Research on Chinese Children's Dance Creation and Arrangement Based on the Theory of Multiple Intelligences

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Abstract: The theory of multiple intelligences is highly regarded around the world as an educational theory. It holds that intelligence is the ability to solve a certain problem or create a certain product that is valuable in a certain culture or environment. In terms of its basic structure, intelligence is diverse. This research aims to explore the development process of the multiple intelligences theory and its influence on the creation of dance by Chinese children. The main finding of the research is that there are certain problems with Chinese children’s dance creation. Additionally, the theory of multiple intelligences resembles similar policies in China and is welcomed by Chinese children’s dance creation teachers. In response to the findings, this research proposes various suggestions for combining Chinese children’s dance creation and the multiple intelligences theory in the future, aimed at universities and teachers.

1. Introduction

Following the development of educational theories around the world, many schools learning style (Howard-Jones, 2010). There have also been hundreds of books written on its application in education (Davis et al., 2011). However, the study of the theory of multiple intelligences is not considered part of the mainstream with regard to creating Chinese children’s dance. According to statistics from CNKI, a maximum of five research papers exist on the theory of multiple intelligences in children’s dance creation (CNKI, 2021). The nursery schools practising the theory are mostly high-priced and high-quality establishments (IVY Education, 2018). The theory is mostly applied to children's language and logic teaching, while art (dance, singing, performance) is less(Li Dan, 2015; Liu Haiyan, 2011). It can therefore be seen that the theory of multiple intelligences is not widely applied in the majority of nursery schools in China, while research and practice on children’s dance creation are rarer still. This research will therefore discuss the creation of children’s dance based on the theory of multiple intelligences. First, it will introduce the development process of the multiple intelligences theory and the value of children’s dance creation. Second, considering the purpose of the creation and its content, the research analyses the current situation regarding the creation and editing of Chinese children's dance, and explores the existing problems. Finally, based on the theory of multiple intelligences, some guidance and suggestions will be suggested for the future development of Chinese children’s dance creation.

2. Literature Review

This research aims to explore the influence of the theory of multiple intelligences on children’s dance creation. In order to clarify the purpose of the research and identify the gaps, the following literature review will explore previous studies related to the research context. As such, the remainder of this paper is presented in two parts. The first part will introduce the content of the multiple intelligences theory and its application in children’s music and dance education. The second part will then introduce the value and current situation of children’s dance creation.

2.1 The Theory of Multiple Intelligences:

2.1.1 The Content of the Multiple Intelligences Theory:
The theory of multiple intelligences was proposed by Howard Gardner in 1983 as a new concept of intelligence. It has since been accepted by many schools and educational institutions (Peariso, 2008). The theory originally sought to (i) avoid excessive learning in a single subject and strengthen interdisciplinary teaching; and (ii) extend the concept of intelligence to the effective use of physical and thinking skills related to the social environment? (Howard et al., 1989; Peariso, 2008). This aligned with the views of some researchers (Barrett, 2001, p. 27; Beane, 1997; Wilson, 1998). According to Gardner’s theory, each person can carry out seven relatively independent forms of information processing, while the specific characteristics of intelligence displayed by each person are different (Howard et al., 1989). In addition to applying his theory of multiple intelligences to mathematics and language skills, Gardner expanded the concept of intelligence into the fields of music, spatial relations and interpersonal knowledge (Tamilselvi and Geetha, 2015). The seven recognised intelligences are presented as follows (Ștănescu and Tomescu, 2021; Zhixian, 2004; Gardner and Hatch, 1989).

A. Musical Intelligence:
This form of intelligence relates to an individual’s sensitivity to rhythm, pitch, beat, pitch, melody and timbre.

B. Visual-Spatial Intelligence:
In a narrow sense, it refers to people's ability to perceive spatial orientation, but in a broad sense, it is no longer simply a person's perception of spatial orientation, but also includes visual discrimination ability and image thinking ability.

C. Linguistic-Verbal Intelligence:
This refers to people’s ability to master and use language flexibly. It manifests as an aptitude for thinking with words and expressing complex meanings using language and words.

