

Enhancing Learning Efficacy for Chinese Undergraduates Majoring in Music — A Constructive Approach

Zijin Zhong*

School of Music Education, Wuhan Conservatory of Music, Wuhan, China

* Corresponding Author Email: kanjia@ldy.edu.rs

Abstract. In 1977, the American psychologist Albert Bandura first proposed the concept of Self-efficacy. Once proposed, this concept has had an impact on several research fields. In the field of music learning, self-efficacy, as the intrinsic psychological motivation in the process of music learning, is an important factor affecting students' music learning. This paper examines the self-efficacy status of undergraduates majoring in Music in China using both quantitative and qualitative approaches. Based on the results of 50 questionnaires and 6 interviews, this study further proposed possible strategies to enhance students' self-efficacy from a constructivist approach. Constructivism learning theory emphasizes the dynamic nature of knowledge, the richness and difference of students' experience, and the active construction of learning, social interaction and situation, which has certain theoretical value and practical significance for college music education. This paper is expected to provide future researchers and educators in music education with research-driven theoretical support on how to facilitate undergraduates' music learning.

Keywords: Self-efficacy, college music education, constructivist teaching, constructivism.

1. Introduction

As the inner psychological motivation of students, self-efficacy in music learning is an important factor affecting students' music learning. For undergraduates majoring in Music, a high level of self-efficacy is required to support their learning process. Self-efficacy in music learning refers to students' assessment of their own music learning ability, judgment, and belief in their own confidence level in completing music learning tasks [1]. Constructivism is one of the important pedagogical approaches to promote students' learning efficacy and is regarded as an advanced course in the music curriculum. These classes focus on how many valuable ideas and reflections students can generate, and guide students to observe and create new perceptions as the goal of learning. This teaching method has certain theoretical value and practical significance for the transformation of the teaching method of college music education. Therefore, on the basis of sorting out relevant theories, this study will issue the learning self-efficacy scale to the research subjects, and investigate the current situation of the research subjects' learning efficacy under traditional teaching methods. Then, through the use of structured interviews, one-to-one interviews were conducted with the research subjects to assist in the promotion of action research and reflect the changes of the research objects in the research process.

2. Literature Review

The research on self-efficacy has been applied in various fields such as school education, clinical psychology, health psychology, sports, vocational guidance, and so on. In 1977, Bandura proposed the concept of self-efficacy for the first time in his article "Self-efficacy: A Comprehensive Theory of Behavior Change" and made a preliminary explanation [2]. American psychologists Zimmerman et al. conducted an experimental study on the influence of self-regulated learning self-efficacy and how academic self-efficacy impacted students' learning goal-setting and academic achievement. The results confirmed that self-regulated learning self-efficacy can enhance students' academic self-efficacy, and the enhancement of academic self-efficacy can improve students' learning goal-setting and final performance level of academic achievement [3]. However, at present, China's school education pays little attention to students' learning self-efficacy, especially since the research in this

field is even weaker. In limited studies, only the relevant theories of students' self-efficacy and their learning motivation, attribution, and self-monitoring ability have been discussed [4]. There have been a few studies of self-efficacy in specific areas such as writing, mathematics, etc. These studies for other disciplines also have reference significance for the study of the influence of music on students' sense of efficacy. Zeng Meina studied the relationship between achievement motivation and teaching efficacy of primary and secondary school music teachers, and the results showed that there was a close relationship between the two, and music teachers with different intensities of achievement motivation had significant differences in educational efficacy [5]. Song Shilong studied the impact of choral experience on college students' sense of self-efficacy, and the results showed that college students with choral experience had a significantly higher sense of self-efficacy than those without choral experience, and the years and experience of participating in choral singing were positively correlated with college students' sense of self-efficacy [6]. Cao Jianming pointed out in his research that negative experiences of success or failure, substitute experiences, negative evaluation of others, and negative emotions and physiological states are the main reasons for the low efficacy of normal college students in vocal music learning [7].

