7]. However, since the teaching process of dancesport major is affected by many influencing factors, the improvement of its teaching quality is subject to certain restrictions. How to effectively measure and analyze the teaching quality of dancesport and other similar majors, and how to improve the corresponding teaching quality on this basis, have attracted the attention of many scholars. For example, Zhang [8] analyzed the reform of college dancesport teaching from the perspective of the new curriculum standards, which not only enhances the teaching effect and quality of the courses, but also improves the physical quality of students. Peng [9] analyzed the relevant factors restricting college dancesport teaching under the background of "Internet+", and discussed the corresponding development strategies. Forey and Cheung [10] discussed the benefits brought by explicit language teaching in PE class to the PE curriculum learning, and their research provides a

reference for the improvement of the teaching quality of dancesport . Guijarro-Romero et al. [11] analyzed whether students' initiative in sports would affect fitness teaching, and the research has a guiding significance for promoting the teaching quality of dancesport . Wu and Xu [13] analyzed the current status of college dancesport teaching, and discussed ways to improve the teaching quality of dancesport . Chen [13] researched and analyzed the path to improve the teaching quality of PE teachers under the background of "Internet+", which has good reference significance for improving the teaching quality of dancesport . However, it can be seen that the measurement and analysis of the teaching quality of dancesport is a complex systematic project. Its processing process involves many influencing factors, and these factors often have the characteristics of dynamic development and fuzzy uncertainty. Therefore, there're still rooms for the further research on how to establish an effective new measurement and analysis system to realize the processing of fuzzy information in the process of measurement and analysis of the teaching quality of dancesport . To this end, from the perspective of theoretical analysis, this paper explored the dancesport teaching quality measurement and analysis indicator system based AHP [14-15], fuzzy theory [16-17] and gray theory [18-19], and proposed a quantitative analysis model.

The research content of this paper consisted of 5 parts. The first part gave an overview of the related issues of the research on dancesport teaching quality. The second part explored the connotations of dancesport teaching quality and analyzed its essential content. The third part studied the multi-attribute fuzzy measurement of dancesport teaching quality. The fourth part discussed the ways and methods to improve the dancesport teaching quality. The fifth part gave the conclusions.

## **2 Connotations of Dancesport Teaching Quality**

In order to clearly understand the essential content of dancesport teaching quality, it is necessary to conduct an in-depth analysis of the connotations of the teaching quality of dancesport major. The author believes that dancesport teaching quality should be able to reflect the multiple aspects such as the teaching planning and organization ability, basic professional ability, teaching implementation ability, and teaching reform ability, etc.

### **2.1 Teaching planning and organization ability of dancesport major**

In terms of discipline setting, dancesport is essentially an interdisciplinary major with interdisciplinary and comprehensive characteristics; therefore, its curriculum setting should comprehensively consider the fusion, crossover and development of sports and dance knowledges. In terms of the professional characteristics of PE and dance major, the teaching of professional courses not only requires a high theoretical level, but also demands high practicality. Therefore, the course teaching process of the dancesport major has a higher requirement for the combination of theoretical knowledge and practical skills. During the course teaching process of dancesport major, it's necessary to well plan and arrange the teaching process. However, in the arrangement and

planning of the teaching content of dancesport major, inevitably, many influencing factors are involved in the process, including not only human factors, material factors, and financial factors, but also management factors, teaching factors, and social service factors, and other aspects. It can be seen that in order to make the dancesport teaching quality be at a higher level, it is necessary to solve the teaching planning and organization problems of dancesport major, so that professional teachers can have good ability in planning and organizing the teaching of dancesport major. In terms of teachers' teaching, a good ability in planning and organizing the teaching of dancesport major requires the professional teachers to have advanced teaching concepts, and be able to keep up with the needs of the development of the times within the scope of their professional fields; with the support of the advanced teaching concepts, they should be able to well arrange the teaching tasks of professional courses, formulate clear teaching goals of the dancesport major, form scientific and reasonable syllabus and teaching plans, thereby constructing a set of curriculum teaching planning system for dancesport major that is scientific, professional, holistic, systematic and developmental. From the above-mentioned logical relationships, it can be seen that a good teaching concept is conducive for dancesport teachers to form teaching goals and syllabus that meet the characteristics of the development of the times, and then formulating adaptable teaching schemes for dancesport major, thereby providing important supports for the construction of dancesport major curriculum teaching planning system, which plays a very important role in improving the teaching quality of dancesport major.