D. Logical-Mathematical Intelligence:
This type of intelligence refers to an individual’s ability to understand, reason and express the relationship between logical results. Its prominent feature is the use of logical methods to solve problems, understand numbers and abstract patterns, and apply reasoning to solve problems.

E. Bodily-Kinaesthetic Intelligence:
This intelligence is related to a person's physical flexibility and control in coordination and balance, as well as all aspects of movement, including strength, speed, and flexibility. People with high physical motor intelligence can use their bodies to communicate and solve problems, to manipulate the required objects proficiently, and to engage in activities that require excellent motor skills.

F. Interpersonal (Communication) Intelligence:
This refers to a person’s sensitivity to the expressions, speech and gestures of others and the ability to respond to them effectively. It is manifested in an individual’s ability to perceive and experience the emotions of others and form responses.

G. Intrapersonal Intelligence:
Someone with high intrapersonal intelligence is good at recognising, perceiving and reflecting on their own emotional states (moods), feelings and motivations. As such, the prominent feature is a sensitivity to one’s own feelings and emotions, being able to understand one’s own strengths and weaknesses, and using one’s own knowledge to guide decision-making and set goals.

In 1999, Gardner revisited his theory of multiple intelligences and added natural intelligence while also suggesting other types, including existential intelligence and spiritual intelligence, in the book ‘Reconstructing Multiple Intelligences’. Gardner (2008) also emphasised the differences between individuals in the theory of multiple intelligences, as well as the child-centred theory. This is very similar to the Confucian culture in traditional Chinese culture, which is student-centered and teaches students in accordance with their aptitude(Tan and Chua, 2015). However, certain researchers have questioned Gardner’s views. Willingham (2004) and White (2005), for example, asserted that intelligence is closely linked to flexibility in pursuing goals. While there are many types of human goals that correspond to many types of intelligence, Gardner distilled and classified these diverse elements into only a few categories. Meanwhile, other researchers (Willingham, 2005;
Stahl, 1999) have disagreed with Gardner’s choice of different teaching methods based on individual differences in children. Their research concluded that this has no substantial impact on children’s learning. Waterhouse (2006) asserted that the theory of multiple intelligences lacks empirical evidence and is too reliant on subjective judgements.

2.1.2 The Application of the Multiple Intelligences Theory in children’s Dance:

The theory of multiple intelligences is widely used in early childhood music and dance education. An ever-expanding body of research has demonstrated the importance and uniqueness of art in the lives and education of children (Campbell, 1991; 2002). According to the interdisciplinary, multidisciplinary and holistic characteristics of the multiple intelligences theory, it is possible to link children’s music and dance education to learning in the diverse fields of many sports, sciences and even (with mathematics) visual graphics. For example, a teacher can establish a link between the size of an object that makes a sound with the degree of pitch, so that children may understand that the size of an object is directly proportional to the tone. As such, teachers may use father and baby teddy bears to facilitate children’s understanding that the baby bear corresponds to small musical instruments and the father bear corresponds to large musical instruments (Economidou et al., 2011). In addition, children’s dance includes sports dance, which assists in the development of emotions, social and musical/rhythmic intelligence through rhythm. While rhythm, for its part, helps in balancing the energy of the body and the development of interpersonal relationships (Becea, 2008; Stănescu and Tomescu, 2021). Skourdi and Rahimi (2010) asserted that emotional intelligence is related to linguistic intelligence, which can be stimulated by dance performance steps and dance styles. Dance also stimulates children’s bodily-kinaesthetic intelligence, visual-spatial and rhythm intelligence, and logical-mathematical intelligence, among others (Gardner, 1983; Ekici, 2011; Murcia et al., 2010). However, although certain studies support the notion that dance can connect with multiple intelligences, the specific relationship between dance content and the multiple influences of linguistic intelligence, logical-mathematical intelligence, etc. is not fully supported by evidence (Stănescu and Tomescu, 2021).

