

The Learning Management Through the Direct Instruction Model to Improve Vocal Music Skills for Secondary 5 (Grade 11) Students

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Abstracts

The objectives of this research were to: 1) compare the vocal music skills of Secondary 5 (Grade 11) students before and after learning management through the traditional method, 2) compare the vocal music skills of students before and after learning management through direct instruction model, and 3) compare the vocal music skills of students between those studying through the traditional method and those studying through the direct instruction model. The research sample was 30 Secondary 5 (Grade 11) students, selected by cluster random sampling, of Beijing Modern Music School, Beijing, China, in the academic year 2023. The research instruments consisted of: 1) a learning management plan using the traditional method, 2) a learning management plan using the direct instruction model, and 3) an assessment form of vocal music skills. The statistics used for data analysis were mean, standard deviation, independent samples t-test, and dependent samples t-test. The research results showed that: 1) the vocal music skills of Secondary 5 (Grade 11) after studying through the traditional method were higher than before at the statistical significance level of .05, 2) the vocal music skills of students after studying through the direct instruction model were higher than the before at the statistical significance level of .05., and 3) the vocal music skills of students studying through direct instruction model were higher than those studying through the traditional method at the statistical significance level of .05.

Keywords: The Learning Management; The Direct Instruction Model; Vocal Music Skills

Introduction

Music education is an important part of the art education system. A good music education popularization and development environment can help students build healthy and positive characters, cultivate good moral qualities, and cultivate people's sentiments. The people of advanced countries have good manners and etiquette, which cannot be separated from their music education. (Song Zhifei, 2021 : 92-93) In 2021, the General Office of the State Council of China issued the "Opinions on Strengthening and Improving Aesthetic Education in the New Era", which included the learning of music, art, calligraphy, and other art courses for primary and secondary school students. Moreover, the issue mentioned also involved participation in school-organized art practice activities in the academic requirements and explored the integration of art subjects into the academic requirements. The issue also had an impact on the scope of the junior and senior academic level examinations by incorporating music and art into the scoring subjects of the senior high school entrance examination.

The use of pedagogy can provide better technical support for students to learn music. The characteristics of music are "invisible and intangible", there are many abstract concepts, and students need to have a certain artistic foundation. On the other hand, some students are not influenced by a good musical environment; therefore, learning music requires understanding, imagination, and sensibility. There are certain difficulties in learning and understanding music also. As a result, students can't understand the teacher's teaching content and can't improve their grades. To help middle school students understand and increase their interest in music including helping them better grasp the knowledge of music theory, the role of the teacher is to convey the tests, rules, and actions to the students in the most direct way as much as possible (Yu Suhong, 2013 : 4). It is necessary to make the students interested in the musical content and the musical content should be easy to understand. These problems are also one of the problems of middle school music teaching.

The process of learning vocal music is abstract. It was found that the comprehension abilities of middle school students are weak and this led to an increase difficulties of learning undoubtedly. The movement states of the various vocal organs and resonance organs of the human body when singing and the mutual coordination of the muscles are invisible and intangible. Students cannot directly and intuitively see their own vocal status. The whole learning process is almost entirely based on experience and feelings. For this reason, the learning efficiency of vocal music is relatively low. (Zeng Qingxing, 2020 : 18–19) Learning vocal music is not as fun as simply learning to sing. Practicing vocals is very boring and pulling high notes is very painful. The process of learning vocal music is very comprehensive including music theory, sight-singing, listening, piano, and others are boring, and incomprehensible. Basic courses are interspersed in the process of learning vocal music, students not only need to maintain a good attitude but also need to maintain interest and motivation in learning.

Development of learners to such skills, one concept used in learning management is the direct instruction model (DI), an approach to learning that is used in the music and arts fields. The direct instruction model also has the function of improving the learning of music. Students are able to grasp of details more accurately and firmly, make abstract things more concrete, and facilitate understanding. The direct instruction model attaches great importance to the transformation of students from imitation to their own practical application. In the teaching process, the two links of imitation--singing and practice, rehearsal and performance-- teachers use multimedia such as video and audio to repeatedly stimulate students' feelings. Let students be able to imitate accurately with repeated practice so that they can master and flexibly use the situation. This method has a significant effect on improving students' performance.

