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Study of problem-based learning with questioning technique to promote choreography ability of dance students

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ABSTRACT

The purposes of this research were to compare the dance design ability of students before and after exposed problem-based learning with questioning techniques, and to compare the dance design ability of students with 70% evaluation criteria. In this study, juniors majoring in dance choreography in Music College of Langfang Normal University were selected as the research. There were 20 students from one class were randomly selected. Research tools include achievement test and performance tests. The t-test for dependent and t-test for one sample were used for statistical analysis. The results showed that the dance design ability of these samples were effectively improved after the problem-based learning. They were significantly higher than the pre-test and for the dance design ability and the post-test scores, and higher than the criterion of 70% at the .05 level of statistics.

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1. INTRODUCTION

Problem-based learning (PBL) is a teaching method where students are presented with real world open-ended questions. The students are at the center of this method. Questioning technique is a method where students are given open-ended questions. The rationale for these two methods is that it was felt that they would keep students interested and they would learn more. Choreography is currently for students of dance professional colleges. It is an essential course, because its applicability and practicability are very strong. In today's society, there is an increasing demand for innovative talents, as well as in the field of art. People's spiritual needs are increasing. More and more competitions and performances require original works, so talent training of choreographers has also occupied a certain position in various universities and colleges.

For professional college choreography major when students enter school, they have great creative enthusiasm and thirst for knowledge, so traditional teaching methods are suitable for them. When teachers demonstrate in class and give assignment requirements directly, students will actively complete them. They have high requirements for themselves in their heart consciousness, so the completion of the course content is very good and the efficiency is very high. But in normal colleges, this kind of teaching method is not applicable. Because in normal colleges and universities, choreography is only a compulsory course of dance major, students will complete the goal when they complete the daily course content. They don't have high standards for themselves, or visions of the future. Students don't see the development prospects of this major and only care about whether they can graduate successfully, instead of thinking about the practicality of this course for the future (Bai, 2014).

In addition, learning this major requires rich professional knowledge and practical experience. That is to say, before learning dance they need to master a lot of professional knowledge about dance, such as dance styles and knowledge of common ethnic groups, as well as the intangible cultural heritage and a lot of practical creative experience. Due to the insufficient knowledge reserve of students, they easily lose interest in creation, so teachers have to lower teaching standards and requirements according to the knowledge reserve of students. Therefore, the practical creation of students will also be affected. If the amount of creation is insufficient, the accumulated experience will be insufficient, and the creation process of students will be difficult. Therefore, many students choose to give up the in-depth study of this course (Chen, 2021).

The questions for this course can be summarized as follows: There is insufficient reserve of other auxiliary professional knowledge. In addition, students' enthusiasm is not strong in the process of practice. Also, students do not have an in-depth understanding of the application prospect of this major. On the development direction of choreography, choreography is an undergraduate major in colleges and universities, which belongs to music and dance. Choreography aims to cultivate interdisciplinary and innovative talents for those who have the knowledge and ability of dance. Choreographers are capable of editing, teaching and research of dance and dance drama in literary and art units, cultural centers, primary and secondary schools, publishing, radio and film departments, and lay a foundation for further study.

Choreography graduates should acquire the following knowledge and abilities: Master the basic theory and knowledge of choreography. Master the analytical methods and techniques of choreography. Have the basic ability of a choreographer. Understand the theoretical frontier, application prospect and development trend of choreography and master the basic methods of dance literature retrieval and data query, with preliminary scientific research and practical work ability. PBL teaching method of problem oriented teaching method, is based on the real world of student-centered education mode, is under the guidance of the teacher, "take the student as the center, on the basis of the problem", by adopting the form of group discussion, students explore problems independently collect data, to find and solve problems, to cultivate students' autonomous learning ability and the innovation of teaching mode. In contrast to traditional subject-based teaching methods, PBL emphasizes active learning by students rather than teaching by teachers (Zhang et.al., 2009).

Teachers' questioning is an effective way to learn the related knowledge of choreography. Through the guidance of professional knowledge of dance design and purposeful questions, students are encouraged to explore and develop dance design ability step by step. It is a very important aspect of classroom teaching and also an important part of classroom interaction of choreographers and directors. There are all kinds of problems in student-centered classes. Questions that seek knowledge, promote understanding, and provoke reflection. Students can gradually improve their dance design ability by exploring and thinking about the problems and using the professional knowledge they have mastered in the early stage to carry out practical activities. The first two types of questions can be classified according to the level of information provided within the range of students' ability. However, the third kind of reflective questions can give us a new understanding of ourselves and how we learn, so that students can improve their dance design ability more effectively.

2. RESEARCH OBJECTIVE

This research consisted of two objectives:

(1) To compare the students' dance design abilities before and after using problem-based learning with questioning techniques.