2.2 The Value and Current Situation of children’s Dance Creation:

Dance is an art form that expresses human emotions (Mengyue, 2012). Graham (1966) conducted research on dance creation and choreography, summarising dance creation and choreography into the following aspects: the tempering of dance language, the choice of dance forms, and the grasp of dance structure. The creative choreographing of children’s dance by teachers can help children understand their own personal strengths and weaknesses; it also provides a means of exploring new physical, social and emotional areas (Lobo and Winsler, 2006). Dance encourages innovation and respects personal experience and resources, regardless of the stage that children reach (Joyce, 1994). Children’s dance education is currently attracting ever greater attention. However, while many children have increased opportunities to engage with dance, this is somewhat tempered by the influence of traditional education models and the fact that some teachers do not have a sufficient understanding of the characteristics and development trends of children at different ages. To this we can add an insufficient number of teachers with the appropriate levels of artistic and musical literacy as the cause of many problems in children’s dance creation (Chun, 2019). According to research by QI (2019) on the current state of Chinese children’s dance creation, the following problems exist with respect to dance creation and editing. First, the utilitarian nature of dance creation and editing; this type of teaching method prevents children from truly understanding the meaning of dance. Second, the content created has little in common with the real lives of children. Some teachers focus on literature, music or traditional folk dances while ignoring children’s actual life experiences. Third, there is a tendency to include a form of creating and editing that ignores children’s interests; as such, creating and editing over-emphasises the teacher’s dominant position, with a lack of connection between the implementation of creative activities and the thematic curriculum. Finally, evaluation criteria are established that have the effect of weakening children’s experience. Therefore, it is evident that certain problems exist regarding the current situation of children’s dance creation in China.
3. Research Method:

This research seeks to use quantitative methods to answer the research questions. An anonymous questionnaire survey was selected as the research tool with which to collect preliminary quantitative data. The questionnaire contains seven questions. These cover aspects including the respondent’s awareness of the theory of multiple intelligences (whether they understand the content of the theory, whether they use the theory in their daily teaching, and whether they will design teaching from the perspective of students’ multiple intelligences). In the context of children’s dance, the questionnaire proceeds to examine whether the respondents use bodily-kinaesthetic, linguistic, interpersonal communication, music and rhythm and/or logical-mathematical intelligences in the creation of children’s dance. The target respondents for the questionnaire comprised those who have participated in the creation of children’s dance. A total of 50 questionnaires were distributed; however, 53 questionnaires were returned, because they exceeded the stipulated time for answering. Of these, 3 questionnaires were deemed invalid, while the remaining 50 were valid. The effective rate was therefore 94%.

After collecting the questionnaire data, the researcher used Microsoft Excel to perform statistical processing and analysis on the survey data. Table 1 shows the statistical data of the questionnaire results. Q1–Q3 relate to the respondents’ awareness of the theory of multiple intelligences; Q4 concerns the use of bodily-kinaesthetic intelligence; Q5 is about the use of linguistic intelligence and interpersonal communication intelligence; Q6 probes the use of music rhythm intelligence; and Q7 enquires about the use of logical-mathematical intelligence. All of the questions were designed in relation to the multiple intelligences theory and the creation of children’s dance (see the appendix for the specific questions contained in the questionnaire). The statistics for the results of the questionnaire are presented as follows:

<table>
<thead>
<tr>
<th>Question</th>
<th>Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Know very well</td>
<td>6</td>
<td>12%</td>
</tr>
<tr>
<td></td>
<td>Understand a bit</td>
<td>26</td>
<td>52%</td>
</tr>
<tr>
<td></td>
<td>Do not know much</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Don't know</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td>Q2</td>
<td>frequently used</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Sometimes use</td>
<td>20</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Rarely used</td>
<td>16</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>7</td>
<td>14%</td>
</tr>
<tr>
<td>Q3</td>
<td>frequently used</td>
<td>5</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Sometimes use</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>Rarely used</td>
<td>11</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>6</td>
<td>12%</td>
</tr>
<tr>
<td>Q4</td>
<td>frequently used</td>
<td>13</td>
<td>26%</td>
</tr>
<tr>
<td></td>
<td>Sometimes use</td>
<td>23</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>Rarely used</td>
<td>12</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>Q5</td>
<td>frequently used</td>
<td>15</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>Sometimes use</td>
<td>23</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>Rarely used</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>Q6</td>
<td>frequently used</td>
<td>17</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>Sometimes use</td>
<td>22</td>
<td>44%</td>
</tr>
<tr>
<td></td>
<td>Rarely used</td>
<td>9</td>
<td>18%</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>Q7</td>
<td>frequently used</td>
<td>28</td>
<td>56%</td>
</tr>
<tr>
<td></td>
<td>Sometimes use</td>
<td>17</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>Rarely used</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>2</td>
<td>4%</td>
</tr>
</tbody>
</table>

