Journal of Green Learning, e-ISSN 2807-890X
Vol. 3, No. 1, June 2023, pp. 1-16.
DOI: 10.53889/jgl.v3i1.213

A reform of Solfeggio course and application PDCA cycle for music majors at Dalian University

Zhang Lina & Pramote Danpradit

Department of Music, Faculty of Music, Bangkok Thonburi University, Thailand

Article Info

Article history:
Received February 14, 2023
Revised May 1, 2023
Accepted June 6, 2023

Keywords:
Dalian University
Music majors
PDCA cycle
Solfeggio course

ABSTRACT

The purpose of the paper is to present the concept of the reform of the Solfeggio course by application PDCA cycle for music majors. Research and teaching tools built with a small group of 26 volunteer students. The PDCA process is used to increase learning management, company management, and instruction enhancement. In order to further progress instructional methodologies and ideas. The Solfeggio course syllabus from 2006 is being rewritten for the 2020 edition. The practicability of the course has also improved, and student enthusiasm for the course has increased in the classroom. General survey outcome found that 90% of students agree that lecturers should raise the quality of teaching, dare to innovate, and increase the attractiveness of the classroom to students. The results indicated that 12.4% of the students are extremely, 77% are somewhat satisfied, 17% are not satisfied, and 9.3% are very dissatisfied.

Corresponding Author:
Zhang Lina
Faculty of Music
Bangkok Thonburi University
Thailand
Email: 505205114@qq.com

1. INTRODUCTION

This paper is an attempt to apply the concept of Dr. Edwards Deming to the solfeggio course for music majors at the Dalian University of the Arts College. The key strategy is the Deming cycle concept, which is used to address two significant issues: the development of self-paced learning in response to the issue of online learning under the threat of the COVID-19 outbreak and the issue of identifying one's own needs or taking into account one's own skill development. That is to say, during the pandemic school closure when there was still teaching or learning online, students and teachers were split up and unable to react or address issues with their skills right away. Another option for addressing issues with teaching and learning is to select alternative methods of instruction. In order to better understand the PDCA, which has turned into a lesson plan, this post will also discuss some of its consequences and potential remedies.

The Dalian University of the Arts College places a strong emphasis on practical qualities and excels at teaching from repertory. Repertory is the focus of art practice teaching, which combines teaching and performance. A project is a vehicle for the integration of learning, doing, and producing; competition is the pull; exhibition and competition integration is the leader; industry, university, and league integration is the goal; and social service is the goal. The three classes that make up art instruction are linked together, with the first class consisting of theory and practice lessons that follow the lesson plan. The second classroom will be used for extracurricular art practice instruction, while the third classroom will be used for extracurricular art practice activities. Dalian University of Arts has recently produced nine big plays in a row, which also makes it a great place to conduct research on real-world music instruction. One of the works, "Silk Road Youth," was incorporated into the solfeggio training teaching system by the researcher, who also used the concepts of applicability and practicality to create a Solfeggio training teaching manual that could adequately represent our college. Show deep and contains the culture, young people's beautiful and rich flavor, the element of time and space of historical and modern, east and west, optimize integration, to the beginning and end, the veins of the four chapters are combined, presents a picture of ancient and modern, an audio-visual feast, and the exchanges with stage drama artistic rendering.

The authors created a tool to be used for trials with some students in the first semester of the 2022 academic year. The tool and preliminary trial were conducted with a small group of 26 volunteer students, and the contents and trial results included the Deming cycle, the solfeggio course syllabus, teaching for the solfege course with the PDCA cycle, and the application PDCA cycle.

2. THE DEMING CYCLE

The Deming cycle, or PDCA process, is credited with being developed as a result of Dr. Edwards Deming's presentation in Japan in 1950. Starting in the 1600s with Galileo and the philosophy of science, the presentation will trace the evolution of the scientific method and the science of improvement. The founder of modern science, Galileo Galilei (1564–1642), made fundamental contributions to experiment design. Francis Bacon (1561-1626) believed that knowledge should follow a predetermined pattern and that humans learn by deduction and induction. In 1872, William James and Charles Peirce asserted that conduct is influenced by knowledge and that truth is established by the best possible outcomes. Building on the Pragmatist Model and Providing a Bridge for the PDCA, Clarence Irving Lewis (1883-1964) Theodore Irving, Charles Pierce, and William James had a big impact on Lewis. According to Clarence Irving Lewis, conceptions are presumptuously applied to every given experience, whereas truth is unquestionable and must be differentiated by empirical verification. Both Dr. Deming and Dr. Walter A. Shewhart were greatly influenced by Lewis's book (Sallis, 2005; Matsuo and Nakahara, 2013; Mine, 2012).

Deming introduced the plan-do-check-action, or PDCA cycle, in his lectures from 1950 and 1951. The activities of the Japanese QC, TQC, and QC circles all included this cycle. Pragmatism was strongly supported by John Dewey (1859–1952) in his lifetime. Clarence Irving Lewis (1883–1964) establishes a link for the PDCA Cycle by building on the Pragmatist Model. Clarence Irving Lewis was greatly influenced by both Charles Pierce and William James. Clarence Irving Lewis argues that whereas ideas are automatically applied to any given experience, truth is indisputable and must be distinguished by empirical verification. Dr. Eming and Walter Shewhart both credited Lewis' book with having had a significant influence. Deming first discussed the plan-do-check-act (PDCA) cycle in his lectures from 1950 and 1951. This cycle was incorporated into the activities of the Japanese QC, TQC, and QC circles (Sallis, 2005; Moen & Norman, 2009; Bo, 2010).