## **2.2 Basic professional ability of dancesport major**

The course teaching of dancesport major requires the teachers not only to have good teaching planning and organization ability, but also solid and good basic professional abilities in dancesport teaching. For dancesport teachers, a high-level basic professional teaching skill is not only the basic guarantee for the smooth implementation of teaching plans, but also a necessary condition for them to complete the teaching tasks in accordance with quality and quantity requirements. From the perspective of cultivating professional talents, teachers with a higher level of basic professional skills in dancesport teaching tend to be able to cultivate professionals with more solid professional knowledge and broader professional vision, which mean that the professional talents they trained are of higher qualities, and this also reflects that these teachers have higher teaching quality. Generally speaking, for a dancesport teacher, on the one hand, a higher level basic professional ability can reflect that he/she has higher professional literacies, and his/her understanding and mastery of professional knowledge have reached a higher level; having a deep understanding of professional knowledge enables dancesport teachers to be more fluent in the process of knowledge imparting, and to grasp the key points, difficult points, and development trend of the professional courses; on the other hand, a higher level basic professional ability also reflects a dancesport teacher's ability in teaching expression; for teachers with same professional knowledge reserves, those with better teaching expression ability are often able to impart professional knowledge more fully, comprehensively, and thoroughly, making it easier for students to absorb the professional knowledge. On the contrary, a poor ability in teaching expression is

not conducive for dancesport teachers to impart professional knowledge, which also hinders students' absorption and digestion of professional knowledge, and thus resulting in low teaching quality of professional courses. As a result, in terms of the above-mentioned perspective, it's necessary to pay more attention to the training and introduction of high-level and highly educated dancesport teachers, the cultivation of dancesport faculty, and the diversification of professional teachers, thereby enhancing the dancesport teachers' ability in undertaking teaching and scientific research tasks.

### **2.3 Teaching implementation ability of dancesport major**

The teaching planning and organization ability, and the basic professional ability of dancesport teachers emphasize more on the preparation of the teaching implementation of dancesport courses; while the teaching implementation ability focuses on the teaching implementation process of dancesport courses. If the former two abilities are important conditions for ensuring the high teaching quality of dancesport major, then the third ability, namely the teaching implementation ability, is an essential condition for ensuring the high teaching quality of dancesport major. Without a good ability in teaching implementation of dancesport major, we cannot cultivate senior talents that can meet the teaching goals of dancesport major, which also directly reflects that the teaching of dancesport major is still at a relatively low level. Since the teaching implementation ability of dancesport major mainly focuses on the implementation process of teaching, all the links involved in the teaching implementation process are the key factors affecting the teaching quality of dancesport major, such as the selection of the teaching methods, the setting of teaching content, the application of teaching tools, the selection of teaching forms, the formulation of teaching assessment mechanisms, the cultivation of teaching atmosphere, and the feedback of teaching information, etc., it can be seen that scientific and reasonable teaching methods, tools, forms and assessment mechanism, rich and diverse teaching content, active and enthusiastic teaching atmosphere, and full and timely teaching feedback are all conducive to the improvement of the teaching implementation ability of dancesport major.

### **2.4 Teaching reform ability of dancesport major**

In the teaching process of dancesport major, due to the continuous development and enrichment of subject knowledge and professional content, the teaching content is constantly changing and enriching as well; especially with the rapid development of modern social science and technology, many intelligent education technologies have begun to be developed and applied in modern education, making the teaching of dancesport major has an increasingly stronger requirement for the teaching reform. It can be seen that due to the continuous development of society and the advancement of science and technology, the curriculum setting of dancesport major is essentially a dynamic development process, that is to say, the course teaching of the dancesport major needs to reform and change with social needs continuously, so that it can more effectively conform to the training goals of modern society for dancesport professionals. The content of the teaching reform reflected in dancesport major reform has many aspects, including

the improvement of teaching planning and organizational ability of dancesport major, the improvement of basic professional ability of dancesport major, and the improvement of teaching implementation ability, and other implementation links, etc. For instance, in different development eras, the teaching concepts of dancesport major are different; with the continuous progress of the times, the teaching concepts get closer and closer to the human-oriented nature, and pay more attention to the cultivation of quality professionals. In different development eras, due to the development and in-depth application of intelligent technology, the teaching methods, forms, contents, and tools of dancesport major are bound to be different, and they are constantly developing and improving with the advancement of the society. In different development eras, the social service properties of the dancesport major are different as well, they need to combine with the requirements of current social development to make corresponding improvements.