It is evident from the table that a majority of the respondents (90%) understand the theory of multiple intelligences. A majority have also attempted to apply the multiple intelligences theory to the teaching process and will design dances from the perspective of the students’ multiple
intelligences (86% and 88% respectively). Additionally, most teachers will incorporate some of the intelligences in the theory of diversity within dance creation. Over 90% of the respondents will choose to create dance moves to help children express the emotions in the dance; they will also engage in multi-person cooperation. This includes the addition of specific gestures to help children understand the theme of the dance, along with beats to help children establish the rhythm. Through the analysis of these data, the research results can be divided into the following two themes: how well the respondents understand the theory of multiple intelligences, and how teachers apply the theory to children’s dance creation.

First, focusing on the respondents’ understanding of the theory of multiple intelligences, most of the respondents not only understand the theory but also use it in their choreography and teaching, thus demonstrating its popularity within children’s dance creation and its important role in creative activities more broadly. This finding aligns with those of other researchers who have reported the widespread use of the multiple intelligences theory in children’s dance creation over recent years (Lei, 2020; Wulandari et al., 2021; Yulianti, 2016).

Second, in terms of how teachers combine the multiple intelligences theory with children’s dance creation and choreography, according to the answers to the research questionnaire, most of the respondents will combine the theory with children’s dance creation and choreography. When analysing the integration of selected intelligences into the dance creations of children, frequently adding count beats was the most common response. It can therefore be seen that the respondents were more inclined to combine dance with logical-mathematical intelligence. Additionally, they displayed a strong willingness to combine bodily-kinaesthetic intelligence, linguistic intelligence, interpersonal intelligence, and music intelligence. Therefore, given the popularity of the multiple intelligences theory in children’s dance creation, it can be concluded that it is beneficial to the development of this discipline. Moreover, when dance educators incorporate activities that strengthen the musical, visual, linguistic, logical-mathematics, interpersonal, and bodily-kinaesthetic intelligences into each class, students’ learning effectiveness will also be improved (Gilbert, 2003, p. 28). Although the theory of multiple intelligences is evaluative, some researchers do not consider it to include an effective method of assessing the abilities required in a specific educational or professional context. For example, there is no accurate method for assessing children’s choreography. In practical terms, this translates as ways of confirming whether children who have never learnt to dance need, for example, linguistic intelligence, logical intelligence or other types of intelligence (Warburton, 2003). While the theory provides a means for psychologists and educators to think about human abilities, there are difficulties associated with perfecting the evaluation method (Torff and Warburton, 2002; Warburton, 2002).

4. Suggestions for the Creation of Chinese children’s Dance in the Future:

Through the review of the literature and the investigation involving a sample of professionals who create children’s dance, this research made several findings. First, the theory of multiple intelligences confirms that dance is a field of knowledge and assumes that it can achieve the absolute potential of a person’s multiple intelligences (Warburton, 2003). Second, the application of the multiple intelligences theory in China has become increasingly Chinese in recent years; at the same time, children’s dance creation practice has become increasingly prevalent in the country. However, some teachers still do not understand how to use the multiple intelligences theory and how to combine it with children’s dance creation. In this regard, I will make the following suggestions.