Sallis (2005) argues that the Deming cycle, also known as the Plan-Do-Check-Act (PDCA) cycle, is an established tool frequently used in the process of improving teaching. It is a collaborative professional development strategy. Understanding the PDCA cycle's history allows us to conclude that the pragmatic model had a significant impact on the cycle's inception. (Matsuo & Nakahara, 2013) The PDCA cycle is a strategy that can be used to improve instruction and advance teaching. We can therefore combine them for study. As mentioned above, most music teachers are unaware of the concept of the Deming cycle, which has long been used to improve education, learning management, and business management (Mine, 2012). The author is aware of the concept of the Deming cycle and therefore applied this concept to designing and planning learning according to the Deming cycle.

3. SOLFEGGIO COURSE SYLLABUS

To improve the teaching of solfeggio, Dalian Art College monitored the entire process and implemented four changes between 2006 and 2020. To improve Solfeggio's teaching, Dalian Art College monitored the whole process and implemented four reforms from 2006 to 2020. The fundamental goal of education is to identify such tactics that respect individual diversity while also working to ensure that students develop to their greatest potential. In the Solfeggio course syllabus (2006) for the 2020 edition, the Solfeggio course's "results-oriented education" approach is being revised in order to better advance instructional strategies and ideas. The teaching curriculum has once again been scientifically adjusted in accordance with the "learning" and "learning" two kinds of knowledge, making it obvious that the aesthetic situation of music theory has been liberated from the "complicated technical theory" (Palmer, 1998; Matsuo and Nakahara, 2013).

Students are allowed to develop their understanding of music beyond the theoretical level by being taught about its composition, the occurrence and application of the law, how to restore the actual sound of music, and the role of theory in directing creative practice (Stauffer, 2003; Chien, 2007). Solfeggio training course relevance to other related professional courses is enlarged (Lena & Feng, 2009; Jingxing & Hong, 2011), the practicability of the course improves, and student excitement for the course increases in the classroom (Table 1). The following is how the directors outlined the problems with the reform:

1. Teaching form: Change to a small class with about 20-25 students in each class.
2. Examination methods and paper structure;
   2.1 Test format: closed-book written exam and solfeggio oral exam.
   2.2 Solfeggio: solfeggio in the first and second semesters of the designated range of songs learned; in the third and fourth semesters of songs not prepared, solfeggio three up and three down.
   2.3 Performance evaluation: 30% in normal time (questions in class) and 70% in paper test (60 points in written test + 40 points in solfeggio).
3. The training of the student's ability to listen to music, the students' sense of style, sense of rhythm, beat, melody, and phonoreception; after taking this course, the students' rich music language; the pupils' music memory; the students' taste; and to help the students learn music and establish a solid foundation for the performance of music (Jingxing & Hong, 2011).
4. Refer to 2011: the teaching materials for solfeggio practice were changed to the Practical Solfeggio Practice Course, which focused on developing students' practical skills in the areas of tone perception, rhythm, multi-sound thinking, and style while also emphasizing the applicability and practicability of teaching solfeggio practice to music majors in art colleges (Lena & Feng, 2009). There are five chapters in this book. The first chapter is toning exercises; the second chapter is the practice of C

clef; Chapter three is multi-voice practice; Chapter four is the practice of playing and singing; and Chapter five is style practice.

5. Refer to the 2015 version: In the 2015 version, the solfeggio and ear training courses and teaching techniques have been updated to meet the demands of application-oriented ability training. Utilizing the development of employability for music service occupations as the guiding premise for instruction, Students are encouraged to actively engage in social art practice activities by using classroom practice as the teaching method and practical situational audio listening experiences. For instance, massive off-campus music rehearsals (concerts, variety shows); musically themed activities; competitions at the state and federal levels, etc. Dalian Jinzhou Cultural Center, Gangxi Primary School, Dongju Primary School, Green Primary School, Xinqiao Primary School, and Jinyuan Primary School are some of the institutions in the Dalian Development Zone.
6. Refer to 2020: the solfeggio course's "results-oriented education" approach is being revised in order to better advance instructional strategies and ideas. The teaching curriculum has once again been scientifically adjusted in accordance with the "learning" and "learning" kinds of knowledge, making it obvious that the aesthetic situation of music theory has been liberated from the "complicated technical theory." Allow students to develop their understanding of music beyond the theoretical level by teaching them about its composition, the occurrence and application of the law, how to restore the actual sound of music, and the role of theory in directing creative practice. The usefulness of the Solfeggio training course is improved in the classroom, as is its connection to other courses.

Table 1 the teaching syllabus of solfeggio course revised in 2020

Course	Course objectives
1	Basic knowledge: 1. Master accurate knowledge of solfeggio and sight-reading works 2. Master the basic theoretical knowledge of music
2	Core Knowledge: 1. Master the knowledge of music teaching in primary and secondary schools and kindergartens 2. Master the professional knowledge of self-playing and self-singing
3	Expand knowledge: Knowledge of multi-part music singing
4	Basic Skills: 1. Ability to accurately solfege and play new works 2. Ability to analyze and judge new songs
5	Professional Skills: 1. Have the ability to music teaching in primary and secondary schools and kindergartens 2. Have the ability to play and sing
6	Development ability: Practical application ability of basic knowledge of various music theories

Teaching reform using solfeggio and ear training improves in-class and out-of-class instruction, helps students understand the sound of music and its reduction applications, fosters students' proficiency in singing and music practice activities, and improves their capacity for

deductive reasoning about music. diminishing power and esteem. Through the reform of the solfeggio course, which actively explores the reform of teaching content and exam format, increases practice of the teaching content in class and outside of class instruction, and helps students learn and comprehend the sound of musical compositions while regaining application skills, Develop pupils' sound and accurate reductive, deductive, and musical appreciation skills in the classroom (Bo, 2010; Shakman et.al., 2017).

