



Development of Music Appreciation Course Based on Case Based Learning and Flipped Classroom to Enhance Music Appreciation Ability for First Year Students in Yan'an University

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Received 07/07/2024

Revised 11/08/2024

Accepted 11/09/2024

Abstract

Background and Aim: Teaching strategies that involve listening to music, expressing emotions, and analyzing its beauty can improve high school students' music appreciation abilities and help them learn music better. This study aimed to 1) compare students' music appreciation ability before and after implementing a music appreciation course based on Case-based learning combined with a Flipped classroom and 2) compare the students' satisfaction towards the music appreciation course based on Case-based learning combined with Flipped classroom using criteria of 3.51.

Materials and Methods: The sample was 25 second-year students majoring in music appreciation courses at Yan'an University, academic year 2023. They were derived by cluster random sampling. Experimental design is the one-group pretest-posttest design. The research instruments were 1) a Music appreciation course based on Case-based learning and Flipped classroom 2) lesson plans based on the case-based learning and flipped classroom approach, 3) a music appreciation ability test (knowledge) with a reliability index of .836, 4) music appreciation ability test (skill/ability) which reliability was .811 and 5) satisfaction questionnaire which reliability was .718. The data was analyzed by using mean, standard deviation, t-test for dependent samples, and t-test for one sample.

Results: The results of the study were as follows: 1) After implementing a music appreciation course based on case-based learning and flipped classroom, the post-test scores of students' music appreciation ability were greater than pre-test scores at .05 level of statistical significance ($M=56.39, SD=9.65, t=16.044, p=.000$). 2) The students' satisfaction was statistically higher than the determined criterion of 3.51 at a .05 level of statistical significance.

Conclusion: Implementing case-based learning and flipped classroom methods in music appreciation courses can improve students' self-assessment of their abilities, enhance interest in learning, inform future teaching practices, cultivate a love for music, and develop well-rounded individuals with balanced moral and intellectual growth.

Keywords: Music appreciation course, Case-based learning, Flipped classroom, Music appreciation ability

Introduction

Music is a very important field of humanities is one of the methods to realize art teaching targets. It possesses significant potency in facilitating emotional expression. The utilization of this practice aids pupils in comprehending and expressing their emotions, hence fostering the development of emotional intelligence and self-awareness. Cultural enrichment is another aspect because music provides valuable insights into a wide range of cultures, promoting a heightened global consciousness and creating an enhanced appreciation for the diversity of cultural expressions (Lehmann & Ericsson, 1997). The cultivation of aesthetic sensitivity is facilitated by the study of music, allowing students to develop the ability to detect and appreciate beauty in diverse manifestations. Engagement with music has been found to alleviate stress and anxiety, hence promoting holistic well-being and mental health therefore, integrating music appreciation lessons into the general education curriculum can yield substantial improvements in students' appreciation of music, hence facilitating a comprehensive educational experience. The curriculum for these courses must provide a comprehensive selection of musical genres, covering various historical periods and combining multiple cultural perspectives (Yu, 2021).

Case-based learning (CBL) is an educational approach that emphasizes student-centeredness within the learning environment, promoting active engagement in the learning process. Case-based approaches promote the investigation of practical and specific scenarios, with a focus on community engagement,





student-centered learning, and a commitment to fostering a culture of continuous learning. The utilization of a Case-based methodology effectively involves students in the examination and analysis of circumstances, often drawn from real-life scenarios. This approach is characterized by its learner-centered nature and entails a high level of engagement among the participants.

Williams (2005), highlights that CBL incorporates collaborative learning strategies, promotes the integration of knowledge, fosters students' intrinsic and extrinsic motivation to learn, encourages self-reflection and critical thinking, facilitates scientific inquiry, integrates theoretical knowledge with practical application, and aids in the development of diverse learning skills. CBL has demonstrated a notable track record of effective implementation in medical, legal, and business schools, and its utilization is progressively expanding in undergraduate and postgraduate education, particularly in pre-professional majors and the sciences (Herreid, 1994). The approach utilized in this methodology entails guided inquiry and is firmly rooted in the constructivist theory, wherein students develop fresh understandings through their interactions with their existing knowledge and the surrounding environment (Lee, 2012).