In addition, in the dynamic development eras, the teaching reform of dancesport major generally focuses on the following issues during the teaching implementation process, including whether the construction of dancesport major teaching materials and high-quality courses can be carried out scientifically and reasonably; whether the dancesport major has undertaken some teaching reform programs and scientific research programs with important research values; whether the dancesport major has attached importance to the teaching-research integration analysis with application value and prospect; and whether the course teaching of dancesport major has paid attention to the combination of theory and practice, etc. All these issues play an important role in improving the teaching quality of dancesport major.

### **3 Multi-Attribute Fuzzy Measurement Analysis of Teaching Quality of Dancesport Major**

#### **3.1 Selection principle of indicators for fuzzy measurement analysis**

Since the measurement analysis of the teaching quality of dancesport major is a complex systematic project, many influencing factors are involved in the process of system analysis. Obviously, it is unrealistic to take all these influencing factors as measurement indicators, and it is also quite difficult to effectively divide these influencing factors. For this reason, in the measurement analysis of the teaching quality of dancesport major, it needs to select the measurement indicators scientifically and reasonably, so that the analysis results are more accurate and reliable. This study holds that the selection of indicators for the measurement analysis of the teaching quality of dancesport major should follow the following principles:

1. The scientific principle, that is, the selection of indicators should be scientific, it should conform to the national or social regulations and related policies on the curriculum setting of dancesport major, the indicators should have clear scientific meanings, and they should be rational, scientific, and normative.

2. The objective principle, that is, the selection of indicators should conform to the objective conditions of the measurement analysis, and be able to reflect the facts objectively and accurately; and the selection of indicators must not be based on the subjective assumptions held by the analyst.
3. The comprehensive principle, that is, the selected indicators should be able to analyze the teaching quality of dancesport major from multiple levels, angles, and aspects; and they should have good integrity and completeness.
4. The typical principle. Since there are many influencing factors in the measurement analysis, taking all factors as indicators would make the measurement analysis process extremely complex, moreover, it's also not conducive to obtaining accurate measurement and analysis results. Therefore, in the actual analysis process, only indicators with greater influence, higher representativeness, and better orientation are usually selected for the measurement analysis.
5. The quantified principle, that is, the selected indicators should be easily operated and can perform quantitative analysis on measurement indicators of various forms.

### 3.2 Construction of fuzzy measurement indicator system for the teaching quality of dancesport major

Based on the above analysis, the paper holds that the fuzzy measurement indicator system for the teaching quality of dancesport major should include five parts, namely the measurement system of the teaching planning and organization ability of dancesport major, the measurement system of the basic professional ability of dancesport major, the measurement system of the teaching implementation ability of dancesport major, the measurement system of the teaching reform ability of dancesport major, and the measurement system of the teaching results of dancesport major. The specific content is as follows:

#### 1. Measurement system of teaching planning and organization ability of dancesport major:

This system mainly investigates a subject's teaching preparation situation and planning ability of dancesport courses, the specific content is shown in Table 1.

**Table 1.** Measurement indicators of teaching planning and organizational ability of dancesport major

First-grade indicator	Mark	Second-grade indicator	Mark
Teaching planning and organization ability of dancesport major	C1	Advanced teaching idea	c11
		Clear teaching goal	c12
		Standard syllabus	c13
		Systematic teaching scheme	c14
		Scientific teaching task	c15
		Reasonable course content planning	c16
		Effective curriculum structure	c17

**2. Measurement system of basic professional ability of dancesport major:**

This system mainly investigates a subject’s professional quality and skills of dancesport , the specific content is shown in Table 2.

**Table 2.** Measurement indicators of basic professional ability of dancesport major

First-grade indicator	Mark	Second-grade indicator	Mark
Basic professional ability of dancesport major	C <sub>2</sub>	Professional knowledge reserve ability	C <sub>21</sub>
		Teaching management ability	C <sub>22</sub>
		Faculty construction ability	C <sub>23</sub>
		Professional quality improvement ability	C <sub>24</sub>
		Coordination and organization ability	C <sub>25</sub>
		Insight and innovation cultivation ability	C <sub>26</sub>
		Skill and technical movement teaching ability	C <sub>27</sub>
		Language expression ability	C <sub>28</sub>
		Rhythm and musical sense training ability	C <sub>29</sub>

**3. Measurement system of teaching implementation ability of dancesport major:**

This system mainly investigates a subject’s performance in the course teaching process of dancesport major, the specific content is shown in Table 3.