(2) To compare the students' dance design abilities after using problem-based learning with questioning techniques with 70% of criteria.

3. METHOD

3.1 Samples

Population was 50 junior students majoring in choreography in Music College of Langfang Normal University. The sample was 20 students randomly selected.

3.2 Research instruments

Research instruments were lesson plans and dance design ability test.

Lesson plan

Step 1: According to PBL question teaching method, design questions and ask the students: the question is "have you felt every part of your body carefully and danced with it?" According to the teaching purpose, this question is put forward to arouse students' thinking and guide students to discover the infinite possibilities of the body. In the process of thinking, students unconsciously change their movements, which is the process of thinking in the gradual exploration.

Step 2: Analysis and experiment: Through the above questions, trigger students to think about their own dance movements, and gradually transform into body tests. First of all, divide the students into 5 groups, 10 people a group. Work together as a group. Each group choses a body part and dance freely with this body part as the lead, using the timing of a piece of music as the background. Give students creative space, do not interfere, but let them give full play to their imagination. Combined with the teaching purpose, the teacher should clearly

solve the body's diverse motor ability and students' active exploration consciousness, and then guide students to actively explore.

Step 3: Observe the progress and situation of each group, timely guide students and put forward suggestions to help students expand their thinking, not limited to thinking and imagination, but to use their bodies to really feel and try more development and change of actions. We can guide students when they are blocked by a problem and can't proceed with a later experiment. For example, if they choose to complete a series of movements with their feet as the dominant force, then we can ask them, in addition to trying to walk forward or backward, can we also try to walk left or right? Because there are a lot of directions, right? And our feet can go down or up; you can hit the ground, you can have a rhythm, you can rub against the ground and so on. So what does that tell us? According to the principle that space is multi-dimensional and three-dimensional, our feet can also make movements in different directions to ask questions to students. Give guidance and advice to students. Group members cooperate to explore and analyze the problems during the experiment and try more possibilities of dance movements.

Step 4: Display them one by one in five groups. This is the test phase of the experiment, each group of students show their experiment results, follow the music, show the dance first, and then the other four groups of students can guess which body part is the main part of the group to dance. Other groups interact and discuss during the observation.

Step 5: Students can evaluate the dances shown by other groups. Say what you like and what you suggest. The teacher helps the students to objectively analyze the cause of the problem. According to the teaching purpose, guide the students to find the key and difficult points of the problem. For example, the limitation of our thinking in the process of creation can lead to the limitation of movement, so that we cannot create more possibilities for the body itself.

Step 6: In the process of the experiment, guide students to find problems, take the initiative to explore problems, cooperate to analyze problems, solve problems together, and finally reflect on the problems in the experiment. Self-reflection: Have students gain a new understanding of their own body structure by solving problems in practice? Did you discover more possibilities for dance moves? Sum up experience, in the next test to better complete.

Dance design ability test

Studying the document related with dance design ability.Constructing the component of the test which was the situation or problem and the indicators for assessment. There were indicators for dance design and practical skills. Dance design indicators were material selection and conception of dance, structural conception of dance, application of dance, and embodiment of innovative thinking. Practical skills indicators were movement rhythm, technical completion, stage performance and overall completion. The test was presented to experts for evaluation. The appropriateness, precision and accuracy were considered, also with suggestions.

3.3 Data collection

This research used one group pre-test and post-test design. The processes of data collection were as follows:

1) The samples were given the pre-test by measuring dance design ability with constructed instruments.

2) The samples were taught by using lesson plans of problem -based on learning together with questioning techniques.

3) The samples were given the post-test by using the same pre- test.

3.4 Data analysis

The data were analyzed by using the statistical program according to the research objectives. Comparing dance design ability before and after being taught by using problem-based learning together with questioning techniques by using t-test dependent sample. Also, comparing dance design ability with the 70% criteria by using t-test for one sample.

4. RESULT

The result of comparing mean score of dance design ability before and after being taught by using problem-based learning together with questioning technique.

Table 1 comparing the mean scores of dance design ability before and after being taught

Group	N	Pre-test scores		Post-test scores		t	P
		Mean	S.D.	Mean	S.D.		
Experimental Group	20	70.95	14.16	80.30	9.70	-7.06	.000

The mean scores of pretest of students dance design ability was mean score 70.95 and posttest of students' dance design ability was mean score 80.30. The results showed that after being taught by using problem-based learning together with questioning techniques, the post- test mean scores was higher than pre-test mean scoresat.05 level of statistical significance (t =-7.06, P <.05) The results of comparing mean scores of post-test with criteria at 70 percent.