However, the continuous development of the curriculum, especially in terms of content, does not prevent the study of solfeggio and ear training from achieving higher learning outcomes. Upon re-examination, it was found that there was still a lack of teaching that the learners had to rely on for self-improvement practice. Therefore, the trial used another teaching method. Therefore, it is another alternative to experimentation for teaching development. They expect to have better academic performance and an attitude toward developing their skills to a higher level.

4. THE TEACHING FOR SOLFEGE COURSE WITH PDCA CYCLE

The PDCA cycle theory is included in the solfeggio course to enhance teaching strategies and teacher effectiveness. A diverse and multi-directional evaluation system for the solfeggio ear training course is built by detecting difficulties, examining causes, devising solutions, and compiling experience. Make the entire closed loop truly useful for teaching solfeggio, making the teaching process as a whole more seamless. Practicality is the guiding premise of the pragmatic teaching philosophy, and the pragmatic method is an activity-based approach (Matulich et.al., 2008; Moen & Norman, 2009; Bo, 2010; Mine, 2012; Matsuo & Nakahara, 2013; Shakman et.al., 2017).

4.1 Solfege course by PDCA teaching cycle

Solfege course has a guiding relevance for the instruction of music theory. It is a philosophy that is both pragmatic and forward-thinking. It views education as an ongoing, dynamic process. The educational process is one of progressive growth, John Dewey once stated in one of his writings. PDCA teaching cycle, through the continuous cycle of four stages of Plan, Do, Check and Act, repeated deliberation (Figure 2), check and fill in the gaps, forming an effective closed loop of classroom teaching practice (Lena & Feng, 2009; Jingxing & Hong, 2011).

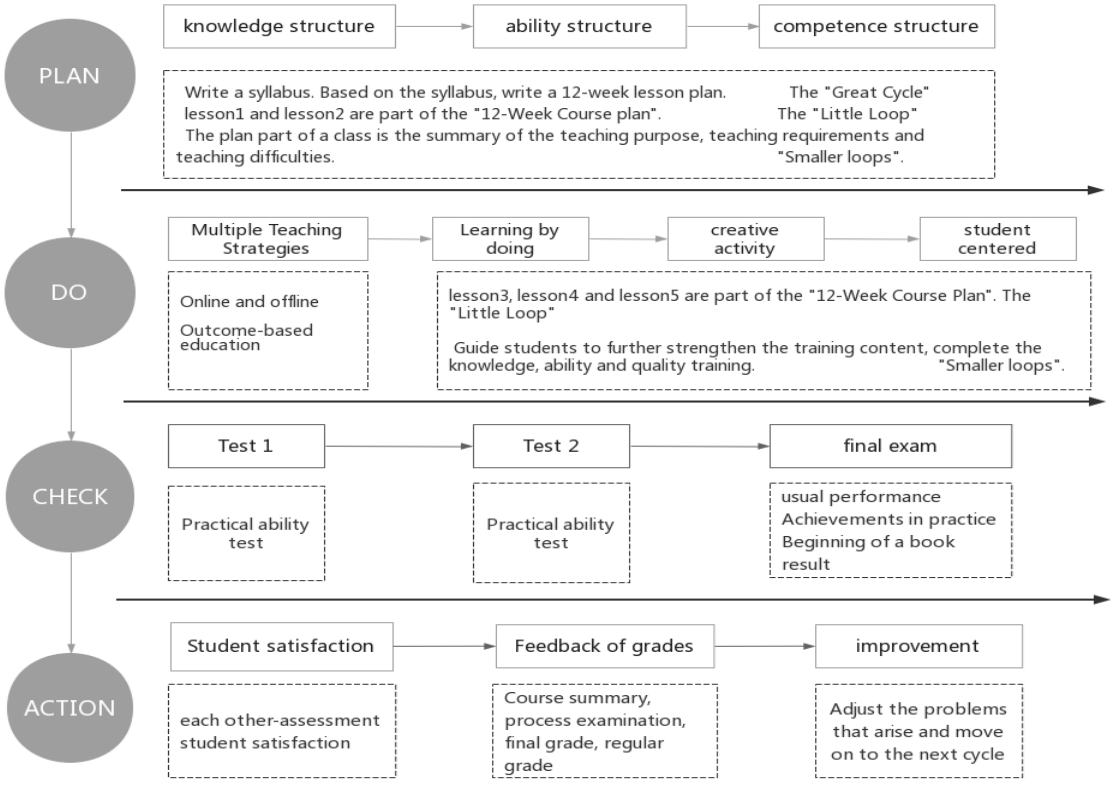

Figure 2 PDCA teaching cycle for Solfeggio curriculum (Lina, 2023)

Plan: According to the index point matrix diagram of the graduation basic requirements of the solfeggio ear Training course, the provisions for graduates are put forward from three aspects: knowledge structure, ability structure, and quality structure. According to this requirement, the teaching syllabus for solfeggio and ear training was prepared. According to the syllabus, a 12-week curriculum plan was prepared. The expert group will submit the syllabus and lesson plan for evaluation. This section can be used as the "big loop" in the PDCA loop. Lessons 1 and 2 are part of the "12-Week Course Plan." Think of it as a "small loop" in the PDCA loop. In "Taking the Lesson plan of lesson 1 as an example", the teaching purpose, teaching requirements, and teaching difficulties in this lesson become the plan. You can also think of it as a "smaller loop."