**Table 3.** Measurement indicators of teaching implementation ability of dancesport major

First-grade indicator	Mark	Second-grade indicator	Mark
Teaching implementation ability of dancesport major	C <sub>3</sub>	Rich teaching content	C <sub>31</sub>
		Advanced teaching methods	C <sub>32</sub>
		Diverse teaching tools	C <sub>33</sub>
		Innovative teaching forms	C <sub>34</sub>
		Rational teaching assessment mechanism	C <sub>35</sub>
		Active teaching atmosphere	C <sub>36</sub>
		Adequate teaching information feedback and interactive communication	C <sub>37</sub>
		Control of teaching progress	C <sub>38</sub>
		Completion of teaching goals	C <sub>39</sub>

**4. Measurement system of teaching reform ability of dancesport major:**

This system mainly investigates a subject’s ability to innovate and improve the course teaching of dancesport major, the specific content is shown in Table 4.

**Table 4.** Measurement indicators of teaching reform ability of dancesport major

First-grade indicator	Mark	Second-grade indicator	Mark
Teaching reform ability of dance sport major	C <sub>4</sub>	Improvement of teaching mode	C <sub>41</sub>
		Improvement of social service	C <sub>42</sub>
		Combination of Industry-University-Research	C <sub>43</sub>
		Integration of smart education technology	C <sub>44</sub>
		Improvement of teaching philosophy	C <sub>45</sub>
		Ability to undertake teaching reform programs	C <sub>46</sub>
		Ability to undertake scientific research programs	C <sub>47</sub>

**5. Measurement system of teaching results of dancesport major:**

This system mainly investigates a subject’s performance and achievement in the course teaching of dancesport major, the specific content is shown in Table 5.

**Table 5.** Measurement indicators of teaching results of dancesport major

First-grade indicator	Mark	Second-grade indicator	Mark
Teaching results of dancesport major	C <sub>5</sub>	Qualified rate of dancesport students	c51
		Excellent rate of dancesport students	c52
		Cultivation of students’ innovation ability in professional skills	c53
		Teaching and research awards	c54
		Social satisfaction	c55
		Student satisfaction	c56
		Improvement of students' social service ability	c57
		Cultivation of students' autonomous learning ability	c58

**3.3 Processing of fuzzy measurement indicators of the teaching quality of dancesport major**

Because the fuzzy measurement indicators of the teaching quality of dancesport major often contain uncertain information, the obtained indicator values might be fuzzy, therefore, from a general perspective, it’s assumed that there are *m* evaluation objects to be subject to the fuzzy measurement, and the number of measurement indicators is *n*, then the value of measurement indicator *j* with respect to evaluation object *i* is  $v_{ij} = [v_{ij}^a, v_{ij}^b]$ ,  $v_{ij}^a \leq v_{ij}^b$ . Taking into account the type of measurement indicators, if it is a benefit-type indicator, then after the scale is unified, its value  $u_{ij}$  is:

$$u_{ij} = [u_{ij}^a, u_{ij}^b] = \left[ \frac{v_{ij}^a - v_j(\min)}{v_j(\max) - v_j(\min)}, \frac{v_{ij}^b - v_j(\min)}{v_j(\max) - v_j(\min)} \right] \tag{1}$$



where,  $v_j(max)$  and  $v_j(min)$  represent the maximum and minimum values of the measurement indicator  $j$ .

If it is a cost-type indicator, after the scale is unified, the corresponding value  $u_{ij}$  is:

$$u_{ij} = [u_{ij}^a, u_{ij}^b] = \left[ \frac{v_j(\max) - v_{ij}^b}{v_j(\max) - v_j(\min)}, \frac{v_j(\max) - v_{ij}^a}{-v_j(\min)} \right] \quad (2)$$

It can be seen that after the scale is unified,  $0 \leq u_{ij}^a \leq u_{ij}^b \leq 1$ .

At the same time, considering that different indicators generally have different weights, this paper adopted the AHP method [20-21] to process the weights of the indicators, so that the results could be more objective and accurate. By inviting relevant experts in the professional field, a 1-9 ratio scale was used to compare and analyze the measurement indicators in pairs, and then obtain the initial weight matrix of the measurement indicators  $R$ , that is:

$$R = \begin{bmatrix} r_{11} & \cdots & r_{1j} & \cdots & r_{1n} \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ r_{i1} & \cdots & r_{ij} & \cdots & r_{in} \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ r_{n1} & \cdots & r_{nj} & \cdots & r_{nn} \end{bmatrix}, 1 \leq i, j \leq n \quad (3)$$

where,  $r_{ij}$  represents the degree of importance of measurement indicator  $i$  with respect to indicator  $j$ , the specific meanings of the corresponding values are shown in Table 6, and it satisfies  $r_{ij} = 1/r_{ji}$ .

