



Music Performance Pedagogy: Self-Regulation in Contrabass Practice

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Abstract: This study explores instrumentalist (students) self-regulation in self-learning practices in a counter-bass class by integrating a performance pedagogy perspective. Self-regulation is the ability of individuals to regulate the learning process through planning, monitoring, and evaluating their performance (practice). This research uses a qualitative approach with a case study method. Data was collected through in-depth interviews, direct observation, and analysis of daily practice journals from students who took counter-bass classes at the college level. The results showed that effective self-regulation in counter-bass instrumentalists involves structured rehearsal planning, performance reflection, and artistic interpretation strategies aligned with pedagogical principles. This research makes a theoretical contribution to the development of self-regulation in the context of performance pedagogy by highlighting how self-directed learning strategies can be strengthened by integrating performative approaches. Implications of this research include incorporating elements of self-regulation and performance pedagogy into music education curricula, particularly on string instruments such as the contra-bass, which require a complex blend of technical and musical skills.

Keywords: Performance pedagogy, Self-regulation, Instrumentalist, Double bass, Music Education

1. INTRODUCTION

Performance is an integral part of music learning. In music pedagogy, performance is an essential element that serves not only as the result of learning but also as the learning process itself. Performance plays a vital role in developing a student's technical skills, musicality, artistic expression, and socio-musical abilities. Dogantan-Dack (2012) Argues that performance is essential as a starting point for gaining new knowledge and understanding of an artistic engagement; however, Dogantan-Dack's study also emphasizes the onstage context. On the other hand, in a music class, especially an instrument class, at least learn the technique of playing an instrument, which includes body and finger position, dynamics control, articulation, and intonation. Their study Palmer & Meyer (2000) mentioned that practicing a will build motor independence functional for musical performance. For skilled adult musicians, performance practice through musical works also generates skills that can be transferred to other works. Further, it adds that within a performance, there is also a habit of mind in applying criticism as a key pedagogy within this tradition.

Furthermore, in performing their musical skills, one is taught how to understand and interpret musical works according to historical context, style, and composition. Music performance stimulates learners to develop expressiveness in presenting sound. There are at least two musical experiences when a student learns, namely the experience of learning independently and playing in a group (ensemble). Woody (2000) Points out that instruction given in



a personalized form is considered to have more impact on musical expression skills.

Independent practice is indispensable as a strong foundation to build before performing skills and working in front of an audience. Hallam (2004) Reinforces the importance of time spent learning, including time spent practicing, in determining the level of expertise achieved. On the other hand, repetition (Leon-Guerrero, 2008) and self-regulation are also crucial in practice sessions (Hatfield et al., 2017; Leon-Guerrero, 2008; López-Calatayud & Tejada, 2024; Mazur & Laguna, 2019; McPherson & McCormick, 1999; Mieder & Bugos, 2017; Nielsen, 2001). Nielsen (2001) points out that students have extensive self-regulation skills that enable them to optimize their learning and performance by considering interpersonal, contextual, and intrapersonal conditions. They set specific goals, engage in strategic planning, use self-instruction and task strategies, and monitor themselves selectively at a detailed level. In addition, they evaluate themselves using their revised criteria. Students with self-regulation ability can set goals, have efficacy (Zelenak, 2024), manage time, and reflect on the practice process (Hatfield et al., 2017; Mieder & Bugos, 2017).

Braun (2020) Emphasizes the importance of instructors, who are often simultaneously performers, actively seeking novel methods, materials, and approaches in their teaching practice. This independent exploration frequently leads to the discovery of new ways of thinking, enriching their pedagogical techniques and enhancing their effectiveness as educators. As a double bass (contrabass) performer and teacher, individuals are continually challenged to evolve, adapt, and strive for improvement in their roles as players, educators, and mentors. For example, engaging independently with etude books enables instructors to uncover best practices for implementing specific techniques while fostering self-efficacy at various stages of learning. According to Braun, each etude is purposefully designed to provide targeted exercises that refine particular musical skills, culminating in comprehensive assessments of progress (Parkes, 2024). The segments within etude books are often excerpts from instrumental compositions, offering students practical applications of their skills in authentic musical contexts. This dual focus on technical precision and artistic expression makes etude study a pivotal component of performance and pedagogy, supporting the ongoing development of performers and educators.