Do: Course plan, Lesson 3-8 is the doing part of the overall plan. This section of content can be used as a "small loop" in the PDCA loop. Guided learning during class periods: teachers evaluate students' completion of preparation class tasks in class, guide students to further strengthen the training content, and complete the training of knowledge, ability, and quality. Something like this is the doing part of this lecture. This section can be used as a "smaller loop" within the PDCA loop. The teaching method is a combination of online and offline. Therefore, teachers can also publish after-class tasks online to better consolidate the knowledge points in class and strengthen the learning content in class.

Check: The course plan, lesson 9-10 are the Check parts of the overall plan. This section of content can be used as a "small loop" in the PDCA loop. This part includes the course assessment and evaluation plan. Assessment and evaluation methods of this course, the proportion of process evaluation, and summarized evaluation, assessment, and evaluation requirements are necessary.

Act: Course plan, Lesson 11-12 are the check parts of the overall plan. This section of content can be used as a "small loop" in the PDCA loop. Feedback includes improvement and optimization of the course, a student satisfaction table, improvement of teaching results, and timely adjustment and improvement of problems.

4.2 Fish bone diagram to find the cause of various problems

Fishbone diagram: For investigations to identify each accountable party's role in the origin of various issues. The root cause of a student's failure to produce the required results was examined by the researcher using the fishbone diagram (Figure 3). We shall learn from the research and root cause analysis that there are five main groups into which all the causes may be divided: students, administration, teachers, the environment, and curriculum design. (Yoshio, 1993; Stauffer, 2003) The particular circumstance is examined as follows: Pupils lack initiative in individual practice; they lack confidence in their artistic abilities; they are unable to put their theoretical knowledge into practice; some teachers struggle to appropriately and efficiently guide their students during practice sessions, which affects the development of the students' capacity for independent learning. It starts with the four stages of the PDCA cycle, from "facing the problem" to "solving the problem".

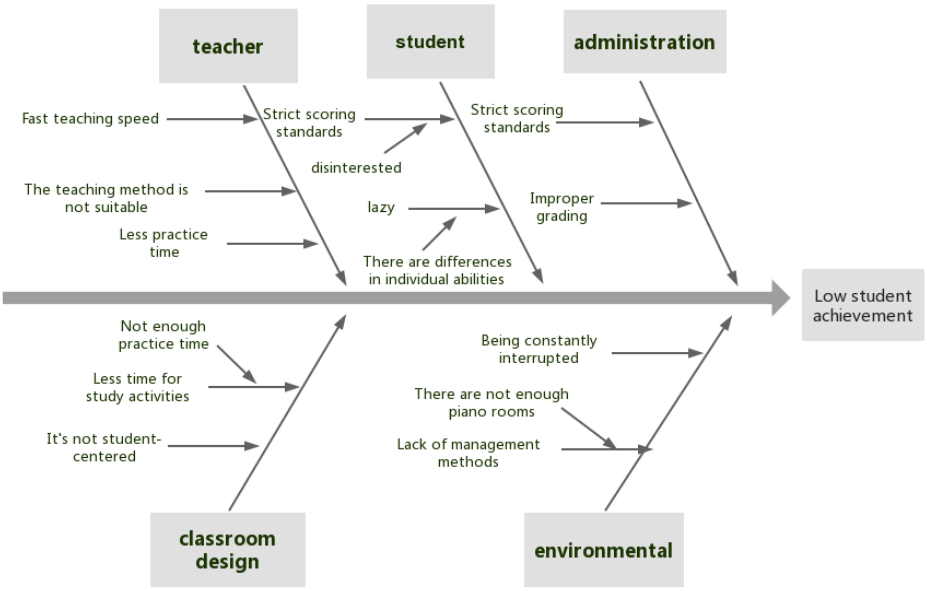

Figure 3 Fish bone diagram to find the cause of various problems (Lina, 2023)

Plan: Plan what you will study that day. Motivation is enough attention until the goal is achieved. Preparation time for practical courses should also be incorporated into the plan. Cut back on tasks that affect productivity, such as playing mobile games and chatting with friends.

Do: Use all the time in your budget. Don't lose motivation to get more interesting information related to the topic. For example, when completing solfeggio training, find the background of the work and the characteristics of the music creation style of the period in which it is located. And the relationship between art forms, such as art, architecture, and poetry. In combination with other theoretical courses, I will conduct in-depth thinking and analysis from the aspects of melody, musical form structure, and harmony, and discover the beauty of the

works. The study process doesn't need to take breaks. Before you go to bed, think about your classes throughout the day.

Check: Now take a break and ask yourself how much you've improved. Analyze and compare the completion of the "Do" process. Identify the factors that you want to change but still haven't. And plan for them to repeat the process.

Act: This link is the most important, but it is easy to ignore in the actual improvement learning. Therefore, in the Action section, we should keep the original rhythm, summarize the successful experience and methods in time, and discuss with friends to try to solve some problems together. The new problems are summarized as the key problems to be dealt with in the next cycle.