Another method that can be implemented to enhance music appreciation among the students is a Flipped classroom. A flipped classroom or inverted classroom is an emerging and widely adopted pedagogical approach, wherein conventional classroom activities such as content delivery are shifted to be completed outside of class, while activities typically assigned as homework are moved to the classroom setting (Sohrabi & Iraj, 2016). In the context of the Flipped classroom, the role of the instructor shifts from being a mere provider of knowledge to actively assisting students. Conversely, students are expected to take ownership of their learning process and regulate their own pace of learning (Lai & Hwang, 2016). In the educational setting, the utilization of classroom time for knowledge dissemination through traditional lectures is minimized. Consequently, educators are allowed to actively interact with students through alternative pedagogical approaches, including but not limited to engaging in discussions, facilitating problem-solving sessions initiated by students, implementing practical exercises, and providing advice.

The Flipped classroom model has been widely adopted across various academic fields, including mathematics, social sciences, and humanities, among others. Its implementation has been observed in educational institutions globally (Hao, 2016). The utilization of Flipped classroom technology has been found to provide several benefits, particularly in terms of enhancing students' academic performance. This is primarily attributed to the instructional approach employed by the technology, which entails students independently learning theoretical concepts outside of the classroom and engaging in practical activities during class time (Akçayır & Akçayır, 2018).

According to Tsubonou et al. (2019), the activation of specific brain regions associated with daydreaming, imagination, perception, and focus occurs when individuals engage with music. Consequently, this cognitive stimulation fosters the development of a creative mentality. The study conducted by Wan (2023) showed results indicate a significant emphasis on the cultivation of creative thinking abilities within music education programs at the university level.

Incorporating both Case-based learning and Flipped classrooms into a music appreciation course can lead to a well-rounded and deepened understanding of music. These approaches encourage active participation, creativity, and a holistic connection to the musical experience, ultimately fostering a greater appreciation for the art form. Keeping in view the practicability of Case-based learning combined with Flipped classrooms in the domain of music education, this study will be an initial attempt to design a course that is based on a combination of Case-based learning and Flipped classrooms to enhance music appreciation among the students. This research work will firstly develop a course based on a combination of both practical methods and secondly find out the effect of its implementation in enhancing the ability of music appreciation music students.

This study establishes a basis for innovating and improving the music education curriculum. It develops new and effective teaching methods, which are highly important for reforming the curriculum in practical undergraduate education. Teachers in music education can also use Case-based learning combined with Flipped classrooms to stimulate students' learning enthusiasm, improve learning efficiency, and





enhance the learning effect in music, which has important practical significance for improving college students' learning effect and practical ability in music education. This study will also help stimulate students' interest in independent learning, enhance students' initiative, innovation, and practical ability, and improve students' comprehensive quality through novel teaching mode, which can not only effectively promote the learning effect but also lay a good foundation for future practical work. Through its ability to transcend cultural barriers and deepen our comprehension of a wide range of human experiences, music functions as a universal language in the interconnected world of today. To foster a more profound appreciation for music among first-year students at Yan'an University, the Music Appreciation Course, which is based on Case-Based Learning and Flipped Classroom technique, is being offered. It is the goal of this course to encourage active participation, critical thinking, and a knowledge of different cultures by utilizing innovative teaching methods such as case-based learning and the flipped classroom model. Students will learn the skills and insights essential to navigate the complex landscape of music with confidence and insight via the examination of many musical traditions, genres, and historical contexts. This will enhance the student's overall academic and personal development if they develop these abilities and insights.

Research questions

1. How is students' music appreciation ability before and after implementing a music appreciation course based on case-based learning combined with the flipped classroom?
2. How is the students' satisfaction with the music appreciation course based on case-based learning combined with the flipped classroom?

Objectives

1. To compare students' music appreciation ability before and after implementing a music appreciation course based on case-based learning combined with flipped classrooms.
2. To compare the students' satisfaction towards the music appreciation course based on case-based learning combined with flipped classroom using criteria of 3.51.

Literature review

Music Appreciation Based on Case-based Learning

Case-based learning is an educational methodology that employs authentic situations (referred to as cases) to promote engaged learning and the development of problem-solving skills. According to Herreid (1997), the encouragement of students to apply theoretical information to real circumstances serves to foster critical thinking skills and facilitate a more profound comprehension. Within the realm of music appreciation, Case-based learning entails the use of musical compositions as individual cases to delve into the historical, cultural, and compositional dimensions of the music. Case-based learning requires relevant, engaging, and objective-aligned scenarios. In music appreciation, one may examine the historical context of a musical epoch, cultural factors that influenced a creation, or emotional expressions transmitted through a performance. Cases can be shown using recordings, films, and writing.