Music Performance Pedagogy

Kraemer's (1997) study is one of the essays that opened up the discussion on performance pedagogy in a general context but then reflected in music learning practices. Kraemer describes the classroom as a particularly inventive environment in which the teacher or instructor no longer plays the role of an all-knowing person but instead tells his or her students what to learn or gives them what they need to know. In the context of music learning, mainly instrumental practice, this involves a series of instructions on what stages of work the music learner should go through.

Simones (2017) Believes that, in the context of higher education (campus), musical performances are shaped by a chain of reciprocal interactions between students, tutors, and teaching staff. According to him, performance can not only provide valuable insights for designing and implementing meaningful educational strategies but also for defining the specific mission of higher

education institutions within and beyond departmental boundaries. Performance is considered the most fundamental cornerstone, especially in a college environment.

Skill or knowledge in musical performance is the goal of pedagogy, although not all students or learners will reach the highest level (Alves & Nogueira, 2024). A highly operational syntax or terminology is required to uncover performance as a pedagogical methodology or formula. Terminology and concepts from the field of education as didactics, methods, techniques, approaches, and skills (including critical thinking, problem-solving, decision-making, and communication) have become key references in the pedagogy of any field, including performance related to musical instruments (Griffin & Care, 2015; Loewenberg Ball et al., 2008; Ray, 2015). In this regard, contextualizing terms encompassing music practice and pedagogy will be fundamental to understanding, refining, and expanding knowledge around evaluating and assessing music practice and its teaching.

Performance is an important component of music pedagogy, especially in encouraging independent practice and informal learning outside the classroom. Performances allow students to apply their technical and interpretive skills in meaningful contexts while enhancing their confidence, stage presence, and artistic expression. Through the performance experience, students learn to overcome challenges such as managing anxiety, adapting to diverse audiences, and conveying musical ideas effectively. In addition, performances encourage collaboration and peer feedback, which is crucial for the holistic development of a musician. Structured performance opportunities significantly increase students' motivation and engagement in music learning.

Self-practice is an important aspect of music education that students and teachers often underestimate. It is a key mechanism for developing learners' self-regulation skills, which include the ability to set goals, monitor progress, and reflect on results. Self-regulation is essential to support effective learning and continuous improvement. However, many students do not understand purposeful practice strategies, while teachers often do not provide sufficient guidance. Research shows that individuals (including students) who apply self-regulation in their practice tend to have higher levels of perseverance, critical thinking, and musical achievement (McPherson, 2022; McPherson et al., 2019, 2017; McPherson & McCormick, 1999; Varela et al., 2016). Teaching strategies such as deliberate practice (see: Bonneville-Roussy & Bouffard, 2015; Hambrick et al., 2014; Lehmann & Ericsson, 1997; Macnamara et al., 2014), time management, and reflection through journaling can significantly increase students' independence and resilience as musicians. In the context of formal education at school and on campus, the concept of learning with these kinds of patterns needs to be discussed in many studies, including this article.

2. METHODS

The qualitative research used a case study design with observation, semi-structured interviews, and document study as data collection techniques. The data was taken from the Kontra Bas class held at the Music Education Study Program (MESP), Faculty of Teacher Training and Education (FTTE), University of Lampung (Unila). Students were asked to give oral reports during and after independent practice sessions. As they prepared the piece or

notation in the etude book to be performed, students practiced independently in a structured manner in several practice sessions. The sessions were also video-recorded and uploaded to YouTube and Instagram platforms. Two students were involved in the Kontra Bas class; in this article, the first student is coded A, and the second is coded B. A is a 7th-semester student, and B is a 3rd-semester student. Both are at different levels. Observational data was taken during the Counter-Bas course levels 1-4.