4.3 Mind map of teaching method

An investigation to determine the role of each responsible party in the origin of various problems. The root cause of a student's failure to produce the required results was examined using the mind map method. The curriculum for learning Solfeggio should be built on a mind map of teaching methodology (Figure 4). These are integration, utility, interest, and experience. The elements that lower teaching quality are enumerated. The teaching cycle mode should be opened to let students know what to learn and the expected learning effect, then to each class, to let students know what to learn and what to do, and then to the project acceptance, to let them know how to improve and meet the project requirements (Yoshio, 1993; Stauffer, 2003). This is done according to different objects, different majors, and different teaching conditions. Do students serve as the major focus, and is improvement ongoing? The teaching is made more rigorous and adaptable through this sequence of cyclical processes, which also encourage students' intense interest in learning and enhance the effectiveness of instruction in the classroom.

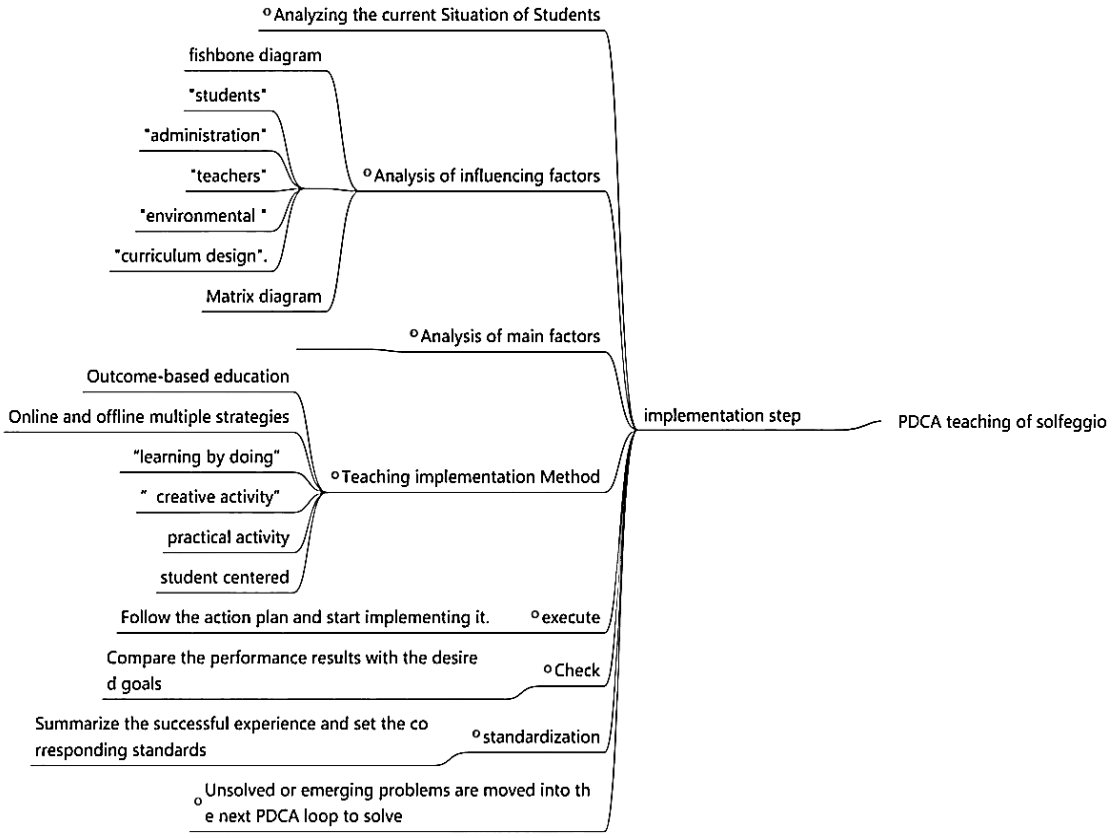

Figure 4 Mind map of teaching method in solfeggio teaching (Lina, 2023)

According to the mind map of the pragmatic teaching technique for Solfeggio, the foundation of the solfeggio curriculum should be a set of fundamental values. These are integration, utility, interest, and experience. The elements that lower teaching quality are enumerated. The teaching cycle mode should be opened to let students know what to learn and the expected learning effect, then to each class to let students know what to learn and what to do, and then to the project acceptance, how to improve and meet the project requirements. This is done according to different objects, different majors, and different teaching conditions. Do students serve as the major focus, and is improvement ongoing? This cycle of teaching methods makes instruction rigorous and adaptable so that students can readily understand the material.

The learning styles of the students and the requirements of art practice at each learning stage should be taken into consideration when choosing the course's theme. Through the characteristics of music ontology and other related humanities such as the characteristics of music creation styles in different periods and the relationship between music and other art forms such as fine arts, architecture, poetry, etc. Students can organically integrate the knowledge of music with other disciplines through participation in practice activities. These results result in the overall improvement of students' individual comprehensive cultural accomplishments. The aforementioned curriculum objective is identical to Dewey's proposed idea of a comprehensive curriculum. Dewey himself did not support the categorization of art into music, dance, painting, and other forms.

5. THE APPLICATION PDCA CYCLE

The application of PDCA cycle follows the four stages combined with an inductive approach to problem-solving or process improvement. It follows the table of how we acquire knowledge through constant reflection, standardization, and modification.

Plan: Target, strategy and system. Formulate course objectives and learning objectives, understand students' learning situation, prepare information base, key points and difficulties of the course, and set test plans. The index point matrix diagram of graduation basic requirements of solfeggio course puts forward three requirements for graduates: knowledge structure, ability structure and quality structure (Table 2).