Case-based learning emphasizes authentic circumstances, cooperative learning, and transdisciplinary knowledge (Savery & Duffy, 1995). Examples of music appreciation include compositions, performances, and musical events that spark investigation. The technique encourages active learning, self-directed learning, and analytical skills. Real-world cases are used in CBL. These scenarios simulate professional or practical circumstances, making learning more engaging and relevant. Complexity and ambiguity are intentional in some instances. To imitate real-world problem-solving, students must manage ambiguity, views, and limited knowledge. CBL solves problems or explores challenges in unique circumstances. Students are driven to solve challenges and make informed choices. Studies often borrow ideas from other fields. This encourages students to study cross-disciplinary links and apply a holistic approach to problem-solving. Steps considered for effectively implementing Case-based learning 1) selection and design of cases 2) preparation and introduction 3) independent inquiry 4) facilitating group





discussion and analysis 5) guided inquiry 6) study and reflection 7) group presentation 8) input from the instructor 9) facilitating synthesis and application 10) evaluation 12) flexibility and adaptation.

Music Appreciation based on the Flipped classroom

The Flipped classroom is an educational concept that offers a distinctive approach by inverting the traditional teaching paradigm. In a traditional educational environment, students attend planned class sessions where they receive instruction through lectures. Following these sessions, students independently complete homework assignments outside of the classroom. The Flipped classroom model employs a distinct approach by shifting the delivery of direct education, often given through lectures, to occur outside of the traditional classroom environment. This is typically achieved through the use of video lectures or assigned readings. As a result, the time spent in the classroom is afterward allocated to promoting interactive and collaborative learning experiences. In a Flipped classroom, educators create or choose recorded lectures, written materials, audio recordings, or web-based tutorials. These instructional tools cover the basics students must know before class. Before class, students should review this content. In-class sessions emphasize active and participatory learning over lectures. These activities include discussions, debates, problem-solving, group projects, hands-on experiments, case studies, simulations, and peer teaching. These activities help students use pre-class knowledge and develop critical thinking skills. In a Flipped classroom, the instructor becomes a facilitator and guide rather than the main information supplier. (Herreid, 1997; Tobudic & Widmer, 2004; Pisani & McDaniel (2005)

The Flipped classroom emphasizes critical thinking, problem-solving, and knowledge application. In-class activities encourage students to engage with ideas rather than just memorize them, improving understanding and skill development. Technology is crucial for pre-class materials and in-class engagements. Teachers use technology to provide multimedia content, web-based educational units, examinations, and interactive materials to engage students outside of the classroom. In-class activities can benefit from online collaboration tools, discussion boards, and interactive simulations. Flipped classroom assessment includes formative and summative evaluations. Formative evaluations allow teachers to test student comprehension in real-time during class activities. Summative assessments may include exams or projects. The continual interaction and feedback during in-class activities help students learn and develop. The Flipped classroom fundamentally changes instruction. Instead of delivering knowledge, pre-class content prepares students for in-class discussions, activities, and applications. Coming to class with basic concepts allows for further investigation and participation. Active and interactive learning exercises build on pre-class knowledge during class. These exercises promote critical thinking, problem-solving, cooperation, and knowledge application. Students participate in group discussions, case studies, simulations, debates, peer teaching, and hands-on experimentation. (Shen & Chang, 2023; Kvashnina & Martynko, 2016)

To provide a dynamic and interesting learning environment. Instead of lecturing, the teacher facilitates and guides in-class activities. The teacher guides discussions, asks probing questions, and encourages topic investigation. The teacher helps students relate pre-class knowledge to in-class activities. In a Flipped classroom, students collaborate with peers. Problem-solving, group conversations, and collaborative projects promote peer learning and various perspectives. These contacts foster understanding and teamwork. Continuous reflection and feedback are key to instruction. Students give teachers comments on pre-class and in-class content. This input ensures that teaching methods and content delivery are improved to improve learning. Flipped classrooms use formative and summative assessments. Formative evaluations in class let teachers assess student understanding and alter instruction. Critical thinking, problem-solving, and collaboration are also taught in these exercises.

