Practice design of violin teaching model based on constructivism learning theory

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Abstract: *Constructivism theory advocates to promote students' active exploration and knowledge generation through rich context creation, interactive cooperation and meaning construction, which brings new ideas and methods for violin teaching. This paper analyzes the significance of applying constructivism learning theory in violin teaching from the perspective of promoting the construction of student-centered teaching mode, improving learning quality and effect, deepening music understanding and expression, and aiming at the main challenges of violin teaching based on constructivism learning theory. This paper puts forward the practical design path of violin scaffolding, anchor and random teaching mode based on constructivism learning theory, hoping to provide more ideas for violin teaching to give full play to the application advantages of constructivism learning theory to improve teaching quality.*

Keywords: *Constructivism; The violin; Teaching mode*

1. Introduction

In today's diversified music education field, violin teaching, as a delicate way of artistic inheritance, has been highly concerned by music teachers and learners. With the continuous innovation and development of educational concepts, constructivism learning theory provides a new perspective and method for violin teaching [1]. Constructivist learning theory emphasizes student-centered learning and believes that learning is a process in which learners actively construct new knowledge based on their previous knowledge structure. Under the guidance of this theory, violin teaching mode should change the traditional "cramming" teaching and pay more attention to students' active participation and experience. The role of teachers has changed from the transmitter of knowledge to the guide and facilitator of learning, while students become the builders of their own knowledge in the learning process [2]. This paper aims to explore the violin teaching mode based on constructivism learning theory, and through concrete practice design and research, aims to improve the effect of violin teaching, stimulate learners' learning interest, and cultivate their ability of independent learning and creative thinking.

2. The importance of constructivist learning theory in the pedagogy of violin instruction

2.1 Promote the construction of student-centered teaching model

Student-centered learning is the core of constructivist learning theory, which emphasizes that students need to invest in their own thinking and practical actions when constructing knowledge system. In actual violin teaching, different students usually have significant differences in learning needs and progress. Teachers follow the constructivism learning theory and design teaching plans and learning methods that fit the characteristics of students based on the actual learning situation of students. In this mode, students can break away from the previous role of passive acceptance of knowledge, and more actively participate in various learning activities. It is also easier for them to actively seek ways to enhance learning problems in self-exploration and learning. In continuous active exploration, students can not only develop the habit of independent thinking, but also solve problems more efficiently.

2.2 Improve learning quality and effect

Providing students with specific learning situations is also a major feature of constructivism learning theory. The contextualized teaching method can help students learn new knowledge in

combination with the actual situation, so that they can understand and master knowledge more deeply and thoroughly. For example, some teachers set up teaching situations in the form of live concerts to provide students with opportunities to experience real performance situations, and students' understanding of performance skills and stage performance will become easier. Violin learning is technically demanding, requiring not only repeated practice but also correct guidance. Constructivism learning theory brings reflective learning into violin teaching, which helps students to reflect and adjust in time, and ensures that mistakes in practice can be corrected in time.

2.3 Deepen music understanding and expression

The application of constructivism learning theory in violin teaching provides teachers with more flexible teaching methods, which can more freely guide students to carry out experiential violin learning full of emotions, and every performance of students has become a creative process [3]. This new teaching mode can help students to interpret the emotions and culture contained in the works from different dimensions, thus promoting the enhancement of musical expression. In addition, the constructivism learning theory also emphasizes the play of imagination and creativity in the learning process of students. Students have more opportunities to freely adapt songs or improvise, and their innovative thinking can be fully stimulated.

3. Major challenges in violin teaching based on constructivism learning theory

3.1 Challenges of individual differences of students

In violin teaching, students' learning motivation and basic ability show significant individual differences. The differentiated learning background brings great challenges for teachers to develop a unified and efficient teaching strategy. According to the constructivism learning theory, teaching activities should fully consider the specific needs of students, and adopt personalized design schemes to optimize the teaching process. However, faced with the wide and diverse individual differences of students, educators have encountered many difficulties in the selection of teaching materials, the application of teaching methods and the arrangement of teaching progress, which is difficult to meet the individual learning needs of each student. This situation requires teachers to adopt more flexible and innovative teaching strategies to adapt to the unique needs of each student and promote their maximum learning and development.