Table 2 The relationships between Solfeggio training course and basic requirements index

Graduate to seek the point of reference	Knowledge structure			Capability structure			Quality structure		
	basic knowledge	core knowledge	expand knowledge	basic capacity	professional ability	expanding capacity	humanistic quality	physical and mental quality	occupational qualities
1. Master the basic theoretical knowledge of music	●	●							
2. Master the knowledge of self-playing and self-singing					●				
3. Ability to solfeggio or visually read new works accurately		●		●		●			
4. Ability to analyze and judge new music			●						
5. Ability to teach music					●				

6. Have the ability of self-learning and self-improvement				●					
7. Practical application of basic knowledge of music theory					●				
8. Have the right way to analyze and solve problems.						●			●
9. Have the firm ideal belief and the lofty life pursuit							●		
10. Have better Chinese traditional cultural accomplishment, literature and art accomplishment							●		
11. Have a sense of innovative practice								●	●
12. Have good social adaptability									●
13. With primary and secondary school, kindergarten teachers professional ethics									●
14. With modern aesthetic education and educational quality								●	

The author has used the table of these relationships to offer the following example of the Solfeggio course teaching plan that adheres to the PDCA principles (Table 3).

Table 3 Solfeggio course teaching plan that adheres to the PDCA principles

Lesson 1						
	Classroom Teaching					
Output	Use the artistic color sense of harmonic intervals to master the nature of intervals. Analysis and understanding of harmony function in classical works					
Content	Phase/Time		Resources and technologies used	Active learning	Learning outcomes	Assessment methods
Introduce teaching requirements and teaching methods	Plan	15 min	Learn the common task points	Students work together to design/plan a lesson.	Clear the key, difficult content of this lesson, consolidate knowledge points.	Complete the learning mission point
Listen for the colors of the harmonic intervals	Do	10-15 min	Piano, multimedia assisted teaching	Students can pronounce or sing at the right pitch.	With the help of color elements in visual arts, students can improve their listening and	Completion of class dictation training is credited to the usual grade

					understanding ability of music.	
Major triad and minor triad listening	Do	20 min	The piano auxiliary	Students can listen to the nature and pitch of chords	Familiar with chord structure and sound characteristics	Completion of class dictation training is credited to the usual grade
Chord connection	Do	15 min	On-site face-to-face explanation, multimedia assistance	Students can tell the function of chords	Will multi-source timbre; The timbre of wind, string and electronic music are all included in the teaching. Shorten the distance between theoretical study and practical work.	Completion of class dictation training is credited to the usual grade
Q&A on Theoretical knowledge	Chec k	15 min	Face to face questions and answers, multimedia assistance	Students can accurately write relevant theoretical knowledge	Theoretical knowledge of scales, diatonic intervals, reduced triads, augmented triads	The team leader is responsible for recording the completion
Conclusion after class	Act	10 min	Face to face, multimedia assistance	Student Feedback	Summarize the students' grasp of this lesson and how to improve it.	Complete class discussion

The author has used the table of these relationships to offer the following example of the Solfeggio course teaching plan that adheres to the PDCA principles.

Preparation class self-study: Instructors give students a preparation class task list before class and advise them to look for stories, common sense, and examples concerning music, painting, architecture, and other characteristics of the classic works to be explained and trained in the "lesson examples." Finish your learning exercises and report your learning outcomes. Guided learning in class: Following an evaluation of the preparation class assignments, teachers work with students to further develop the training material and achieve the learning objectives of knowledge, aptitude, and quality. Consolidation exercises after class: Teachers assign situational exercises for students to perform in order to improve the lesson material and better integrate the knowledge points discussed in class.

Do: Content, process, and attitude. Apply the solfeggio and ear training lesson plan and include it in the particular teaching procedure in accordance with the different lesson implementation plans that were developed during the planning stage. The blend of theoretical and practical instruction is reflected in the lesson plan materials.

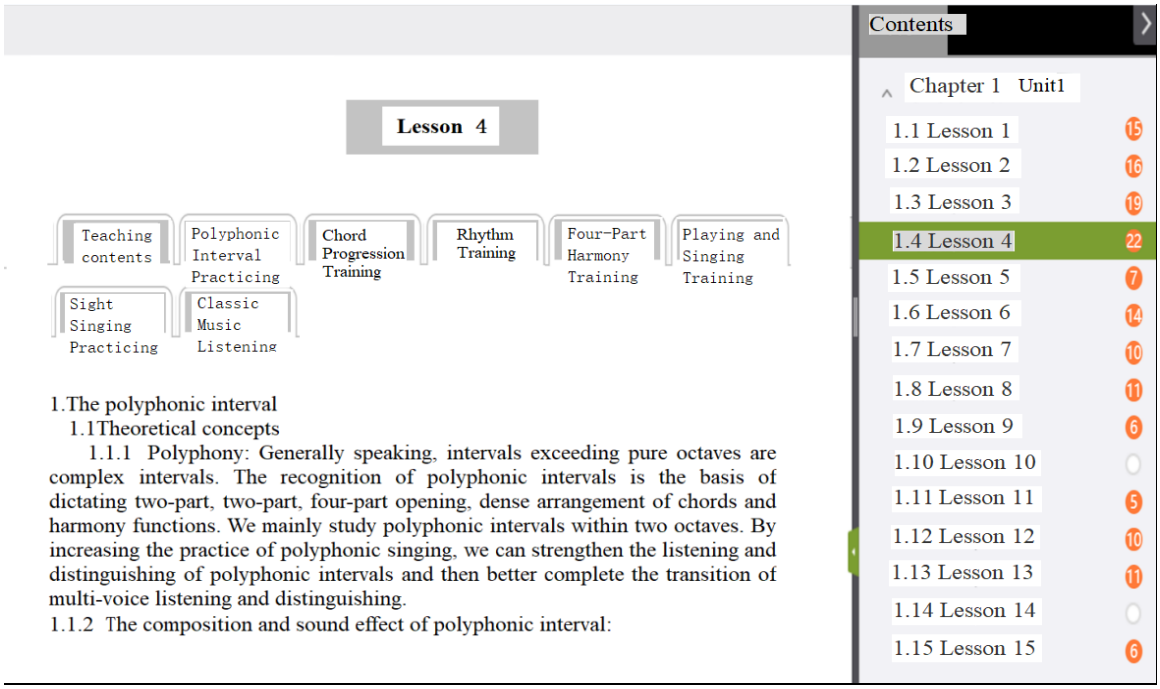

Figure 5 Online independent learning for students and combine it with offline face-to-face instruction (Lina, 2023)