Music Appreciation Ability

Appreciating music involves understanding, interpreting, and connecting with musical works. Juslin & Sloboda (2010) define musical appreciation as the identification and understanding of musical components, the contextual understanding of works within their historical and cultural context, and the subjective experience of emotional and aesthetic reactions to music. Appreciating music requires active



engagement and the development of musical analysis and evaluation skills. Music appreciation teaches active listening. Students learn melody, harmony, rhythm, dynamics, and timbre. People connect with music because of these traits. Music enjoyment fosters critical thinking. Critically assessing music requires pupils to spot patterns, structures, and links. Improves music structure comprehension. The history and culture of music are enlightened by music appreciation education. Students investigate how music reflects society, history, and culture. Circumstance elevates music. Many musical genres, styles, and traditions are heard. Students are encouraged to attempt different musical genres through schooling. This project promotes musical diversity and openness.

The capacity to appreciate music is a complex phenomenon that encompasses various interconnected elements. Aural perception involves actively listening to music to identify melody, rhythm, harmony, and timbre. Facilitating cognitive perception and assessment of auditory inputs helps understand and appreciate music's various components. This method enhances the musical experience by revealing a composition's many parts. Appreciating music in a cultural context requires understanding historical, sociological, and cultural influences on musical compositions and live performances. Understanding these characteristics helps you appreciate the music by revealing its cultural significance, symbolic meanings, and underlying meanings. The music connects listeners to its cultural ideas, customs, and storytelling. Analytical music appreciation seeks the essence of musical structures, forms, and methods. Deconstructing and analyzing music show recurring patterns, chord sequences, tonal relationships, and structural frameworks. This program explains music's complexity. To appreciate artists' and composers' emotional nuances and expressive goals, music enjoyment demands emotional participation. The process involves noticing and responding to music's joy, grief, passion, and reflection. Emotionally committed listeners identify with music. Music's creativity and meaning are assessed visually. Composers' expertise, creativity, and choices matter. Music's beauty, elegance, and profundity surpasses its utility. It celebrates music's creativity. (Juslin and Sloboda, 2010; Lehmann & Ericsson, 1997; Gabrielsson, 2001)

Conceptual Framework

In this study, the independent variable was a music appreciation course based on case-based learning combined with a flipped classroom and the dependent variable was students' music appreciation ability and students' satisfaction. Figure 1 illustrates the conceptual framework of this study.

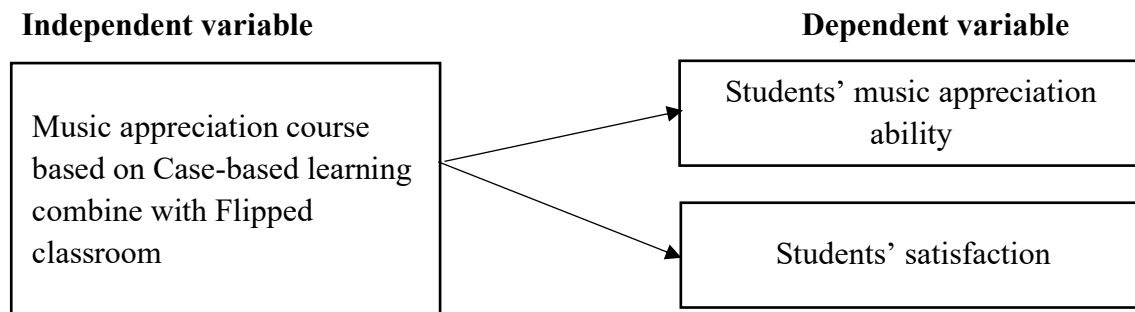


Figure 1 The figure of research Conceptual Framework

Methodology

1. Population and sample

The population in this study was about 50 Chinese who majored in the education of music at Yan'an University, the People's Republic of China. They were selected by using the cluster random sampling method.

The sample of this study was 25 first-year students who majored in the education of music at Yan'an University, the People's Republic of China, derived by cluster random sampling method. Set the sample



size by using the G*Power program and set effect size = 0.80 (choose a large effect size), error prob. = 0.05 and power (1-B error prob.) = 0.95. After calculation, the size of the sample was 25.

2. Research Instruments

Research instruments served as the primary tools employed in the research process for data collection. The research tools utilized in this investigation were 1) a Music appreciation course based on case-based learning and flipped classroom 2) 8 lesson plans 3) a Music appreciation ability test (knowledge) 4) a music appreciation ability test (skill/ability) and 5) a satisfaction questionnaire.