**Table 6.** Meanings of  $r_{ij}$  values

Value of $r_{ij}$	Relationship between indicator i and indicator j
1	The two are equally important
3	The former is slightly more important
5	The former is more important
7	The former is much more important
9	The former is extremely important
2,4,6,8	Intermediate state between two adjacent states

Through analysis, the largest characteristic root  $\lambda_{max}(R)$  of the weight matrix  $R$  of measurement indicators could be obtained, then, the value of the consistency index  $CI(R)$  can be obtained as:

$$CI(R) = \frac{\lambda_{max}(R) - n}{n - 1} \quad (4)$$

According to  $n$ , the number of measurement indicators, the value of the corresponding random consistency index  $RI(\mathbf{R})$  could be obtained, then, the test coefficient  $CR(\mathbf{R})$  of the weight matrix  $\mathbf{R}$  could be obtained as:

$$CR(\mathbf{R}) = CI(\mathbf{R}) / RI(\mathbf{R}) \quad (5)$$

If it satisfies  $CR(\mathbf{R}) < 0.1$ , it means that the indicator weight matrix  $\mathbf{R}$  meets the requirement of the consistency test; otherwise, it is necessary to regenerate matrix  $\mathbf{R}$  until it meets the requirement of the consistency test.

For a measurement indicator  $i$ , its weight  $w_i$  is:

$$w_i = \frac{\sum_{j=1}^n r_{ij}}{\sum_{i=1}^n \sum_{j=1}^n r_{ij}}, \quad 1 \leq i, j \leq n \quad (6)$$

### 3.4 Realization of the fuzzy measurement model of the teaching quality of dancesport major

After the scales had been unified, the measurement indicators were subject to the maximum value processing, then the positive ideal domain  $U(o)$  of measurement indicators could be obtained as:

$$U(o) = \{u_j(o) | 1 \leq j \leq n\} \quad (7)$$

where

$$\begin{cases} u_j(o) = [u_j^a(o), u_j^b(o)] \\ u_j^a(o) = \max_{1 \leq i \leq m} u_{ij}^a \\ u_j^b(o) = \max_{1 \leq i \leq m} u_{ij}^b \end{cases}, \quad 1 \leq i, j \leq n \quad (8)$$

According to the fuzzy theory [22-23], for measurement indicator  $j$ , the fuzzy distance  $d(u_{ij})$  between the evaluation object  $i$  and the positive ideal domain  $U(o)$  can be expressed as:

$$d(u_{ij}) = \sqrt[P]{\frac{|u_{ij}^a - u_j^a(o)|^P + |u_{ij}^b - u_j^b(o)|^P}{2}} \quad (9)$$

where, when  $P = 1$ ,  $d(u_{ij})$  is the Hamming distance, namely:

$$d(u_{ij}) = \frac{|u_{ij}^a - u_j^a(o)| + |u_{ij}^b - u_j^b(o)|}{2} \quad (10)$$

When  $P = 2$ ,  $d(u_{ij})$  is Euclidean distance, namely:

$$d(u_{ij}) = \sqrt{\frac{|u_{ij}^a - u_j^a(o)|^2 + |u_{ij}^b - u_j^b(o)|^2}{2}} \quad (11)$$

According to the gray theory [24-25], for measurement indicator  $j$ , the gray correlation coefficient  $\eta_{ij}$  between the evaluation object  $i$  and the positive ideal domain  $U(o)$  is:

$$\eta_{ij} = \frac{\min_i \min_j d(u_{ij}) + \beta \max_i \max_j d(u_{ij})}{d(u_{ij}) + \beta \max_i \max_j d(u_{ij})} \quad (12)$$

where,  $\beta$  represents the identification coefficient of gray relational analysis, generally, it takes  $\beta = 0.5$ .

In the same way, considering the weight  $w_j$  of indicator  $j$ , the gray correlation degree  $\psi_i$  between the evaluation object  $i$  and the positive ideal domain  $U(o)$  is:

$$\psi_i = \sum_{j=1}^n (w_j * \eta_{ij}) \quad (13)$$

According to the physical meaning of gray correlation degree, the closer the evaluation object  $i$  is to the positive ideal domain  $U(o)$ , the greater the gray correlation degree  $\psi_i$  between the two. Conversely, the farther the evaluation object  $i$  deviates from the positive ideal domain  $U(o)$ , the smaller the gray correlation degree  $\psi_i$  between the two. Therefore, based on the relevant standards for the measurement of the teaching quality of dancesport major, the evaluation threshold was set to be  $\psi_o$ , if it satisfies  $\psi_i \geq \psi_o$ , it indicates that the teaching quality of dancesport major of evaluation object  $i$  can meet the requirements; and greater  $\psi_i$  value indicates higher teaching quality.