The research data analysis used Robert K. Yin's case study design with the steps of planning, designing, preparing, collecting, analyzing, and sharing or displaying data (Yin, 2018). The pattern matching technique was chosen as the analysis technique. This research collected data using a naturalistic approach. Data were obtained from various information from students in the Counterbass of Double Bass course. Researchers as lecturers also build rapport with students as informants for more natural data. All forms of information presented are data from facts during lectures, both in class and during the practice process outside the learning process. Data organization is carried out to analyze the results of interviews, observation notes, and documentation. Field data, photographs, drawings, researcher comments, and interview recordings are described and categorized into units. The following process is synthesizing and arranging patterns to be explored. The proposed research focus concludes the next stage.

3. RESULTS AND DISCUSSION

3.1 Results

The Contrabass class organized at MESP adapts a self-directed learning pattern in which students are encouraged to perform regular, structured, and disciplined practice exercises. Lecturers consider the sensorimotor and affective conditions of students' body movements that underlie their understanding of lecture material. By applying self-practice learning patterns, students prepare a thinking space for themselves. Self-regulation is the ability of students to plan, monitor, and evaluate their learning process independently. In the Major Contra Bas class, the lecturer prepares a plan for independent practice in a daily practice journal that must be collected 5 times a week. The journal was created by posting "live" recorded videos on YouTube and Instagram for 30-60 minutes (Figure 1).

During the exercises, lecturers and students monitored their progress, detected mistakes, and sought solutions. Students recorded their practice to evaluate the quality of intonation or tempo speed and then improved it. At the weekly meeting, held once a week, the lecturer reviewed the students' reading techniques and skills. After the practice session, students reflected on their strengths and weaknesses in their performance. Students noted what they had achieved and which parts still needed further practice.

The material presented as self-practice suggestions to students will standardize instruction for the next stage. Students will be asked to set specific goals, such as mastering a particular technique, learning a section of repertoire or etude, or preparing for a performance. In practicing notation reading skills, for example, students break down the repertoire or notation into small parts (chunking), set the duration of the exercise, and choose a daily focus (intonation, dynamics, or phrasing).