Based on the constructivist teaching method, this study will explore its influence on students' learning efficacy in music classrooms. Since the end of the 20th century, the research of constructivism teaching theory has made rich achievements. Focusing on the subject of music, domestic scholars have confirmed that the music teaching model guided by constructivism has achieved preliminary research results through the research on constructivism and music teaching in different sections, and is applicable to music teaching in different sections. In the stage of higher education, Huang Guorong introduced the teaching methods and contents of constructivism [8]. From the viewpoint of constructivism, this paper makes a preliminary research and discussion on the learning idea, teaching method, teaching design, teaching evaluation, and teacher orientation of music education in normal universities. Shen Jie discusses the basic concept of constructivism in music teaching and tries to establish a constructivist music teaching model, which provides theoretical guidance for helping students overcome mechanical music learning and promoting cooperative learning and meaningful learning.

It is worth noting that the research of constructivism teaching theory has matured, and has attracted the wide attention of scholars in the music discipline, but there are still shortcomings in the research of learning self-efficacy. Most of the studies on self-efficacy focus on the overall theoretical research, and the research on self-efficacy in music learning is even less. Therefore, it is necessary to further enrich and perfect the research of self-efficacy combined with specific disciplines. Under the constructivist approach of course design, the music undergraduates' self-efficacy research needs to be further explored. In such a context, this paper aims to confirm whether constructivist music teaching has an impact on undergraduates' self-learning efficacy and what teaching methods can better develop students' sense of learning efficacy.

3. Research Methods

3.1. Participant

In the questionnaire survey, 50 sophomore students majoring in Music Education from professional music colleges in Hubei Province were investigated in an attempt to investigate the current situation of their learning efficacy under traditional teaching methods. At present, 50 valid questionnaires are collected from the above students. During the interview, the author selected 6 students. Students with strong, medium, and weak self-learning efficacy were selected for interviews.

3.2. Measure

3.2.1 Study status questionnaire

In this study, the scale of learning self-efficacy designed by the learning Psychology research group of the Department of Education of Zhejiang University was adapted according to the characteristics of this study, with a total of ten questions, consisting of seven positive questions and three negative questions [9]. It is calculated by dividing the average number of questions by the maximum number of questions in this case using a seven-point Likert scale, and the maximum number is seven. It should be noted that since the test questions are divided into forward questions and reverse questions, they should be converted into calculation. The principle of conversion is that the higher the score of students, the stronger the sense of self-efficacy.

3.2.2 Structured interview

The interview outline is set up according to the characteristics of the music pedagogy curriculum [10]. The outline of the interview consisted of 7 questions, which focused on students' understanding and application of constructivist learning methods and the influence of different learning styles on their sense of efficacy. The average duration of all interviews was approximately 60 minutes. In order for them to provide sufficient detail and remain objective and relaxed, the interview was recorded and transcribed in Chinese, and then the translation was double-checked.

3.3. Data analysis

In this study, SPSS 26.0 was used to analyze the valid data collected. Descriptive analysis is made on the data in the learning questionnaire to show the strength of the respondents' sense of learning efficacy under the traditional teaching method. For the structured interview, thematic analysis is adopted. To explore students' views on constructivist learning methods and their influence on their own learning efficacy.

4. Result

4.1. Frequency analysis of students' self-efficacy scores

Table 1. Frequency Analysis of Students' Self-Efficacy

		Frequencies	
	N	Valid	Missing
		50	0
Mean		35.58	
Median		34.5	
Mode		34 ^a	
Std.Deviation		10.614	
Variance		112.657	
Skewness		0.543	
Std.Error of skewness		0.337	
Kurtosis		1.824	
Std.Error of Kurtosis		0.662	
Minimum		10	
Maximum		67	
Percentiles		25	31.00
		50	34.50
		75	40.00

a. Multiple modes exist. The smallest value is shown

In this study, descriptive statistics in SPSS 26.0 were used to analyze the overall self-efficacy of 50 students. The frequency analysis results are shown in Table 1.

