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INTEGRATING CONSTRUCTIVISM THEORY INTO ELECTONE TEACHING IN CHINA MUSIC EDUCATION

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Abstract

This article explores the integration of Constructivism theory into Electone teaching within the context of China's music education, aiming to enhance students' creative, cultural, and practical competencies. Constructivist pedagogy emphasizes learner-centered, experiential, and collaborative learning, offering a valuable framework for transforming Electone instruction beyond technical performance. By designing authentic, context-rich tasks that reflect students'lived experiences and cultural backgrounds, Electone education can become a medium through which students construct knowledge in meaningful ways. Incorporating elements of arts, culture, traditions, ways of life, beliefs, and even religions, Electone-based projects such as arranging music for local festivals, storytelling, or spiritual themes promote deep engagement and cultural literacy. This approach not only nurtures technical proficiency but also fosters an understanding of music as a reflection of human identity and social expression. While challenges such as limited teaching resources, rigid curricula, and assessment constraints remain, the article argues that a constructivist model rooted in cultural responsiveness can empower students to become innovative, expressive, and culturally aware

musicians who contribute actively to the evolving landscape of Chinese music education.

Keywords: Integrating; Constructivism Theory; Electone Teaching; China music education

Introduction

Constructivist teaching emphasizes students' initiative and the dynamic construction of knowledge, while traditional teaching focuses on the transmission and memory of knowledge. Constructivism pays more attention to the learning process and the cultivation of students' abilities, while traditional teaching pays more attention to learning outcomes and the mastery of knowledge. 1) Knowledge philosophy: knowledge is dynamic, contextualized, and depends on individual experience background. 2) Learning philosophy: learning is a process of active construction, social interaction and contextual practice. 3) Teaching philosophy: teachers need to create a collaborative environment to promote students' autonomous construction (such as scaffolding instruction, anchoring instruction, and random-access instruction) (Chen & Zhang, 1998).

The traditional teaching of Electone relies more on the model of teacher demonstration-student imitation, lacking the cultivation of students' initiative, creativity and collaboration. Constructivist theory emphasizes that knowledge is actively constructed by learners through interaction with the environment, rather than passively accepted. Researching and optimizing the classroom teaching structure of Electone based on constructivist theory is a need for the new educational environment and the development of the times. Through the concept of constructivism, Electone teaching is optimized, a more reasonable and optimized Electone teaching structure is proposed, the shortcomings of the current Electone teaching are improved, and flexible, open, interactive and effective music teaching is constructed, while cultivating students with creative thinking and musical expression (Bai, 2017).

Constructivism Theory

Constructivism is one of the important theoretical foundations for educational reform in the 21st century, and it is an emerging theory that emerged in the late 1980s in the United States. With the emergence and interpretation of educational ideas such as Piaget, Vygotsky and Bruner, constructivism has been continuously enriched and has gained widespread dissemination and development (Chen, 2014).

According to London (1990), constructivism is basically a theory based on observation and scientific study about how people learn. It says that people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences. When people encounter something new, they have to reconcile it with their previous ideas and experience, maybe changing what they believe, or maybe discarding the new information as irrelevant. In any case, people are active creators of our own knowledge. To do this, people must ask questions, explore, and assess what they know.

The Origin and Development of Constructivism

To explore the origin of Constructivism, it is necessary to trace back to its philosophical foundation, including Giambattista Vico's New Science, Immanuel Kant's Copernican Philosophical Revolution and John Dewey's Experiential Naturalism. There is no eternal and unchanging thing in human nature. While humans transform society, they also create themselves. Human understanding of the external world comes from the construction of their own knowledge and understanding of it. Although he did not provide a systematic and detailed exposition of constructivist theory, he is known as the "pioneer of constructivism."

In addition, German philosopher Immanuel Kant proposed the idea and importance of subjective agency, which is also one of the philosophical foundations of constructivism. American educator and philosopher John Dewey proposed that learners complete the understanding and construction of knowledge in real or simulated environments and contexts, and discussed the essence of education: education is growth, education is life, and education is the transformation and reorganization of experience. He believes that learning is linked to action, education is based on action, and knowledge and ideas can only be formed within a certain social context. The psychologist Piaget made an important contribution by tracing the proposal and development of constructivism, elaborating and developing it in detail, and applying it to the classroom and children's learning and development (Chen, 2014).