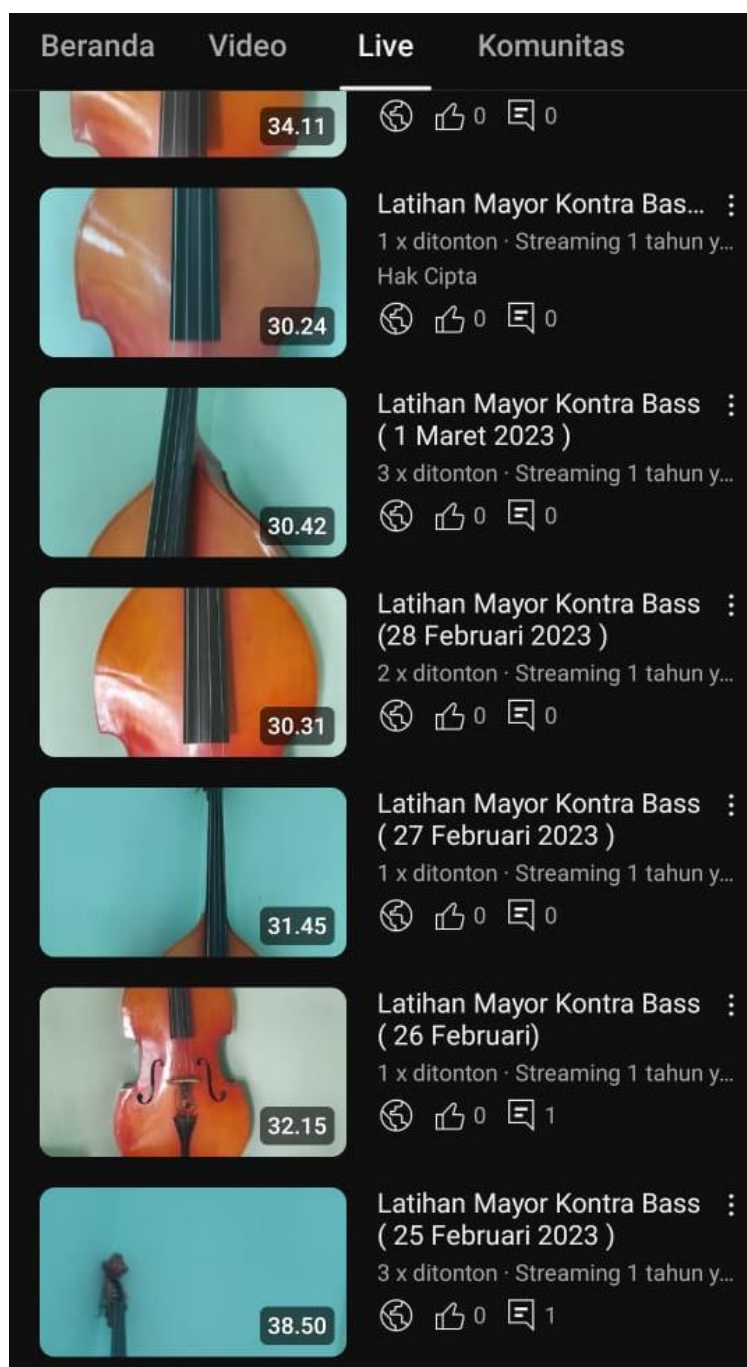


Figure 1. "Live" videos of self-practice uploaded regularly by students. (Source: YouTube)

Performance in the context of this article is music performance as a methodology, especially one that leads students to see independent practice as an integral part of performance preparation. During Contrabass lectures, performances are not always performed on stage but through activities such as simulating games, reflecting, and exploring. Self-rehearsal is conducted as if in a performance situation, for example, by playing the repertoire from beginning to end without interruption. The lecturer always asks students to read the notation in every lecture without stopping. This act strengthens focus and confidence and creates an intense mental atmosphere. Students then evaluate their performance by positioning themselves as the audience, looking for ways to improve

intonation, dynamics, or individual phrases. Through video and peer assistance, corrections and critiques are easier to make. Students are also free to try new interpretations or improvisations that may not be explored in formal rehearsals. For example, adjusting the tempo, trying certain bowing positions, trying other finger positions on the same note, and looking for other etudes. In the Kontra Bas lecture at MESP, the etude book "Complete Double Bass Method - Volume 1" by Edouard Nanny is used. The lecturer recommended other etude books as comparative practice materials, such as "30 Etudes for the Double Bass" by Franz Simandl and "A New Technique for the Double Bass, Books 1-5" by Francois Rabbath.

Table 1 summarizes the main dimensions that guide students' self-regulation and self-efficacy during the Contrabass instrument self-training. Each dimension is complemented with levels of self-regulation and self-efficacy, specific indicators, and examples of real-world implementations that can be applied. In the planning stage, self-regulation is shown through students' ability to set specific practice goals, such as practicing bowing techniques, finger positions, and reading etude. Students are encouraged to set daily targets, such as practicing long bowing for 15 minutes, major scales in first position for 15 minutes, and reading etude for 30 minutes. In addition, a consistent practice schedule, such as one hour every day, is reinforced by the habit of recording practice as a form of progress documentation. Self-efficacy at this stage reflects students' belief that they can set realistic learning goals and achieve them, such as improving fluency in reading etude notation and mastering bowing techniques better.

In the monitoring dimension, students' self-regulation involves monitoring their practice progress, for example, by comparing practice recordings over time. In addition, they are also taught to identify technical or musical difficulties, such as improper intonation, and correct them periodically. Self-efficacy at this stage is seen in students' belief in their ability to correct identified errors, such as improving bowing technique through focused rehearsal. Good study strategies also help students optimize practice time. Self-regulation in this dimension includes applying technical strategies such as using a metronome to maintain tempo and chunking practice before playing the whole repertoire. Self-efficacy is realized through the belief that the chosen strategies, such as practicing with a metronome, will effectively improve their tempo consistency and technical ability.