#### 4 Ways and Methods to Improve the Teaching Quality of Dancesport Major

In actual engineering analysis, sometimes, there are evaluation objects whose teaching quality of dancesport major cannot meet the requirements of evaluation threshold  $\psi_o$ ; for such evaluation objects, corresponding improvement measures need to be taken to improve their teaching quality.

##### 1. Increase investment in basic facilities of dancesport major:

The lack of basic investment often has a great impact on the construction of software and hardware facilities of dancesport major, which not only makes it impossible to effectively guarantee the implementation of the teaching of dancesport major, but also greatly restricts the development of professional dancesport teachers, and the

improvement of their competitiveness. At the same time, insufficient basic investment will result in obsolete software and hardware facilities, which can hardly meet the requirements of the teaching of dancesport major, and it will also affect the enrollment of students. Therefore, increasing basic investment in dancesport major, improving the teaching environment and providing guarantee for the smooth implementation of the teaching of dancesport major are important basic conditions for improving the teaching quality of dancesport major.

2. Enhance the cultivation of professional dancesport teachers:

Professional dancesport teachers are the most direct personnel involved in the teaching of dancesport major, and they are playing a decisive role in the teaching effect. In terms of professional knowledge imparting, a teacher with higher professional competence indicates that he/she has better comprehensive professional qualities, and outperforms in aspects such as professional knowledge reserves, teaching method application, teaching progress control, professional knowledge expansion, and teaching technology application, etc. In order to reach a higher teaching quality of dancesport major, it is necessary to ensure that the dancesport faculty has excellent professional qualities and skills. Therefore, introducing high-level professional talents, strengthening the construction of dancesport talent team, enhancing the training of professional dancesport teachers and conducting high-level professional academic exchanges are ways to improve the teaching quality of dancesport major.

3. Improve the teaching management system of dancesport major:

The teaching management system of dancesport major not only acts as a guidance for the teaching implementation of dancesport major, but also provides a guarantee for the application and management of the teaching resource of dancesport major. A good teaching management system of dancesport major is conducive to urging the teaching implementation of dancesport major to go on the right track quickly, and it can point out the correct direction for the in-depth development of the teaching reform of dancesport major. At the same time, with the support of a good teaching management system, professional dancesport teachers can make use of the teaching resources more rationally and share their teaching information; this is conducive to the formulation of teaching plans and teaching development plans, thereby inspiring the initiative and enthusiasm of professional dancesport teachers. Therefore, to perfect the teaching management system of dancesport major, it's necessary to make comprehensive improvements in aspects such as teaching management, scientific research management, student management, and teaching reform mechanism of the dancesport major.

4. Enhance the integration of production-university-research in dancesport major:

The teaching of dancesport major has strong theoretical and professional properties, and it's closely related to the development of the times, that is to say, the dancesport major has a social service property. With the continuous development and progress of the times, dancesport major has also undergone corresponding changes and development, and the professional knowledge involved also shows a dynamic development

trend. Therefore, to make dancesport major better meet the needs of social development, both the professional and the social attributes of the dancesport major should be taken into consideration. Moreover, the teaching of dancesport major, scientific research and social industries should be effectively integrated to make the dancesport major better serve the society, and at the same time, stimulate the development of dancesport major through social needs and the feedback of application results, thus forming a benign development process; during this process, the comprehensive qualities of dancesport teachers could be more effectively improved, and it has an important role in improving the teaching quality of dancesport teachers.

## **5 Conclusion**

Through an analysis on the connotations of the teaching quality of dancesport major, this paper discussed the aspects that can reflect the teaching quality of dancesport major, which provided a theoretical basis for the in-depth understanding of the teaching quality of dancesport major. At the same time, by establishing an indicator system and a model of the multi-attribute fuzzy measurement of the teaching quality of dancesport major, the analysis of the dancesport major teaching quality with fuzzy information became feasible. In order to effectively improve the teaching quality of dancesport major, this paper explored ways and methods to improve the teaching quality of dancesport major, providing a good guarantee for the improvement of the teaching quality of dancesport and other similar majors.

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