It can be seen from the above table that the total score of the ten questions is 70 points, and the reverse scoring questions have been converted. The higher the score, the stronger the sense of learning self-efficacy. The average score of the 50 students' learning efficacy was 35.58, which was in the middle level. The mode is 34 points, which does not reach the medium level. The maximum and minimum values are 10 and 67 points respectively. These data show that the self-efficacy of the survey subjects fluctuates greatly, and the overall self-efficacy is in the lower middle level.

4.2. Analysis of Structured Interview Results

On November 28, 2023, the author explained the purpose and confidentiality of this interview to six students in a professional classroom and informed the interviewees that the entire interview process needed to be recorded. After asking their permission, the author conducted one-on-one interviews. The interview lasted about 60 minutes each, and the author tried to be objective and fair in the process of recording. Finally, after the interview, the author sorted out, transcribed, and analyzed the interview recordings, and the results showed as follows:

Question 1: Are you confident in learning music pedagogy well?

Question 2: Do you like the course of music pedagogy? Do you like the way the teacher teaches?

Question 3. What difficulties did you encounter in the course of learning? Do you just ignore it or do you look for solutions?

Question 4: Can I immediately understand the teacher's theoretical knowledge and complete self-digestion in the normal course of listening?

For question 1, three of the six students interviewed are confident that they can meet the requirements of the course objectives. Through interviews, it is known that students are very interested in the learning content and have been exposed to the learning content after class or in other courses, so they are naturally more confident in completing the goal.

For question 2, two students said that they liked the course but did not like the current way of teaching. One student said he did not like the course and was opposed to the current format. The rest indicated that the lecturer is boring in class and has always been an old model of summarizing knowledge points after explaining the textbook. Teachers always rely on PPT lectures have no new ideas, and have no interest in learning.

As for question 3, all six students said that they did not understand unfamiliar nouns or theories to varying degrees in class, four students said that they would ignore them, and two students said that they would record the constructs and theories they did not understand, and reflect on the reasons why they did not understand them after class, and search for relevant knowledge on the Internet or in the library. There were also three students who said that it was difficult to take on a lot of note-taking homework after class. Although they knew that it would help them to improve their mastery of the course, they still cared about the excessive role of words which occupied their spare time.

For question 4, only four students said they could basically understand it. One student said that because the class was boring, he chose to attend the class but did not listen to it. Instead, he chose to finish the homework of other subjects in class, because students and teachers had no interaction outside the classroom. Being lack of familiarity and shy, students said that even if they did not fully understand the content of the class, they would not be willing to raise their hands in class or ask the teacher after class.

Question 5: After finishing the homework assigned by the teacher, will you actively participate in the literature homework, class notes, and playing and singing homework after class?

Question 6: During your study, do you plan, implement, monitor, and reflect on your study plan? Do you think these practices have a great impact on your study?

Question 7: If you were a principal, what would you most like to change about the current music curriculum?

For question 5, six students said that they would complete the teacher's homework, but their active participation was very low. Most of them think that they finish their homework in order to get regular grades. Moreover, they thought that the assignment was too complicated, and two students showed obvious resistance to the assignment.

For question 6, two students think that they will formulate learning objectives and tasks before learning a new unit, and anticipate possible problems and solutions, while the remaining four students say that they will only finish the homework assigned by the teacher on time, and would rather use the planned time to practice piano or vocal skills or complete other learning tasks. After completing a stage of study, only one student will compare their learning results with the study plan, check whether they have completed the study plan, affirm their own advantages, and summarize their shortcomings. Only three students believed that making a plan, monitoring the learning process, and reflecting on the learning results had an impact on their learning, and they believed that they could get a passing grade by simply reciting the exam outline before the final exam. The interview results show that most students have a low frequency of using cognitive and metacognitive strategies, an insufficient level of cognitive strategies in learning engagement, and a low sense of learning efficacy.

For question 7, six students all raised different degrees of doubt about the current teaching mode. Four of them strongly expressed a desire to change the current class mode. For example, it is hoped that teachers and students can participate in class together. It is hoped that teachers can connect with examples when explaining theoretical knowledge to help students understand. I hope teachers can try to use a variety of teaching tools when teaching. It also puts forward the hope that the characteristics of music major can be highlighted in the classroom, and that the knowledge of pedagogy can be better combined with music learning. One student expressed the hope that the teacher can strengthen the interaction with the students in class, instead of telling the whole story alone. Another student hopes to reduce the current number of students, saying that the teacher cannot take into account too many students, and hopes to get more attention and guidance from the teacher in class.