The direct instruction model is organized by bringing in skills incrementally, giving students the opportunity to learn and apply these skills before being asked to learn another new skill. Only 15% of each class is provided new content, and the remaining 85% of each class is reviewed. The application of the knowledge that students have already learned is carried out in the order of cognitive development so that students can systematically master basic knowledge and skills. (Zhang Zhiguo & Wang., 2015 : 4). For that reason, the direct instruction model, under the theoretical support of linguistics, psychology, and pedagogy resulted in several major processes as an introduction and display, understanding and modeling, imitation and practice, communication and application, error correction, and consolidation. In this study, the direct instruction model was applied to middle school music classes, which could effectively improve the skills of vocal students. Under the guidance of teachers, students can gradually comprehend

music through music education, improving their musical literacy and promoting their all-around development.

Research Objectives

1. To compare the vocal music skills of students before and after learning management through the traditional method.
2. To compare the vocal music skills of students before and after learning management through the direct instruction model.
3. To compare the vocal music skills of students between those learning through the traditional method and those learning through the direct instruction model.

Research Methodology

This research was quasi-experimental research with Pretest- Posttest Control Group Design. The details of the research methodology are as follows:

1. Population and Sample: The research sample was 60, selected by cluster random sampling, out of 200 Secondary 5 (Grade 11) students studying at Beijing Modern Music School in the academic year 2022. The 60 students were divided into two classrooms with 30 students in each classroom. The traditional method was used in one classroom and the direct instruction model was used in another classroom.

2. Variables: 1) Independent Variable: learning management consisting of two methods: the traditional method, and the direct instruction model. 2) Dependent Variable: Vocal Music Skills in Vocal Technology subject.

3. Instrument Development

1) The learning management plans of the traditional method and direct instruction model on Vocal Music Skills in Vocal Technology subject. The teaching contents include Unit 1: The Background of the Song for 4 hours, Unit 2: Song Features and Techniques for 4 hours, Unit 3: Personal Characteristics and Songs are integrated for 4 hours, Unit 4: Sing a Song in its Entirety for 4 hours. The steps to instrument development are as follows.

1.1) Study curriculum, the learning management plan, and the learning activities of the traditional method and direct instruction model. Analyzed relevant literature and research papers. Summarizes the following concepts: 1.1.1) The learning management through the traditional method is a process of learning management that uses the normal method which consists of 3 steps: introduction, learning activity, and conclusion. 1.1.2) The learning management through direct instruction model is a process of learning management that emphasizes well-developed and carefully planned lessons designed around small learning increments and clearly defined and prescribed teaching tasks which consist of 5 steps: review previously learned material, state objectives, present new material, guided practice and independent practice.

1.2) Construct a learning management plan based on the traditional method of Vocal Music Skills in the Vocal Technology subject.

1.3) Propose the learning management plans of the traditional method and direct instruction model to the advisor to verify content validity and suggestions. Then, revised according to suggestions. Propose the learning management plans based on the traditional method to 5 experts for assessment.

1.4) Check and consider the appropriateness of the learning management based on the traditional method assessed by the expert and analyze the ratings. Make it perfect by setting the Item-Objective Congruence (IOC) consistency index value to be greater than or equal to 0.50 and revised it according to the expert suggestions. The analysis results showed that the IOC value was equal to 1.00.

1.5) Try out the learning management plan based on the traditional method with 30 Secondary 5 (Grade 11) students at Beijing Modern Music School, Beijing, China who are not the sample. Improve and publish the plan, then do the data collection.

2) An assessment of Vocal Music Skills in the Vocal Technology subject. The assessment form is a rubric scoring; the steps are as follows:

2.1) Study curriculum, theories, and assessment concepts.

2.2) Construct an assessment of Vocal Music Skills on the Vocal Technology subject.