Piaget's theory is full of dialectical materialism, and he insists on studying children's cognitive development from the perspective of the interaction between internal and external factors. He believes that children gradually construct knowledge about the external world through interaction with their surrounding environment, thereby developing their cognitive structure. The interaction between children and their environment involves two fundamental processes: assimilation and accommodation. Assimilation refers to the process by which an individual organizes and reconstructs new knowledge and experience through their own cognition and understanding, after feeling stimulated by external knowledge and experience, and incorporates it into their original cognitive structure, making it a part of their own original cognition and understanding. Accommodation refers to the process in which an individual's new experiences and external stimuli cannot be restructured and reorganized into their existing cognitive structure. Under such circumstances, the cognitive subject can only adapt to new experiences and external stimuli by adjusting and modifying their internal structure. Cognitive individuals (children) get equilibrium with their surrounding environment through assimilation and accommodation. When children are able to assimilate new information using existing schemes, they are in a balanced cognitive state. When existing schemes cannot assimilate new information, balance is disrupted, and the process of modifying or creating new schemes (i.e accommodation) is the process of finding a new balance. The

cognitive structure of children is gradually constructed through assimilation and accommodation processes, and constantly enriched, improved, and developed in the cycle of "balance—imbalance—new balance". This is Piaget's fundamental viewpoint on constructivism. On the basis of Piaget's above theory, Kohlberg conducted further research on the properties and developmental conditions of cognitive structures. Sternberg and Katz, among others, emphasized the crucial role of individual initiative in constructing cognitive structures and made serious explorations on how to exert individual initiative in the cognitive process. Vygotsky's theory of cultural and historical development emphasizes the role of learners' social and cultural historical background in the cognitive process. Based on this, the social-cultural-historical school led by Vygotsky deeply studied the important role of "activities" and "social communication" in the development of human advanced psychological abilities (He, 1997).

When discussing the relationship between teaching and development, Vygotsky proposed an important concept - the zone of proximal development (ZPD), the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (Chen & Liu, 2019). Vygotsky advocated that teaching should stay ahead of children's current level of development, fall within the zone of proximal development, and drive development. Teaching not only makes the zone of proximal development a reality, but also creates new zones of proximal development. The gap between children's two levels is dynamic. As time progresses, some tasks that were previously impossible to complete are gradually mastered by children, replaced by more complex and difficult tasks (Chen, 2014).

Electone Education in China

The construction and development of Electone professional education are mainly reflected in the curriculum design. Based on the development of Electone teaching in China, it has gone through three stages.

Stage 1: The introduction of the Yamaha Electone education system in Japan (1985-1990). In 1985, Electone was first introduced into China through the Yamaha teacher training program, as well as the Yamaha's teaching system. The graduation criteria for teacher training programs were based on the final Yamaha music education level obtained (Level 5, Level 4, Level 3).

Stage 2: Combining Yamaha Electone teaching system with Chinese unique Electone teaching method (1990-2002). The earliest Electone education in China in 1990 was developed by combining Japan's Yamaha Electone teaching system with China's unique Electone teaching method. The Chinese unique Electone teaching method is aimed at the characteristics of Chinese students, integrating the characteristics of traditional Chinese music into the training method and ultimately forming an auxiliary training method suitable for student performance. As a result of the application of this method, the overall performance level and ability of Chinese Electone have rapidly improved and enhanced.

Stage 3: Dealing with the weak links in its own development purposefully, gradually forming a unique teaching system (2002-present). Currently, the characteristics of Chinese Electone teachers and students are: mature playing techniques; Weak foundational theories such as harmony, improvisation and compositional abilities; Lack of basic knowledge in the application of musical instrument functions and sound.

Faced with the shortcomings in teaching, in recent years, various music colleges have placed more emphasis on the study of basic theory and Electone performance, offering courses on improvisation, composition, and functional application. From the performance works of music schools in the 2016 National

Electone Education Alliance, it can be seen that the proportion of original and adapted works by professional music colleges is 100%, while other non-professional music colleges also account for 5%. This marks the development and progress of music composition education level (Zhang, 2017).

Electone Arrangement Education

Concluded Arrangers should first have the basic skills of the following aspects: (1) Performance control for rich music should have. (2) Voice allocation, function setting application and operation ability. (3) Harmonic and polyphonic understanding, keyboard and harmonic application ability. (4) Ability to read scores and analyze works. (5) Excellent musical accomplishment and appreciation. (6) Ability to use various means to complete solo pieces on Electone creatively.

Through arranging music creation, students can exercise their ability to understand and grasp the original music completely and accurately. It can stimulate students' musical imagination and enthusiasm for artistic knowledge exploration. Composition creation is extremely flexible, different design schemes will get different results. Its main function is to enable students to unleash their potential, from shallow to deep, gradually achieving clever, accurate, and flexible use of Electone to express rich musical emotions and colorful inner worlds. Through the practice of composing music, students can verify the application of their knowledge in various aspects. The creation of arrangement is not only the embodiment of the comprehensive musical ability of the students majoring in Electone, but also an important symbol of the compound musical talents (Gao, 1999).