Table 2 Comparing the mean score of dance design ability after taught with the criteria 70 percent

Group	N	Full score	Criteria score	$\bar{X}$	S.D.	t	p
Experimental group	20	100	70%	80.30	9.70	30.546	.000

The mean score of students' dance design ability after being taught by using problem-based learning together with questioning technique was mean score 80.30. The criteria score was 70 (Full score =100). Results showed that it was statistically higher than the criteria 70 percent at.05 level (t=30.546 P <.05)

5. DISCUSSION

From the scenario they did research and showed dance performance. They can improve practical skills and dance design skills. They master standardized technical movements. Completion of technical movement, they can do coordination learning. The teacher used appropriate questions in each step of learning. The questions encouraged the students ' thinking. They can integrate the content with dance design skills. The teacher used diverse questions in practice time. Every time the scenario was raised in class, the corresponding solutions of each groups were different. Therefore, in the basic part of each class in the experimental group, many targeted exercises are increased which is due to the rapid movement of students' physical (Zhou, 2020). After practice dance skills there are still many skills to be improved. The students do better at teaching evaluation, but also have students reflect, if not actively participate in class if they don't know what needs to be done to the classroom, teachers generally feedback this way of teaching classroom atmosphere. It is better, but also adds a new challenge to prepare lessons, course content is more abundant and initiative of students is stronger (Huang & Xu. 2019).

The research results show that PBL together with questioning technique is feasible and effective in ordinary university teaching. PBL together with questioning technique can optimize dance class, change students' previous learning styles, improve students' learning ability, interest in sports learning and skill level of movement (Danpradit et.al., 2021). It can improve students' interest in physical education and arouse students' enthusiasm. The application of problem-based learning in ordinary colleges and universities can improve the teaching efficiency, be conducive to the mastery of technical movements, and play a positive role in the students' learning of standard degree of movements, artistic expression, combination completion and combination arrangement ability. PBL teaching mode has rich teaching means and learning methods to meet the different needs of students, and students have high satisfaction with PBL teaching mode (Liu, 2020).

This study showed the post-test scores of dance design ability was higher than before using problem-based learning together with questioning techniques, and post-test also higher than 70 percent criteria. The students dance design ability after being taught by using problem-based learning together with questioning technique was higher than before at .05 level of statistical significance. It means that problem-based learning together with questioning techniques can enhance dance design ability of students majoring in choreography in Music College of Langfang Normal University.

As students learn to solve problems, they do research and demonstrate the ultimate practical results. Improve the ability of dance design through solving problems, exploring problems and practicing activities. The teacher asked the students appropriate guiding questions at each step of their learning. These questions stimulated the students' thinking. The results show that problem-based learning with questioning technique can optimize the class of choreography, change students' previous learning styles, and improve students' learning ability, learning interest and dance design ability. It can improve students' interest in choreography and arouse students' enthusiasm for innovation.

The application of problem-based learning with questioning technique method in ordinary colleges and universities can improve the teaching efficiency, be conducive to the mastery of professional technical ability, and play a positive role in students' learning skills of artistic expression, dance completion and choreography ability. PBL together with questioning technique method has rich teaching methods and learning methods, which can meet the different needs of students (Panasan & Nuangchalerm, 2010). They can combine content with dance design ability. The teacher used a variety of questions in the practice and proposed different questions in class each time, and the corresponding solutions of each group were different. Therefore, the experimental group added a lot of targeted exercises in the basic part of each

class, and the practice results found that the dance design ability of the experimental group students was effectively improved.

6. RECOMMENDATION

PBL with questioning technique can be used in other practical skills courses. It is suggested to use this teaching method to stimulate students' learning initiative and interest. Teaching objectives should be clear, flexible, and scientifically formulated and planned. Students' participation in learning tasks are introduced in advance, so that students take the initiative to participate in learning activities and improve learning efficiency. After class must be summed up, timely reflection, and constantly improve the teaching effect. For teachers who will use problem-based learning withquestioning technique, carefully analyze the characteristics of the curriculum they teach, evaluate the effectiveness of using the methodology, and how to formulate teaching plans. According to the ability of students, need to master more scientific teaching methods and means are necessary, so as to directly or indirectly improve the teaching level of teachers. Through the leading-in process, analysis of problems, experimental research, sharing, display and evaluation summary, students can not only improve their learning efficiency and academic performance, but also actively participate in learning and develop good learning habits. Due to the particularity of the course, choreographer teachers need to use problem-based learning with questioning technique in class for a long time, test experimental effects, make use of research data, and conduct more effective practical research in the future. There are still some deficiencies in the exploration of PBL together with questioning technique, which need to be continuously improved and innovative teaching methods should be tried. It is suggested to further study other dance-related courses to enrich the accumulation of relevant knowledge.

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