2.3) Propose the assessment of Vocal Music Skills to the advisor to verify the content validity and improve based on suggestions by the advisor.

2.4 Propose the assessment of Vocal Music Skills to 5 experts. Then, check and consider the appropriateness of the assessment given by the experts and analyze the expert ratings. Make it perfect by setting the Item-Objective Congruence (IOC) consistency index value to be greater than or equal to 0.50 and revised it according to the expert suggestions. The analysis results showed that the IOC value was equal to 1.00.

2.5) Try out the assessment of Vocal Music Skills with 30 Secondary 5 (Grade 11) students at Beijing Modern Music School, Beijing, China who are not the sample. Improve and publish the assessment of Vocal Music Skills before collecting data.

2.5) Collect data by using the assessment form of Vocal Music Skills with a control group and experimental group.

4. Data Collection: The following actions have been taken as follows:

1) Preparation steps: Contact Beijing Modern Music School to collect data with the sample group, and request permission from school administrators to collect data.

2) The research plan was carried out using the management plans prepared according to the aforementioned classification groups. The data are collected in the following order:

2.1) The students take singing assessment before the learning management (Pretest). The purpose of which was to assess Vocal Music Skills before learning management. The result is the students' original Vocal Music Skills.

2.2) Collect data with learning management through the direct instruction model for the experimental group and the traditional method for the control group.

2.3) The students take singing assessment after the learning management (Posttest). The purpose was to assess the Vocal Music Skills after learning management. The result is the students' Vocal Music Skills.

3) Summarize data and discuss research findings.

5. Data analysis: In the data analysis, the researcher conducted the following data analysis work as follows:

1) Study instrument quality analysis: 1.1) The Index of Item Objective Congruence (IOC) was used to analyze the effectiveness of the learning management plan and assessment form of Vocal Music Skills in the Vocal Technology subject.

2) Analysis of hypothesis testing: 2.1) To compare the vocal music skills of students before and after learning management through the traditional method and the direct instruction model, the dependent samples t-test was used. 2.2) To compare the vocal music skills of

students studying through the traditional method and through the direct instruction model, the independent Samples t-test was used.

Conceptual Framework

Since this research paper employs an experimental research design, the framework below is served as the researcher's guide in this study:

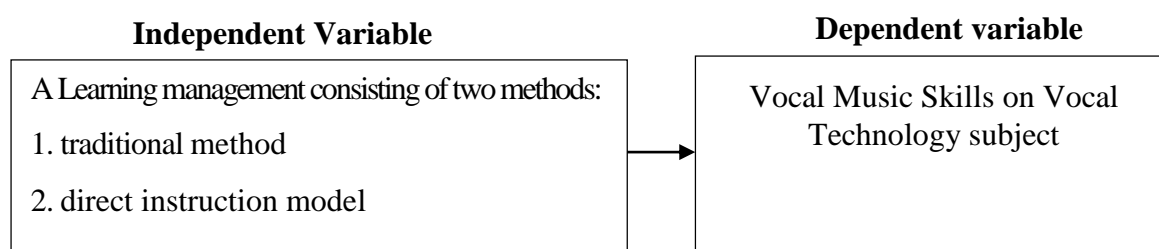


Figure 1 Conceptual Research Framework

Research Results

1. Comparison analysis of the students' vocal music skills before and after learning management through the traditional method.

The results are also presented in Table 1 and Figure 2.

Table 1 Comparison of the students' vocal music skills before and after learning management through the traditional method.