1) Evaluation of Music appreciation course based on case-based learning and flipped classroom

The music appreciation course based on case-based learning and flipped classroom teaching model was designed consisting of six components: 1) formulation of principles 2) formulation of objectives 3) Selection of content 4) design of instructional strategy 5) selection of media and resources 6) selection of evaluation method. This draft course was evaluated based on 6 components by five experts in the field of curriculum and instruction evaluated draft courses with a 100% recall rate. After analysis, the score of experts in each evaluation component is $M=4.74$ and $SD=0.48$. This suggests a significant level of proficiency, indicating that the course could be employed in this study.

2) Evaluation of Lesson Plans

The summarized finding of lesson plans according to the music appreciation course was based on case-based and flipped classrooms, which were collected and analyzed by arithmetic means and standard deviation. This procedure aimed to determine the quality of the lesson plans before their implementation. After analysis, the score of experts in lesson plans is $M=4.89$ and $SD=0.31$.

3) Evaluating Quality of Music Appreciation Test (knowledge)

The index of Item Objective Congruence (IOC) was adopted by experts for the evaluation. The results obtained from the study of the IOC index demonstrate that all test items were determined to be appropriate and feasible for incorporation into the examination. It found that the IOC value range between 0.80 and 1.00 is greater than 0.50. The result of analyzing the IOC index showed that all test items were appropriate and could be used in the test. In this research, the researchers use exam papers to test students to get a set of data. This data was then used to measure the learning academic achievement test had an item difficulty (p) .31 - .77 and the item discrimination between .26 - .90, which was within acceptable criteria.

Compute the reliability of the theoretical knowledge test using appropriate formulas, Kuder and Richardson formulas 20, with a target reliability of more than 0.7. The reliability of the evaluation form was .836, computed using the formula of Kuder and Richardson formulas 20.

4) Evaluating Quality of Music Appreciation Test (skill/ability)

The index of Item Objective Congruence (IOC) was adopted by experts for the evaluation. The results obtained from the study of the IOC index demonstrate that all test items were determined to be appropriate and feasible for incorporation into the examination. It found that the IOC value range between 0.80-1.00 is greater than 0.50. The result of analyzing the IOC index showed that all test items were appropriate and could be used in the test. Compute the reliability of the essay test using appropriate formulas, Cronbach's Alpha coefficient. The reliability of the evaluation form was 0.811, computed using the formula of Cronbach's alpha.

5) Evaluating Quality of Satisfaction questionnaire

The index of Item Objective Congruence (IOC) was adopted by experts for the evaluation. The results obtained from the study of the IOC index demonstrate that all test items were determined to be appropriate and feasible for incorporation into the examination. It found that the IOC value range between .80 and 1.00 is greater than .50. The result of analyzing the IOC index showed that all test items were appropriate and could be used in the test. Try out with 30 students to assess reliability by using Cronbach's alpha coefficient. It found that the reliability of the questionnaire was .718, computed using the formula of Cronbach's alpha.



3. Experimental Design

This study has employed the one-group pre-test and post-test experimental design (Campbell and Stanley, 1966) as a methodology to examine the efficacy of curriculum course implementation, as seen in the accompanying diagram.

Group	Pre-test	Treatment	Post-test
Experimental	O ₁	X	O ₂

O₁ will be the measurement of the Music appreciation ability of the first-year students at Yan'an University before an instruction.

X will be instructed through a Course Based on Case-based learning combined with the Flipped classroom.

O₂ will measure Music appreciation ability and students' satisfaction with the first-year Students at Yan'an University after instruction

4. Data collection

The course will be implemented in the samples during the Autumn semester of the academic year 2023. The procedures of data collection during course implementation process were as follows:

1. The samples were given the pre-test for measuring music appreciation ability with constructed instruments.

2. The samples that were assigned as experimental groups were taught by using instruction through a music appreciation course. This group was taught through 8 lesson plans and the allocation time for instruction was 2 hours.

3. After finishing the instruction, the samples received the post-test by using the same instrument as the pre-test.

4. The samples were given the students' satisfaction questionnaire to express their opinions about the course.

5. Data analysis

In this study, quantitative data will be analyzed by using the statistical program in line with the research objectives. The data was analyzed by using mean, standard deviation, t-test for dependent samples, and t-test for one sample.

Results

The results of the study are as follows:

1. Compare students' music appreciation ability before and after implementing a music appreciation course based on case-based learning combined with the flipped classroom. Shown in Table 1.