3.2 Problems in teaching materials and curriculum setting

In the face of the significant differences in students' basic ability and acceptance ability, the selection of teaching materials has also become a challenge that cannot be ignored in the teaching process. Teachers must carefully select from a wide range of teaching materials to ensure that the selected materials can not only adapt to different students' skill levels, but also stimulate their learning interests, so as to effectively promote the improvement of skills [4]. In addition, in violin teaching, the curriculum usually presents a relatively fixed model, lacking the necessary flexibility. In this case, how to properly balance the allocation of time between theoretical learning and practical operation, and realize the effective integration between the two, is also one of the important challenges in the implementation of constructivism theory teaching. Teachers need to show more creativity and adaptability in curriculum design, so as to better meet students' learning needs and promote their all-round development.

3.3 Difficulty in changing the role of teachers

Under the guidance of constructivism teaching theory, teachers are more likely to play the role of facilitator and collaborator in violin teaching. The change of teaching role not only requires teachers to quickly adjust their teaching psychology, but also requires teachers to constantly improve their teaching skills. Students' learning styles and needs vary from person to person. Only when teachers have a solid grasp of diversified teaching modes, such as situational teaching and random teaching, can they flexibly apply and innovate these teaching strategies in practical teaching. This innovative teaching mode requires teachers to make full preparation for lessons and flexibly deal with various possible teaching problems in actual teaching.

4. Practice design of violin teaching mode based on constructivism learning theory

4.1 Practical design of scaffolding teaching mode

Guided by constructivist learning theory, the violin scaffolding teaching model helps students master complex musical skills independently by providing them with the necessary support and gradually removing it.

4.1.1 Task decomposition and adaptation

The teacher first subdivides the skill requirements of violin playing into several small goals. For example, moving from simple note recognition to complex playing techniques can help students gradually adapt to different levels of technical requirements and avoid feeling overly complicated and frustrated at first. In addition, according to the specific situation of each student (such as age, foundation and learning ability), design a personalized learning path, personalized adjustment of learning progress and difficulty, to ensure that each student can effectively learn at their own pace. For example, for beginners, you can start with the "Little Star Variations" and work your way up to more complex pieces like" Bach's Sonata in G Minor".

4.1.2 Dynamic teaching interaction

In the teaching process, teachers need to observe students' performance in real time and provide feedback in time. In this process, they should not only point out mistakes, but more importantly, provide solutions to help students understand and overcome technical difficulties. In the teaching process, teachers should guide students to actively and bravely express their unique understanding of music and different feelings, and actively demand help in the face of learning difficulties. By using the smooth two-way communication mode, students and teachers can have a deeper understanding of the application effectiveness of the teaching mode, and teachers can also achieve the "right remedy" when providing support to students.

4.1.3 Gradually remove the support

In this process, teachers need to assess students' learning status regularly, focusing on whether they can carry out independent learning. If it is observed in the teaching process that students have the ability to play a certain piece of music independently or can solve technical problems independently, then teachers can encourage students to continue to challenge and try more free playing methods on the basis of mastering basic skills, so as to gradually build students' learning confidence and avoid excessive difficulty to discourage students' learning enthusiasm.

4.1.4 Cooperation and collective intelligence

The peer learning model requires teachers to provide students with more group learning opportunities and guide students to take the initiative to perform, evaluate and suggest within their own groups. In this process, students' individual skills can be significantly improved, and their teamwork ability will also be greatly improved. In order to help students understand music from more dimensions in group cooperative learning, teachers can also instruct students to rotate different roles such as performer, listener, critic, etc.

4.2 Practical design of anchored teaching mode

Under the guidance of constructivist learning theory, the violin anchoring teaching model focuses on fixing learning activities on specific and contextualized problems in order to enhance students' active exploration and problem-solving abilities.

4.2.1 Select teaching materials

In the selection of teaching materials, in order to guide students to deeply feel the emotion and story background of the songs learned, teachers can choose the songs with rich cultural background and emotional expression as the teaching content.

In addition, in order to increase students' learning interest and sense of participation, some modern popular or film music violin works can also be introduced as teaching materials.In addition, a technically challenging and stylistically diverse repertoire such as "Paganini's 24 Capriccios" can be selected as an "anchor" for teaching.These pieces not only have a high level of technical requirements, but also require students to have a deep understanding of music and expressiveness.