This focuses on students and offers a range of personalized experiences, in keeping with the "Internet Plus" era's approach to teaching. A range of teaching settings that incorporate flipped classrooms and only provide online courses will be developed, combining students' independent online learning with offline face-to-face instruction (SPOC). The OBE education paradigm is integrated into the solfeggio and ear training teaching construction, and a range of teaching tactics are employed to conduct result-oriented education, leading students to "learn by doing" and emphasizing the student-centered teaching strategy.

Table 4: The OBE education, the Internet Plus Era's approach to teaching.

Basic statistical data of resources			
Number	Content	Data	Proportion of resources
1	The total number of videos	8	1.78%
2	The amount of audio	157	34.97%
3	Total number of documents	7	1.56%
4	Total number of animations	0	0
5	Total other resources	0	0
6	Total number of pictures	277	61.69%

Through the use of online hybrid teaching, the teaching approach is neither a fully liberated teacher who moved the classroom and online, nor is it a "line" and "offline" simple machines combined, but rather a class leader, online autonomous learning, a challenging topic on sex in the classroom, depth of online discussion, process evaluation, an increase in the students' interest in learning independently, and an exercise in their capacity for independent thought.

Check: The effectiveness of a teaching program's implementation is assessed utilizing evaluation and evaluation methods. Plan for reviewing and evaluating the course. Clarify the

course's assessment and evaluation procedures, including the proportion of process and summarized evaluations as well as the assessment and evaluation requirements.

Act: Feedback, improvement and optimization, then summarize the teaching process, survey students' satisfaction, discuss the unresolved or remaining problems in the learning process, and adjust and improve the problems.

6. RESULT AND DISCUSSION

On November 12, 2022, the preliminary results were used in the study. With 26 participants, including 6 piano majors, 6 vocal music majors, 8 musicology majors, and 6 instrumental music majors, the researcher and other interested parties performed a small group experiment. The teacher reviewed and watched the lesson, and the satisfied, performance, concerned, and preliminary evaluation results were as follows.

1. The satisfied: 12.4% of the students are extremely, 77% are somewhat satisfied,17% are not satisfied, and 9.3% are very dissatisfied with the teacher's classroom instruction level. 90% of students agree that professors should "raise the quality of teaching, dare to innovate, and increase the attractiveness of the classroom to students" when it comes to classroom management during the teaching process. 68 percent of respondents agreed that educators should "strengthen emotional communication with students."

2. Evaluating performance: 36% of students believe that evaluating the quality of classroom instruction is "whatever" or "not necessary." 77% of students chose "according to the actual performance of each teacher carefully checked each topic." 12% of students chose "random check, just complete network evaluation task." 11% of students chose "every teacher who gives points, who also don't offend."

3. The assessment of concern: 92% of students, a teacher's severe standards would not cause them to lower their grades. 90% of students claimed that "before the evaluation, the course teacher did not express or imply that the students would provide high marks in the evaluation of the course"; 8% claimed that "because they were concerned that the teacher's rating is too low, therefore they offer the teacher a good grade." For fear of receiving negative assessment scores, 17% of students believed that teachers had decreased academic or behavioral standards for them.

The student participant’s speech:

The piano major students “Lin, Wang, Chen and Sun”: Can the number of solfeggio classes be increased? Along with their own keyboard major, and several teaching majors. Can the training for singing and playing keyboard harmony be increased? I want to use what I've learn in practical ways.

Vocal music students “Wang, Chen, and Du”: Each teacher's control over the classroom is ineffective, and the classroom order is disorganized. Hopefully, the Musicology Teaching and Research Department will keep up its after-school tutoring programs and highly commend them.

Lyu, and Wang, students of instrumental music: Instead of merely evaluating the teaching progress, without taking into account the teaching effect and students' acceptance, I hope that teachers in the teaching and Research Office can deliver lessons in accordance with the actual circumstances of students.

Musicology students “Zhou, Han, Quzai, Zong, etc.”: I hope some teachers cannot be too casual in teaching, carefully prepare after class, and do not talk about topics unrelated to the course.

Summary of opinions from listening to stakeholders

By summarizing the instructional process, analyzing student achievement, and surveying students on their satisfaction, researchers were able to draw the conclusion that students who received this type of compound multi-element teaching were better able to

improve their understanding of the unit material and were most able to combine their study of music theory and other lateral subjects. Focused on developing students' collaborative skills, the educational impact is clear and builds a solid foundation for their professional growth and employment. Also, it increases students' excitement for and interest in learning, fostering a strong connection between theory and practice.