Table 1 The results of the Tests of Normality of music appreciation ability scores were analyzed by Kolmogorov-Smirnov and Shapiro-Wilk Tests.

Music Appreciation Ability	Tests of Normality					
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	p	Statistic	df	p
pre-test	.101	25	.200	.966	25	.545
post-test	.084	25	.200	.975	25	.773

From Table 1, the results of the Tests of Normality of music appreciation ability scores were analyzed by Kolmogorov-Smirnov and Shapiro-Wilk Tests to verify the preliminary agreement before using the t-

test. The results showed that both the pre-and post-learning scores of the music appreciation were higher than 0.05 (the critical level of significance). The results indicate that both of the tests showed a normal distribution of the music appreciation ability scores. Thus, the test could be performed with the following T-test for the dependent sample without violating the prescriptions.

The table below presents the results of a t-test for dependent samples, which evaluated the pretest and post-test scores to compare students' music appreciation ability. The purpose of this table was to address the research objective of determining whether a music appreciation course could improve students' ability to appreciate music.

Table 2 Findings of Music Appreciation Ability before and after learning through the Music Appreciation Course

Music appreciation ability scores		n	M	SD	t	p
Pre-test	100	25	56.39	9.65	16.044**	0.000
Post-test	100	25	87.16	5.00		

** $p < 0.01$

As presented in Table 2, the average pre-test score of students' music appreciation ability was ($M=56.39$, $SD=9.65$), and the average post-test score of students' music appreciation course was ($M=87.16$, $SD=5.00$). The result of Table 3 showed that after implementing a music appreciation course based on case-based learning and a flipped classroom, the post-test scores of students' music appreciation ability were greater than pre-test scores at 0.05 level of statistical significance ($t = 16.044$, $p = .000$).

2. Compare the students' satisfaction towards the music appreciation course based on Case-based learning combined with Flipped classroom using criteria of 3.51.

The findings of the comparison of students' satisfaction after learning through the music appreciation course with the criterion set at 3.51 which were analyzed by using t- t-test for one sample were presented in the below table. This table aimed to answer the research objective about whether students are satisfied with learning through this course.

Table 3 The Finding of Comparison of Students' Satisfaction After Learning Through Case-Based Learning and Flipped Classroom of Music Appreciation Course with the Criterion Set at 3.51 scores

Group	n	Full score	criterion score	M	SD	t	p
Experimental group	25	5.00	3.51	4.77	0.14	44.426**	.000

** $p < 0.01$

As presented in Table 3, the mean score of the students' satisfaction after learning through case-based learning and flipped classroom learning of the music appreciation course was 4.77 from a possible full mark of 5.00 and the standard deviation was 0.14 which was statistically higher than the determined

criterion of 3.51 at .05 level of statistical significance ($t=44.426, p=0.00$). The case-based learning and flipped classroom learning of music appreciation courses can promote students' satisfaction.

Discussion

The results of this study indicate that there are effects of music appreciation courses based on case-based learning and flipped classroom teaching can improve students' examination scores and appreciation ability performance. The students in case-based learning and flipped classroom teaching settings exhibited higher engagement and participation compared to traditional lecture-based courses, which aligns with previous studies suggesting that active learning strategies promote interactive and student-centered environments (Abeysekera & Dawson, 2014; Akçayır & Akçayır, 2018). Additionally, Johnson et al. (2020) and Masko et al. (2020) investigated the use of Case-based learning within music history courses and its impact on students' aptitude for critical thinking and comprehension of cultural concepts. Consistent with research showing that the flipped classroom teaching model enhances academic outcomes (Låg & Sæle, 2019, NG et al., 2022, Tiya Wong & Chankit, 2024, Wang, 2018, Wang, 2024). Furthermore, survey data indicated increased student satisfaction, with students citing better comprehension and more meaningful interactions (Karabulut-İlgu et al., 2018). These findings suggest that educators should consider incorporating case-based learning and flipped classroom teaching strategies into their curriculum design, provide professional development for teachers, and allocate resources to support these methodologies. However, the study's limitations, including a small sample size and limited generalizability, highlight the need for future research with larger, more diverse populations and longitudinal studies to assess long-term effects. Overall, integrating case-based learning and flipped classroom teaching in a music appreciation course has shown significant benefits, enhancing student engagement, critical thinking, academic performance, and satisfaction, offering a promising approach to improving educational practices.