The self-evaluation section teaches students to reflect on their practice results. Self-regulation at this stage includes writing down daily practice notes, comparing results with repertoire standards, or using apps such as "MuseScore" to rewrite notation as an evaluation tool. Self-efficacy is reflected in students' confidence to assess their progress objectively, such as evaluating intonation or dynamics that still need improvement. Self-regulation on the emotional dimension focuses on students' ability to cope with frustration when facing difficulties, such as taking short breaks. In addition, students are taught to motivate themselves by remembering previous achievements. Self-efficacy is seen when students face difficulties, such as completing a rhythmically complex repertoire section, after intensive practice. At the execution stage, self-regulation involves preparing to play the piece in full, such as simulating a performance in front of lecturers or friends. Students are also trained to practice focus and concentration while playing without interruption. Self-efficacy in this dimension is manifested in students' belief that they

can perform Kontra-Bas playing well after intensive and structured practice.

Table 1. Dimensions and Levels of Self-Regulation and Student Efficacy

Dimensions	Levels	Indicator	Implementation
Planning	Self-regulation	Determine specific practice objectives in bowing technique, finger positioning, and etude reading exercises (etude).	Set daily goals, such as practicing long bows for 15 minutes, Major scales in first position for 15 minutes, and reading for 30 minutes.
		Set a consistent training schedule and record training videos	Practice every day for ± 1 hour (time adjusts students)
	Self-efficacy	Confident in setting realistic learning goals	Students believe they are able to play better string techniques and are more fluent in reading the notation on the etude.
Monitoring	Self-regulation	Monitoring practice progress	Recording exercises and comparing them with previous recordings
		Identifying technical or musical difficulties	Notice incorrect intonation in specific parts and correct it periodically.
	Self-efficacy	Confident in the ability to correct mistakes.	Confident about improving the bowing technique after recognizing flaws through re-practice.
Learning Strategy	Self-regulation	Implementing appropriate technical strategies	Use a metronome to keep tempo while practicing and record practice.
		Breaking down the practice into smaller parts (chunking) or stages	Before performing the complete song or melody, concentrate on one difficult line or repertoire piece (etude)
	Self-efficacy	Believe that the chosen strategy will be effective	Students assume that using a metronome to practice will help them become more consistent with their tempo.
Self- Evaluated	Self-regulation	Reflecting on the results of the exercise	Write down daily practice notes, such as successes or parts that are still difficult to play.
		Comparing training results with repertoire standards	Examine whether their performance resembles the accepted interpretation of musical notation by rewriting it in the "MuseScore" app or comparing it to YouTube footage.
	Self-efficacy	Self-assurance to objectively evaluate progress	Students are able to assess dynamics or intonation that requires improvement
Emotion Management	Self-regulation	Overcoming frustration when facing difficulties	If they feel fatigued, take quick pauses to stay motivated
		Encourage oneself to keep practicing	Remembering previous successes to increase enthusiasm for learning
	Self-efficacy	ave faith in their ability to overcome obstacles and keep learning	After extensive practice, students can finish challenging portions, such as notations with challenging rhythms
Performance	Self-regulation	Preparing yourself to play the work in its entirety	Play the entire song in front of your lecturer or friends to simulate a performance

	Practicing focus and concentration while playing	Practice focusing by performing the piece uninterrupted from beginning to end
Self-efficacy	Very confident when preparing for the show	After much practice, students are confident in playing the contrabass

(Source: Researcher, 2024)

A comparison of the self-regulation profiles of students A and B reveals two distinct learning approaches. Student A demonstrates strong self-regulation but requires more time to master new skills. A pedagogical approach suited to A involves encouraging creative exploration and accelerating skill acquisition through technical challenges or more complex repertoire variations. In contrast, Student B exhibits high self-efficacy and rapid skill acquisition but lacks self-regulation. B would benefit from a more structured practice regimen, including daily goal-setting, time management, and guided reflection (see Table 2). Collaboration between these profiles could be mutually beneficial: A can assist B in developing better self-regulation through structured practice routines, while B can provide A with stimuli to explore new techniques. Incorporating recorded practice sessions for mutual feedback could enhance students' reflective capacities and self-awareness, fostering a more balanced and effective learning environment.