Since China introduced the music college has for more than 10 years of rapid development, it has been more than 30 colleges set up the major of Electone, teaching based on the early development to the present difficult technique and some of the colleges of improvisation and arranger. Cultivate students' creativity and innovation ability is the most fundamental to Electone learning task. It is

manifested as the ability of improvisation, arrangement, originality, voice configuration and production, as well as the important embodiment of creativity and innovation ability. In particular, improvisation and arrangement should be a very important course and quality for all students in the learning process, which is also the biggest difference from traditional teaching (Zhu, 2008).

As one of the earliest music colleges in China to offer Electone majors, Shenyang Conservatory of Music was the first to offer Electone majors in 1990. In teaching practice, the teaching philosophy of Shenyang Conservatory of Music is "tension, seriousness, diligence, humility". In the teaching arrangement, mainly focuses on students' performance skills of Electone. In the first year, a combination of individual and group classes will be adopted to enhance students' performance skills and abilities. In the second year, students will use 2 classes per week to complete improvisation training and achieve a basic level of YAMAHA improvisation exam level 4. In the third year, students will gradually start learning arrangement courses based on practicing improvisation. In the fourth year, focus on cultivating students' ability to compose and create music through independent creation, performance, rehearsal, and other methods. Although there are not many effective class hours, the school pays attention to integrating music arrangement learning into skill practice and teaching in the course arrangement process, so that students not only master performance skills, but also effectively improve their artistic creation ability (Bai, 2017).

From the teaching syllabi of various music colleges for Electone, it can be seen that students are closely related to their major in learning through the Electone courses which is two classes per week. Although some music colleges offer courses such as improvisation and harmony, the teaching effect is still not ideal due to insufficient teacher resources. In the Electone major courses, teachers not only need to complete the teaching of professional performance techniques, but also need to carry out various teaching tasks such as harmony, improvisation, arrangement and creation. So, the arrangement of teaching hours is far from enough. Secondly, it involves teaching related to Electone, such as sound effects, MIDI production, mixing processing and other courses. Not every teacher has teaching advantages of learning and work experience in this area. It is obvious

that there should be a comprehensive and scientific system in the curriculum of Electone (Yin, 2013).

Due to the late start of teaching Electone in China, research on teaching methods is still in its infancy. In teaching, some piano training methods and songs are often used as a supplement for technical training of Electone. The sound principles of Electone and piano are different, especially in the touch of keys, Electone has its special features. Therefore, strengthening the research on the Electone teaching method is a necessary requirement to grasp the characteristics of musical instruments, make use of human subjective initiative and stimulate learners' passion, also it is the key to push teaching further. If learners only focus on playing, it is difficult to learn the essence of Electone. The repeated practice teaching of simple songs focuses on the presentation of arrangement and weakens the cultivation of arrangement ability. In Electone teaching and learning, students ignore the essence to the end, and the cultivation of students' ability cannot meet the needs of their performance, leading to the deviation of learning direction, which is not conducive to the benign development of Electone teaching. Arranging music requires the ability to integrate various aspects, including the understanding of the work, the understanding of the instrument and the addition of innovative elements (Liu, 2012).

Integrating Constructivism Theory into Electone Teaching

In the context of Electone teaching, constructivism theory offers significant potential to foster student-centered, experiential learning, yet its implementation faces systemic barriers. Traditional education environments remain heavily teacher-centered, emphasizing standardized tests and rigid curricula, which contradict constructivist principles that prioritize situational learning, collaboration, and learner agency. Teachers may lack the training, support, or time to design project-based, context-rich tasks required for effective constructivist instruction. Additionally, assessment systems that favor test results over process-oriented evaluation make it difficult to measure key constructivist outcomes such as creativity, collaboration, and conceptual understanding. Despite

these challenges, Electone's multi-voice capabilities and voice editing functions align well with constructivist approaches by enabling collaborative performance and realistic situational tasks, such as film scoring projects. However, the complexity of the technology may increase cognitive load and create unequal participation in group tasks. Therefore, effective constructivist Electone teaching must carefully balance student autonomy with technical skill development, integrate scaffolding and its gradual withdrawal, and diversify task roles to engage all learners. Moreover, incorporating local music culture through Electone-based reinterpretation projects can enrich students' understanding and help resist Western-centric biases. For Electone educators, developing skills in curriculum design, collaborative learning facilitation, and technology integration is essential for realizing the transformative potential of constructivist pedagogy in instrumental music education.