5. Discussion

5.1. Self-Efficacy of College Music Education Majors

It can be seen from the above results that the self-efficacy of students in the traditional lecturing class is basically at a medium to low level. In college music education majors, the teaching-oriented classroom mode affects students' learning efficacy and is one of the main factors leading to students' poor learning efficacy.

Based on the above data, the specific problems are summarized as follows: 1. Students don't like the current teacher-lecture-oriented class mode. 2. Students lack a sense of participation in class and the classroom atmosphere is not good. 3. Students are unable to understand obscure book knowledge. 4. Students lack the use of cognitive and metacognitive strategies and do not master the correct learning methods. To sum up, the current traditional teacher-oriented classroom can no longer meet the learning needs of students, and the classroom needs to be transformed into a structured classroom aiming at higher education goals.

Constructivist teaching theory puts forward a different interpretation of learning and teaching from the lecturing classroom. This theory regards learning as creating meaning based on experience, and constructivist curriculum adopting this teaching theory has a higher cognition level of music. This kind of curriculum does not aim at how much knowledge to master, but focuses on how many valuable ideas and thoughts students can generate, and leads students to observe and create new cognition as the goal of learning. In the college music class guided by constructivism theory, the way for students to acquire professional knowledge will no longer be simple. Constructivism emphasizes that knowledge is generated by the interaction between man and the environment. Students can not only acquire music knowledge through the teacher, but also through their own interpretation of music knowledge, and the content of the book into their own experience. At the same time, students can also rely on their own music knowledge and experience to actively construct, such a learning process

is positive, and can actively accept and store relevant music information. Constructivism emphasizes that the purpose of learning arises from the learning process and is determined by students themselves. This way of achieving goals is more conducive for students to choose their own learning methods according to their own learning needs. Constructivism also emphasizes that students have individual differences in knowledge cognition, so they need to communicate with others to reach a consensus. Such a concept emphasizes the need to pay more attention to cooperative learning in the classroom and advocates communication between teachers and students and between students, which is conducive to students' self-awareness.

In general, constructive music classes can better reflect students' subjectivity and improve students' interest, which is conducive to the improvement of students' learning efficacy.

5.2. Strategies for Improving Self-Efficacy in Constructivist Music Classes

5.2.1 Constructive classroom design

Based on the cognitive characteristics of college students majoring in music education, the classroom design scheme is preliminarily designed (see Fig. 1).

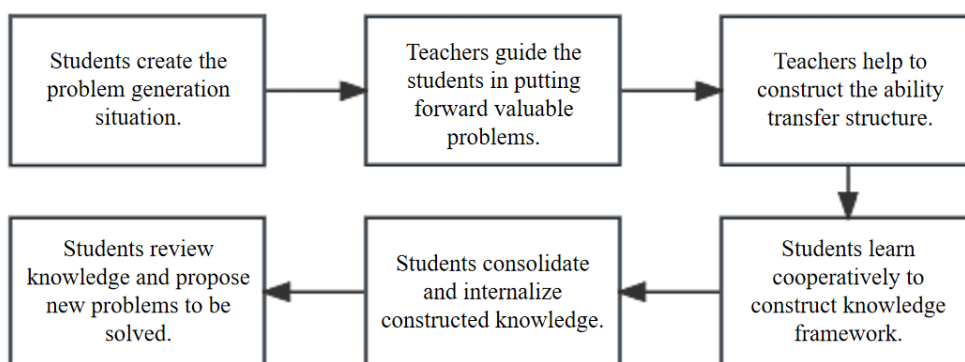


Fig. 1 Classroom Design Scheme

After the problems are generated, teachers will properly guide students to put forward music problems worthy of research and construct the ability transfer scaffold according to students' cognitive level. By this means, students can learn cooperatively to complete the meaning construction of knowledge and then consolidate and internalize constructed knowledge until proposing new problems.