Students' input over time led researchers to the conclusion that most students find learning solfeggio to be more engaging than they had anticipated and that their interest in the subject has increased. It is directly correlated with artistic activity in addition to academic study. Few pupils indicate that there are few class hours; The teaching strategy should also take into account the professional requirements of students of various majors; Increase the amount of time spent by students engaged in active learning in the classroom. These problems will be improved further and put into the next PDCA cycle mode.

PDCA cycle is a mode that spirally rising and continuously improving the performance of the system (Chang, 2006). The four steps of PDCA combine inductive and deductive interactions were a simple and scientific approach to problem solving (process improvement). It follows the table of how we acquire knowledge through constant reflection, standardization and modification. This diagram of the eight steps in the PDCA cycle (Table 5). An important factor is to cycle clockwise from the planned time. In one stage of the cycle according to the set goals to solve some problems, and then according to the final results of the adjustment, into the next cycle (Sahno & Shevtshenko, 2014).

Table 5 The eight steps of the PDCA cycle

Stage	Process	Method
Plan	1. Analyze the current situation and find problems	Data collection, checklist, permutation chart, minutes of meeting
	2. Analyze various influencing factors in the problem	How to analyze, track and solve problems?
	3. Analyze the main reasons affecting the problem	Summarize, review, correct and follow up
	4. Take measures to solve the main causes	What: What is the effectiveness of this work? When: When will it be finished? Where: Where do I do this? Why: Why is this measure formulated? Who: Who is responsible for the completion? How: How to make it successful?
Do	5. Implements the action plan as required	Action plan
Check	6. Check and compare the results with the required goals	Check required goals
Act	7. Summarize the successful experience and formulate corresponding standards	Report from the meeting
	8. Move unresolved or emerging problems to the next PDCA cycle	Improvement plan

The PDCA cycle does not run once and finish. Instead, it is repeated. It looks like steps going up. Before the next cycle is created after one cycle is finished, the quality will increase

by one level. The second cycle will then be created, and so forth. Each PDCA loop has to be focused on a certain objective, which is to address a problem. The large difficulty that has to be handled in practical teaching may be divided into multiple smaller ones. Small issues are resolved, which gradually improves larger issues. For example, a significant PDCA cycle can be created to increase students' interest in learning solfeggio and ear training. A sub-cycle of PDCA should be created in the meantime in accordance with the elements that influence how effectively students learn in a classroom, including the teaching methodology, course material, teaching techniques, classroom management, students' ability to self-regulate, and learning habits. Enhance each link's quality to increase students' excitement and interest in studying. (Hiebert & Stigler, 2000; Bhulyan & Baghel, 2005)

After learning the evaluation results from these volunteer students' small-group trials, the author went on to thoroughly research and improve the instruction, and she was prepared to put certain things into practice to make it easier to use and fix other defects until the pattern was accomplished. for an extensive test the next semester.

REFERENCES

Bhulyan, N., & Baghel, A. (2005). An overview of continuous improvement: from the past to the present. *Management Decision*, 43(5), 761-771.

Bo, L. (2010). *The application of PDCA theory in the Department of Quality, Quantity and Management of Higher Education,* Research of Higher Education, Modern Education Science.

Chang, E. C. (2006). Perfectionism and dimensions of psychological well–being in a college student sample: A test of a stress-mediation model. *Journal of Social and Clinical Psychology*, *25*(9), 1001-1022.

Chien, T. K. (2007). Using the learning satisfaction improving model to enhance the teaching quality, *Quality assurance in Education, 15*(2), 192-214.

Chokshi, S. & Fernandez, C. (2005). Reaping the systemic benefits of lesson study: Insights from the U.S. *Phi Delta Kappan, 86*(9), 674-680.

Hiebert, J., & Stigler, J. (2000). A proposal for improved classroom teaching: Lessons from the TIMSS Video study. *The Elementary School Journal, 101*(1), 3-20.

Jingxing. X., & Hong. S. (2011). *Solfeggio.* 3rd Ed. Higher Education Press.

Lena, Z., & Feng, S. (2009). *Practical Solfeggio course.* Liaoning People's Publishing House.

Lena, Z., & Feng, S. (2023). *The pragmatism psychology for teaching the solfeggio course base on the PDCA process at the School of Music of Dalian Arts College.* (Doctoral dissertation). Bangkokthonburi University.

Matsuo, M., & Nakahara, J. (2013). The effects of the PDCA cycle and OJT on workplace learning. *The International Journal of Human Resource Management, 24*(1), 195-207.

Matulich, E., Papp, R., & Haytko, D. L. (2008). Continuous improvement through teaching innovations: A requirement for today's learners. *Marketing Education Review*, *18*(1), 1-7.

Mine, A. (2012). Revolution of methodology for improvement of the social studies lesson-Spiral PDCA cycle based on difference in quality formation. *The Journal of Social Studies Education, 1*(2), 11-27.

Moen, R., & Norman, C. (2009). "The History of the PDCA Cycle." In Proceedings of the 7th ANQ Congress, Tokyo. September 17, 2009. *Asian Network for Quality*. from https://www.anforq.org/activities/congresses/index.html

Palmer, P. J. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life.* Jossey-Bass.

Sallis, E. (2005). *Total quality management in education*. Taylor & Francis.

Shakman, K., Bailey, J., & Breslow, N. (2017). *A Primer for Continuous Improvement in schools and districts.* Education Development Center. Department of Education for Teacher Incentive Fund (TIF) Technical Assistance.

Stauffer, J. (2003). SQC before Deming: The works of Walter Shewhart. *Journal of Applied Management and Entrepreneurship*, *8*(4), 86.

Yoshio, K. (1993). Quality education in Japan. *Quality Management, 4*(2), 115-126.