To operationalize constructivist principles in Electone classrooms, task design must transcend superficial exercises and instead promote meaningful musical construction. Situational tasks should integrate technical skills with expressive and theoretical components—such as asking students to arrange music for specific cultural events or narrative scenes—which encourages not only practical skill application but also deep conceptual understanding. These tasks should be open-ended, scaffolded according to student proficiency, and provide opportunities for self-assessment and reflection, such as through learning journals or peer critiques. Differentiated roles within group projects—ranging from technical operators to creative arrangers—can accommodate diverse learning styles and stimulate equitable participation. Dynamic role rotation and gamified task structures may also motivate passive students and distribute responsibility. Furthermore, the phased withdrawal of teacher scaffolding, including initial modeling followed by increasing student autonomy, supports the gradual development of self-regulated learning. Importantly, constructivist Electone instruction should also promote cultural responsiveness by integrating local music traditions into learning projects. This foster both musical and cultural literacy, helping students to contextualize their skills within their own communities. Ultimately, while challenges such as cognitive overload, uneven collaboration, and assessment misalignment persist, a thoughtfully designed constructivist

approach in Electone teaching can cultivate technically proficient, culturally aware, and creatively empowered learners.

New Knowledges

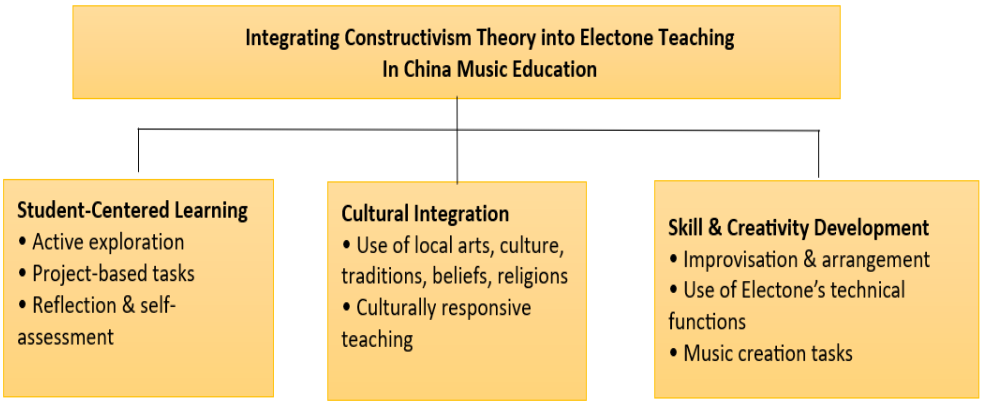

Figure 1: New Knowledges Diagram of The Integrating Constructivism Theory into Electone Teaching in China Music Education.

Conclusions

In conclusion, integrating constructivist theory into Electone teaching presents a forward-thinking and holistic approach to music education that emphasizes active learning, cultural relevance, and student agency. While current educational structures in China often constrain such implementation due to limited instructional hours, insufficient teacher training, and rigid evaluation systems, the rich expressive and technological capacities of Electone provide a strong foundation for constructivist pedagogy. By designing authentic, context-rich tasks that blend performance, composition, and cultural exploration, educators can foster deeper understanding, creativity, and collaborative skills among students. Moreover, incorporating local musical traditions and allowing students to assume varied roles within ensemble and arrangement projects supports differentiated learning and enhances engagement. Addressing systemic challenges through curriculum reform, teacher professional development, and a

shift toward process-oriented assessment will be key to realizing the full potential of constructivism in Electone education. Ultimately, such an approach not only enriches students' musical abilities but also cultivates independent, innovative, and culturally grounded musicians equipped for the demands of 21st - century artistry.

References

Bai, W. (2017). **Current status and prospect of Electone in art universities.** The Sound of the Yellow River, 2017(13), pp. 35-36.

Chen, Q., & Liu, R. (2019). **Contemporary psychology of education** (3rd ed), Beijing normal university publishing group.

Chen, Q., & Zhang, J. (1998). **Critical analysis of the essence of constructivist learning perspectives**. Journal of East China Normal University (Educational Sciences) 1998(1), pp. 61-68.

Chen, W. (2014). **Study of music teaching structure based on the theory of constructivism** [Master's thesis]. China Conservatory of Music.

Gao, J. (1999). **Performance with creation combined with art and technology and equal emphasis ─ on the idea of cultivating Electone compound music talents.** Journal of Xinghai Conservatory of Music 1999(3), pp. 63-66.

He, K. (1997). **Constructivist teaching models, methods, and instructional design.** Journal of Beijing Normal University (Social Sciences), 1997(5), pp. 74-81.

Liu, Y. (2012). **Exploration of Electone teaching mode in higher music colleges and universities.** Journal of Mianyang Normal University, 2012(4), pp. 152-155.

London, C. B. G. (1990). **A Piagetian constructivist perspective on curriculum development.** Reading Improvement, 27(2), pp. 82-95.

Yin, M. (2013). **Thoughts on the development of Electone major and teaching status in universities in China.** The new voice of Yue-Fu (Journal of Shenyang Conservatory of Music), 2013(1), pp. 178-181.

Zhang, Y. (2017). **Development and current status of Electone specialized education in China.** The World of Music, 2017(8), pp. 45-46.

Zhu, J. (2008). **This song should only be innovative with —about the cultivation of Electone students' creativity.** Art Education, 2008(8), pp. 90-91.