The learning management through the traditional method	(Number of Units) n	Mean (\bar{x})	Standard Deviation (S.D.)	Computed t-value (t)	Degrees of Freedom (df)	Sig. (p-value)
Before	30	11.37	1.903	10.910*	29	0.000
After	30	13.23	1.775			

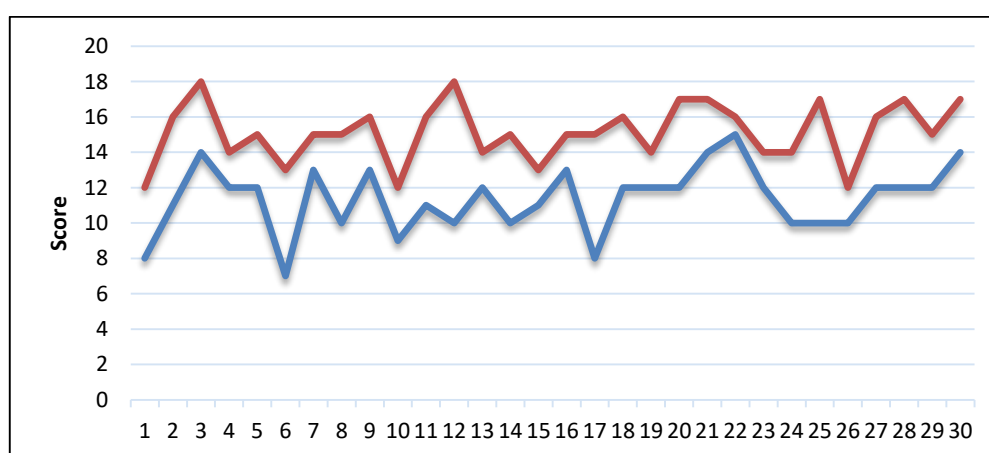


Figure 2 Comparison analysis of the students' vocal music skills before and after learning management through the traditional method.

Based on Table 1 and Figure 2, the results show the vocal music skills of students before learning management through the traditional method. The before learning had a mean of 11.37 ($\bar{x} = 11.37$, S.D.=1.93), and the after learning had a mean of 13.23 ($\bar{x} = 13.23$, S.D.=1.775). When comparing the vocal music skills before and after, it was found that the vocal music skills after the learning management were higher than before at a statistical significance of .05.

2. Comparative analysis of the students' vocal music skills before and after the learning management through the direct instruction model.

The result is also presented in Table 2 and Figure 3.

Table 2 Comparison of the students' vocal music skills before and after learning management through the direct instruction model.

The learning management through the direct instruction model	(Number of Units) n	Mean (\bar{x})	Standard Deviation (S.D.)	Computed t-value (t)	Degrees of Freedom (df)	Sig. (p-value)
Before	30	11.27	1.964	16.343*	29	0.000
After	30	15.33	1.709			

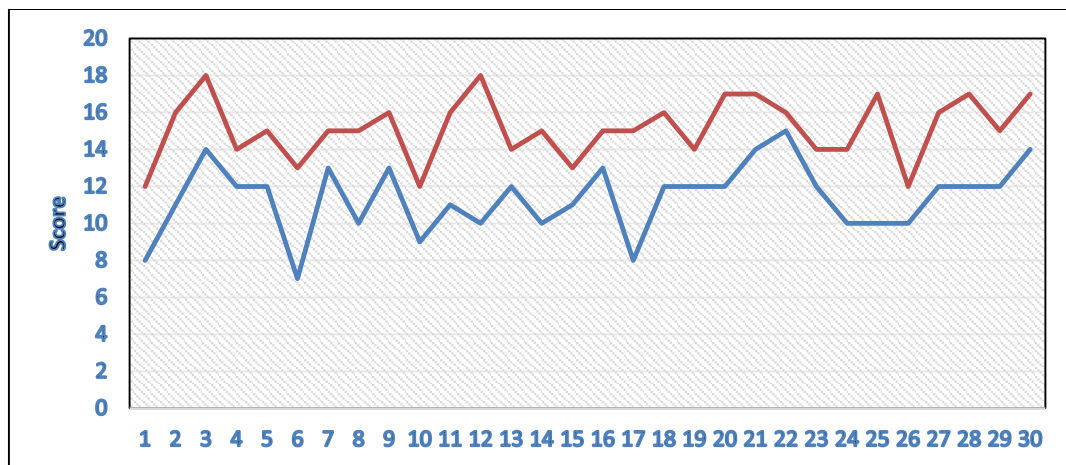


Figure 3 Comparison of the students' vocal music skills before and after learning management through the direct instruction model.