4.2.2 Creating a Problem Situation

Create a learning environment for students that is close to the actual performance, such as setting up a small concert to allow students to experience the preparation and stage performance before the performance. Teachers can also deliberately set some technical difficulties, such as quick string change skills, so that students can deepen their mastery of skills in the process of solving specific problems.

4.2.3 Inspire students to explore independently

In the face of complex music, the teacher does not provide answers directly, but helps the students explore different playing methods and interpretation methods by asking questions and guiding them.For example, when a student is practicing "Beethoven's Spring Sonata", the teacher can guide the student to explore the influence of playing styles of different historical periods on its interpretation.In addition, the performance videos or recordings of famous violinists such as Heifetz and Menuhin can also be introduced through case studies to analyze their playing skills and expressions, so as to inspire students to discover and improve themselves.

4.2.4 Cooperative learning and creative expression

In order to further deepen students' understanding of problems, teachers can organize students to cooperate in groups, discuss and practice together, and help each other solve problems through collective wisdom to enhance the depth and breadth of learning. In addition, regular music workshops can be arranged to allow students to present their learning results and share learning experiences, while receiving feedback and suggestions from classmates and teachers.

4.2.5 Reflection and iteration

Students are encouraged to evaluate themselves, think about their progress and shortcomings in music learning, and how to use the knowledge learned to solve new problems. In addition, it is also possible to organize regular presentations of learning results, invite other teachers and students or external experts to watch students' performances and provide feedback, which not only helps students receive evaluation from multiple perspectives, but also promotes self-reflection and continuous improvement. Based on the feedback received, students make iterative modifications to continuously optimize their playing and technique, a process that encourages students to continue learning and gradually move closer to the professional level.

4.3 Random teaching mode practice design

The violin random teaching mode based on constructivism theory focuses on flexibly adjusting the teaching content and methods according to the actual performance and needs of students. The core of this mode is personalized teaching and instant feedback.

4.3.1 Flexible adjustment of teaching content

In the selection of teaching repertoire, teachers need to fully consider and respect the interests and preferences of students, for example, if students have a higher interest in popular music, they can choose some violin adaptations of popular songs to learn. In actual teaching, teachers need to observe the performance of students in actual performance. For students who master faster, more complex skills or rhythms can be introduced timely to increase the difficulty of the repertoire. For students who need more practice, they can reduce the difficulty or slow down the progress.

4.3.2 Diversification of teaching methods

Under the guidance of constructivist learning theory, teachers can use video recording function to record students' performance, and then play back the video under the guidance of teachers. This method allows students to objectively evaluate their performance from a third-person perspective, which helps them identify the highlights and shortcomings in performance through self-observation. The recorded videos can serve as a record of the student's learning journey, and by comparing videos from different points in time, students and teachers can visually see progress and growth, and also be able to quickly understand and absorb guidance and advice.

In order to develop students' teamwork and social skills, teachers can also group students according to skill level or interest, and assign different parts of the piece for collective performance. On this basis, opportunities for improvisation can continue to be introduced to further enhance students' creativity and enhance their understanding of musical structure and melody. Group collaboration Fusion Improvisation requires students to collaborate with each other to create music live, helping to develop

their creative thinking and quick response skills.

4.3.3 Continuous learning motivation

Teachers can work with students to set specific and achievable short-term goals (such as learning a new piece of music) and long-term goals (such as attending a public performance or taking a grade) based on their level and interests. In order to stimulate students' intrinsic learning interest, it is also possible to design thematic teaching units related to life or students' interests, such as "Film Music Week" or "Around the world Music Tour", through these interesting topics to enhance students' learning enthusiasm. Students are encouraged to choose learning tracks according to their own interests, and they can even try composing music to increase their initiative and personal investment in learning.

5. Conclusion

To sum up, integrating constructivism learning theory into violin teaching not only has far-reaching educational significance, but also has high practical value. Teachers and students get a new teaching and learning experience in the violin teaching mode based on the constructivism learning theory. In practical teaching, the efficient integration of constructivism learning theory puts forward more stringent requirements for teachers' teaching professional ability. Violin teachers need to actively cope with a series of challenges brought by the application of constructivism learning theory, explore the teaching focus of violin scaffolding, anchor and random teaching mode based on the constructivism learning theory in practical teaching, and constantly optimize the teaching mode combined with the actual teaching feedback.

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