The students' satisfaction was statistically higher than the determined criterion of 3.51 at a .05 level of statistical significance. The results indicate that combining case-based learning with the flipped classroom approach is an effective strategy for teaching music appreciation (Låg & Sæle, 2019). This method likely engaged students more deeply, allowing them to actively participate and apply their knowledge in practical contexts. The higher satisfaction levels suggest that these teaching methods fostered greater engagement and interaction among students (Akçayır & Akçayır, 2018, Shuyuan, et al., 2023), leading to a more personalized learning experience (Wang, 2018, Li, 2018). The success of these teaching methods supports the continued exploration and adoption of pedagogical innovations in music education (NG et al., 2022).

Conclusion

Through the comparative analysis of the results of the pre-test and post-test of the first-year students learning music appreciation course based on case-based learning and flipped classroom teaching, after the intervention of case-based learning and flipped classroom teaching. The conclusion was as follows:

1) After implementing a music appreciation course based on case-based learning and a flipped classroom, the post-test scores of students' music appreciation ability were greater than pre-test scores at a .05 level of statistical significance ($M=56.39, SD=9.65, t = 16.044, p = .000$).

2) The students' satisfaction was statistically higher than the determined criterion of 3.51 at a .05 level of statistical significance.

At the outset, the researchers examined the research context of this study by considering the current state of traditional teaching, the emergence of problem-based teaching methods, the growing popularity of case-based and flipped classroom learning, and other relevant factors. They also provided a concise overview of the research focus of this study. This text provides a detailed explanation of the definition, connotation, characteristics, theoretical basis, and teaching practice of the music appreciation course. It serves as the groundwork for the development of a music appreciation course at Yan'an University, which



utilizes case-based learning and a flipped classroom approach. Additionally, it establishes the theoretical foundation for enhancing students' music appreciation abilities.

The course was implemented for new students to assess the effectiveness of the course. The study of music appreciation courses based on case-based learning and flipped classroom teaching can improve students' examination scores and appreciation ability performance. This may be due to the following reasons:

1) Case-based learning and flipped classroom teaching foster students' capacity for independent problem inquiry learning, enhance their learning initiative, and promote autonomous learning beyond the classroom. This approach enables students to develop a greater interest in learning and improve their learning efficiency. It also helps students to better comprehend the content of the music appreciation course by integrating theoretical knowledge with practical applications. As a result, students' grades improve and their ability to appreciate music is enhanced.

2) By employing case-based learning and the flipped classroom technique, students have the autonomy to select their objectives and engage in critical thinking through questioning. Students can enhance their enthusiasm for theoretical learning by engaging in critical thinking. The pedagogical approach of prepping problem sets before class, addressing queries during class, and engaging in class-wide summarization and reflection can enliven the otherwise mundane music appreciation course.

3) During the analysis of experimental data, it was discovered that the use of case-based learning and the flipped classroom approach resulted in a notable improvement in students' music appreciation performance compared to traditional teaching techniques. Therefore, this instructional approach significantly enhanced the educational outcome of the music appreciation course. The average scores of the study exhibited a progressive increase compared to the pre-test. The study found a Cohen's *d* effect size of 4.18, indicating a significant impact of the music appreciation course on students' music appreciation skills. This effect size is deemed large. The average scores of the study exhibited a progressive increase compared to the pre-test.

4) Based on the objectives established by the teacher, students are expected to engage in independent study and provide feedback before class. They should effectively communicate with both their peers and teachers during class, and use this interaction to summarize and enhance their understanding. The ultimate aim is to solve problems and foster a positive learning experience, thereby significantly improving their efficiency in learning.

5) After implementing the teaching methods of case-based learning and flipped classroom, students' performance in self-assessment of music appreciation ability will improve. This will enhance their interest in learning and can be beneficial for future teaching. It will also help students develop a love for music appreciation courses, foster good moral values, and cultivate well-rounded college students with a balanced development of morality and intelligence.

Recommendation

1. Prioritize course development and professor expertise in course design, with budget support for instructional materials and teacher training in diverse instructional activities and effective classroom management.

2. Thoroughly review and analyze curriculum and teaching materials before implementation. Equip teachers with the skills to independently acquire and prepare teaching methods, and encourage student engagement, collaboration, and effective communication.

3. Implement and explore hybrid teaching methods, combining case-based learning and flipped classroom approaches, to enhance scientific knowledge and learning abilities. Involve teachers in designing mixed teaching modes.



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