5.2.2 Adopting resource-sharing learning mode to carry out cooperative learning

Traditional classroom teaching adopts the competitive reward structure, while cooperative learning adopts the cooperative reward structure. This reward structure contributes to the success of one person while helping the success of other students. This objectively provides students with many more opportunities to improve their learning efficacy than traditional teaching. At the same time, it is also conducive to promoting the common progress of students and cultivating excellent musical talents through such social interaction.

5.2.3 Attaching greater importance to encouragement and good classroom atmosphere

Students with a strong sense of self-efficacy, driven by motivation, plan their learning process in the direction of success, showing positive and confident thinking. However, students with weak self-efficacy will have negative thinking, which is essentially different from negative thinking. In teaching, teachers should pay full attention to each student. We should attach importance to the role of motivation and train students to enhance their self-confidence. By means of cognitive adjustment, discussion or music games, students are guided to express their own musical views, deeply understand their own advantages, and enhance their self-confidence.

5.2.4 Establish Classroom Evaluation Mechanism and Encourage Students to Make Positive Attribution

Teaching evaluation is an important part of the teaching process, which is conducive for teachers to pay full attention to students' multidimensional ability and tap students' advantages at different levels. Multi-dimensional evaluation methods such as student self-evaluation, student mutual evaluation and teacher evaluation can be used for teaching evaluation. For students, it helps them to better understand themselves and make positive attribution. For teachers, it is beneficial to improve students' learning interests and self-confidence from the perspective of understanding and appreciation, so as to improve students' self-efficacy.

6. Conclusion

This study adopts the method of questionnaire survey and interview to study the current situation of college music education students' learning self-efficacy. The survey shows that students who receive traditional classroom learning generally have a low sense of learning efficacy. Based on the survey results, the author puts forward a music classroom teaching strategy with constructivism as the core, in order to improve students' learning efficacy.

Self-efficacy is crucial to the development of college students. Students have a sense of self-efficacy, only through self-motivation, face learning challenges, and realize their own value. Teachers need to carry out constructivist classroom according to the actual situation of education through scientific teaching concepts. Thus actively guide students to develop their good learning habits and self-confidence and improve students' sense of self-efficacy by playing a synergistic role. At the same time, it is necessary to actively try in teaching practice to explore the new ideas of college music teaching which conform to the national conditions of our country.

References

- [1] Brown, D., & Netlibrary, I. Career choice and development. Jossey-Bass, 2002.
- [2] Bandura, A. Self-efficacy: toward a unifying theory of behavioral change. *Advances in Behaviour Research & Therapy*, 1977, 1(4): 139-161.
- [3] Compilation Group of Social Psychology in 13 Colleges and Universities in China. (Eds). *Social Psychology*. Nankai University Press: Tianjin, 2016.
- [4] Kou, D, Liu, D, & Zeng, X. The experimental study on the cultivation of student's sense of mathematics self-efficacy. *Journal of Southwest China Normal University (Philosophy & Social Sciences Edition)*, 2002.
- [5] Zeng, M. Research on the relationship between achievement motivation and teaching efficacy of music teachers in primary and secondary schools. Master's Thesis, Minnan Normal University, 2017.
- [6] Song, S. The Effects of choral experience on college students' subjective well-being, self-efficacy and interpersonal trust. Master Dissertation, Hubei University, 2014.
- [7] Zhang, S. The cultivation of students' self-efficacy in college vocal music teaching. *Big Stage*, 2012, 12: 204-205.
- [8] Huang, G. Analysis of music teaching methods in normal universities under the theory of Constructivism. *Journal of Chifeng University (Chinese Philosophy and Social Sciences Edition)*, 2007, 5: 159-160.
- [9] Bian, Y. Learning self-efficacy scale of preparation and application of. Ph.D. Dissertation, East China Normal University, 2003.
- [10] Xiang, H. Research on the cultivation of college students' self-efficacy in music learning, Master Dissertation, Capital Normal University, 2007.