Based on Table 2 and Figure 3, the before-learning results of the students' vocal music skills studying through the direct instruction model had a mean of 11.27 ($\bar{x} = 11.37$, S.D.=1.964) and the after-learning had a mean of 13.23 ($\bar{x} = 15.33$, S.D.=1.709). When comparing vocal music skills before and after the learning management, it was found that the vocal music skills after the learning management were higher than before the learning management through the direct instruction model at a statistical significance of .05.

3. The comparison of vocal music skills of students studying through the traditional method and direct instruction model

The result is also presented in Table 3.

Table 3 The comparison of students' vocal music skills of those studying through the traditional method and the direct instruction model.

Learning Management	(Number of Units) n	Mean (\bar{x})	Standard Deviation (S.D.)	Computed t-value (t)	Degrees of freedom (df)	Sig. (p-value)
The traditional method	30	13.23	1.775	9.957*	29	0.000
The direct instruction model	30	15.33	1.709			

Based on Table 3, the results reveal that the vocal music skills of students studying through the traditional method show a mean of 13.23 ($\bar{x} = 13.23$, S.D.=1.775) and the vocal music skills of students studying through the direct instruction model show a mean of 15.33 ($\bar{x} = 15.33$, S.D.=1.709). When comparing the vocal music skills of students studying through the direct instruction model were higher than those studying through the traditional method at a statistical significance of .05.

Discussion

1. The comparison of the students' vocal music skills before and after learning management through the traditional method found that the after-learning showed a higher mean than the before-learning at the statistical significance of .05. This resulted from the learning management through the traditional method had many steps to follow. The learning management system provides a secure environment, that is supported and recognized by institutions, can effectively store and manage copyrighted content and data involving student privacy, and can also provide various exchange tools. Students take advantage of a variety of learning resources, tools, apps, off-campus experts, and peers to create a personalized learning experience (Terry Anderson 2017 : 8). This is also congruence with the findings of Zhang Guilan's (2021 : 270-271) and the findings of Yang Sha, et al. 's (2023 : 46-48) who stated in a similar way.

2. The results of comparing vocal music skills before and after learning management through the direct instruction model, it was found that the after-learning of students' vocal music skills were higher than the before-learning at a statistical significance of .05. This may cause by the direct instruction model believes that all students are able to learn if they are taught carefully and mindfully. Teachers should have high expectations for all students, especially in promoting the progress of students at risk. The failure of students is a reflection of teachers' failure. Teachers are ultimately responsible for students' learning. A student's race, family background, social class, or other factors were not the reasons for not being able to learn. Students should not be blamed for learning failures. Although teachers directly present the content to students in a direct instruction model, they also need to pay close attention to the needs of students in the process of curriculum design and teaching implementation so that all students can learn successfully. (Yu Suhong, 2013 : 4) Therefore, all details of instruction must be controlled to minimize opportunities for students to misinterpret the information being

taught and maximize the reinforcement of instruction. For example, the use of language and body movements in vocal music teaching can make it easier for students to understand the content of vocal music singing, such as "smelling flowers", "blowing candles", and "blowing paper" in inhalation training, which are typical direct pedagogy. Shen Lu (2010 : 128). These findings are also in congruence with the findings of Yu Suhong (2013 : 3-12) and Zhong Yimei (2013 : 1-2)