First, colleges and universities should seek to increase the training of ‘multiple intelligences theory quality talents’ to cultivate students’ interest in dance creation. After clarifying the role of the multiple intelligences theory in children’s dance creation, colleges and universities can then add special courses to clearly explain the concept, development trends and Chinese forms of the theory. In addition, since the majority of students studying this theory and children’s dance education are preschool education majors, early childhood education is more professional compared to other majors. Given the existing problems surrounding Chinese children’s dance creation, colleges and
universities should plan training programmes and supervise students’ learning when training students in the children’s dance creation curriculum (Shi Junyin and Guo Li, 2017). At the outset of the learning process, students could observe and understand children’s daily activities. Then, taking the real life of children as the basis, create dances that are in line with children’s development and rationally use literary stories and other materials. Second, students can be aided in mastering the relevant knowledge of children’s dance creation in an all-round manner through the use of, for example, video resources and demonstrations and guidance from professional teachers. Also, concerning the application of the multiple intelligences theory in children’s dance, if we take linguistic intelligence as an example, students can choose familiar songs for children, and then let the children sing and dance to cultivate their language skills. In the later stages of learning, the school can enable students to cooperate with dance education institutions for internships, allowing them to combine their theoretical and practical knowledge in order to understand their own strengths and weaknesses.

Secondly, teachers should learn to localise the theory of multiple intelligences at the same time as understanding it. The theory of multiple intelligences shares a level of similarity with China’s policy history, which means many people in China support its development. Gardner proposed his theory of multiple intelligences in 1983, which was the same year that Deng Xiaoping of China issued the important ‘three orientations’ instruction regarding modernisation, the world and the future as the direction of China’s education development. Therefore, the appearance of the theory of multiple intelligences coincided with an important period in the development of China’s education modernisation, and it has become a key piece of theoretical guidance for the development of education in China (Ruli, 2003). Further, the eight types of intelligence that make up the theory are similar to the children’s development goals specified in China’s 3-6 Years Old Children’s Learning and Development Guide (2012). Nowadays, when many teachers use the theory of multiple intelligences, there is a phenomenon that only copies, but does not combine with the actual situation. This has led to some teachers breaking away from the guidance of the multiple intelligences theory within their teaching practice (Fang, 2013). In response to this phenomenon, after understanding the content of the theory, teachers should consider how to connect the theory with Chinese culture and the creation of children’s dance. For example, ancient Chinese poetry is very closely related to music and dance. This encourages poetry to be combined with music and dance in ways that use both the body and language to express emotions. In children’s dance creation, linguistic expressions can be added to dance to express emotions. This is in line with the common use of linguistic, musical and bodily-kinaesthetic intelligence in children's dance.

5. Conclusion

This research has discussed the content of the multiple intelligences theory and the status quo of Chinese children’s dance creation. It has also put forward suggestions for ways to combine the multiple intelligences theory and Chinese children’s choreography. From the literature review, the theory of multiple intelligences provides a means of helping teachers understand how students learn, and how teachers should teach lessons. It also helps in understanding the existing problems within Chinese children’s dance creation. A questionnaire survey was conducted to explore the application of the multiple intelligences theory in Chinese children’s dance creation.

The research shows that, first, the application of the multiple intelligences theory in China has become increasingly widespread, and many teachers will consider using it when creating dances. Second, in the investigation of specific usage situations, the respondents were enthusiastic about combining the multiple intelligences theory with children’s dance creation. In exploring the different combinations applied, logical-mathematical intelligence was the type of intelligence most frequently combined with children’s dance creation and choreography.

The results of the research demonstrate that in the future, Chinese children’s dance creation will be more closely integrated with the theory of multiple intelligences. According to this trend, colleges and universities should seek to increase training in ‘multiple intelligences theory quality talents’, train professional teachers in the multiple intelligences, set up related activities to cultivate
students’ interest in dance creation and strengthen the supervision of students’ dance creation classes to improve the classroom. Second, children’s dance creators should be encouraged to transform knowledge into practice, and based on fully understanding the theory of multiple intelligences, to Sinicise it, link it with traditional Chinese culture and policies, and make the theory more applicable to practice in children’s dance education.

In terms of the limitations of this research, it has been unable to consider the topic in sufficient depth. This was due to the limited level of the author and the short research time. As a result, it has not been possible to thoroughly discuss certain issues. For example, the discussion is limited to considering how Chinese children’s dance creation and the theory of multiple intelligences are combined. Therefore, in future studies, researchers may seek to explore the combination of non-Chinese children’s dance creation and the multiple intelligences theory and consider how the theory can be combined with different cultural backgrounds.

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