3. The results of comparing the vocal music skills of students studying through direct instruction model were higher than those studying through the traditional method at a statistical significance of .05. In the direct instruction model, the teacher's role is to pass facts, rules, or action sequences to students as a direct way as possible. It is especially useful for teaching well-structured subjects like mathematics, English grammar, etc. The components of the direct instruction model include informing the students of learning objectives, activating their prerequisite knowledge, explaining the new topic in small and sequential steps, providing sufficient supervised practice, and giving immediate feedback followed by independent practice in the form of seatwork and homework. Moreover, the direct instruction model has also attracted the worldwide attention of research scientists at all levels of education and in all subject areas. The results mostly favor the effectiveness of this approach (Rubina Kousar, 2009 : 275-295). One of the many challenges facing music educators is diminishing class time in lower secondary schools in the face of the increasingly crowded curriculum and the advent of arts 'taster' courses. However, music educators are still expected to be able to produce musically literate students capable of completing high-level music courses in upper secondary school. (Geoffrey Lowe and Steven Belcher, 2012 : 3-13) and the findings of Sheng Qunli (2005 : 42-44) and also in congruence with Peng Zhengmei (2018 : 180-188) which stated that the direct instruction model improved student achievement more than the traditional method.

Suggestions

1. Suggestions for applying the research results

The direct instruction model is superior to the traditional method and requires all teachers to have basic teaching skills. Teachers should formulate a sound teaching plan and objectives, familiarize students with course content, and use explanations, demonstrations, and other methods to assist learning. This can increase students' practical opportunities and form a good musical atmosphere. Teachers should make preparations before class, follow a specific order, reinforce key content, provide new knowledge, allow students to relate to what they already know, get feedback, and summarize key content at the end of the lecture. The music teaching process guided by direct pedagogy is not only a natural, mechanical, repetitive learning process, nor a musical score and repetition and reproduction, but a planned, organized, and controlled teaching process. It is conducive to improving the practical application ability of music, deepening students' perceptions and impressions, and improving students' enthusiasm and initiative in learning music. From this point of view, in the actual teaching of the direct instruction model, teachers should adopt different teaching methods for specific environments and problems, adapt to local conditions, and improve students' singing skills.

2. Suggestions for future research

Research should focus on specific topics for further understanding: 1) learning management through the direct instruction model to improve other music skills, and 2) the learning management through the direct instruction model combination with teaching techniques to improve the vocal music skills of students.

References

- Anderson, T. (2017). *Three Pillars of Educational Technology: Learning Management Systems, Social Media, and Personal Learning Environments*. The International Review of Research in Open and Distributed Learning. 18 (3), 1-13.
- Kousar, R. (2009). Effects of Direct Teaching Mode on Intermediate Grades and Attitudes to English Grammar. *Journal of College Teaching and Learning*. 7 (2), 275-295.
- Lowe, G., & Belcher, S. (2012). Direct instruction and music literacy: one approach to augmenting the diminishing. *Australian Journal of Music Education*. (1), 3-13.
- Lu, S. (2010). *On the difference between skill teaching method and image teaching method in vocal music teaching*. Music and Dance, 128.
- Peng, Z. (2018). The Instrumental and Domain, Emancipatory Educational Significance of Critical Thinking. *Journal of Arts and Humanities*. 7 (8), 180-188.
- Sheng, Q. (2005). *The model of direct guidance in learning and teaching*. In *12 lectures on the model of learning and teaching*. 12 lectures on the model of learning and teaching. 42-44.
- Song, Z. (2021). *Research on the strategy of college piano infiltrating music aesthetic education factors under the background of information age*. House of Drama. 13, 92-93.
- Yang, S., & Mao, X., & Zhao, Y., & Zhang, R., et al. (2023). *Comparative study of the "6+1" model and traditional model of effective physical education option course*. School Physical Education. 46-48.
- Yu, S. (2013). *On direct teaching*. Studies in Foreign Education. 40 (281), 4.
- Zeng, Q. (2020). *Let the vocal learning of high school students move from abstract to concrete*. Secondary School Teaching Reference, Comprehensive Edition. 18-19.
- Zhang, G. (2021). *Breaking the traditional teaching concept and innovating the junior high school music teaching model*. Science Fiction Pictorial. 270-271.
- Zhang, Z., & Wang, R. (2015). *On the principle of step-by-step teaching*. New West: Teaching Reform, 4.
- Zhong, Y. (2013). *Leveraging the advantages of direct teaching and improving teaching effectiveness*. Curriculum Education Research. 1-2.