Table 2. Self-Regulation Ability A and B in Contrabass Practice

Dimension	A (Self-regulation)	B (Self-regulation)
Proficiency in Reading Notation	Fairly good, able to read notation accurately	Less consistent in reading notation, tends to rely on hearing
Resilience	Very diligent, always complete training targets	Lack of perseverance, often losing focus when practicing
Discipline in practice	High discipline, following the training schedule consistently	Low discipline, often does not follow training schedule
Progress report	Reporting exercises via daily videos regularly	Rarely report training progress, irregular in documentation
Skills acquisition	Pretty good, but still takes a while to master new techniques	Excellent skill acquisition, quick to understand and master new techniques
Setting practice time	Make good use of practice time, focus on basic techniques	Less comprehensive, often disturbed by external factors during training
Self-reflection ability	Conduct consistent practice reflection through daily reports	Rarely reflect or evaluate training results
Self-efficacy	Confident in completing daily training targets	High self-confidence but lack of structure in achieving goals

(Source: Researcher, 2024)

3.2 Discussion

Based on the self-regulation mapping of Students A and B, two distinct dimensions of achievement emerge in independent double bass practice. Student A exhibits higher levels of self-regulation and self-efficacy. Pedagogically, the recommended focus for A is on enhancing confidence to explore new techniques and accelerating skill acquisition through specific methods such as performance simulations and tackling more complex repertoire. This was demonstrated in A's preparation of Sergei Rachmaninoff's 'Vocalise.' Although their performance and interpretation were not yet fully refined, A made a concerted effort to record and execute the piece to the best of their ability. The strategies employed by A included (1) Transcribing the piece using the "MuseScore" application, (2) Reviewing multiple video performances for reference, (3) Simplifying specific notes for feasibility, and (4)

Lowering each note by an octave to facilitate finger positioning. A's combination of self-efficacy and self-regulation fosters creative exploration. Recognizing their limitations, A adopted several strategies to anticipate and mitigate potential errors. Structured and disciplined practice also served as a performance simulation, enabling A to refine their technical and interpretive skills. In small-class sessions, both double bass students engaged in discussions and demonstrations and alternated between playing duets and solo repertoire as part of a performance simulation. While one student demonstrated, the other took on the role of an audience member, peer, and supporter, providing constructive criticism, as advocated by Hastings (2017). This collaborative environment nurtures mutual learning and mirrors the dynamics of real-world musical performance.

Peer Teaching

The peer teaching scenario is a pedagogical method implemented in the double bass class, fostering a collaborative learning environment between Students A and B. As the senior student in this setup, A guides B through various stages of learning, such as improving the bowing technique and reading etude notation. Indirectly, A also facilitates B's self-regulation and self-efficacy by optimizing practice strategies. Despite their differing potential and characteristics, both students strive to maximize their efforts. A's structured guidance and practice regimen prove highly beneficial for B, as B refines skill acquisition and explores new techniques daily. For instance, when B demonstrates a legato bowing technique in the F major scale, they are encouraged to develop second and third legato variations for other scales. This iterative process, constructed within each practice session, strengthens B's self-regulation. Simultaneously, A reinforces their conceptual understanding of double bass pedagogy, an essential foundation for teaching music at more advanced levels. As a mentor, A helps B develop a structured practice schedule, emphasizes discipline, and models consistent daily practice routines. A also guides B in breaking repertoire into manageable sections, or "chunking," an advanced self-regulation strategy. Furthermore, A teaches B to use metronome and repetition techniques to focus on intonation and dynamics. This structured mentorship helps B construct learning strategies while allowing A to refine their teaching methodology. By observing B's progress, A identifies areas of improvement and reinforces their self-efficacy as an instructor. Tasks that B masters efficiently are noted by A as examples of successfully imparted techniques, contributing to a dynamic and mutually beneficial learning environment.

The lecturer chose the collaborative independent practice strategy to foster self-regulation skills among students. Student A gained teaching experience through this approach, which enhanced their understanding of self-regulation within the limitations of methodology and pedagogy. Additionally, A was motivated to explore new techniques while mentoring Student B. The structured and disciplined learning model introduced by the instructor in the double bass course emphasizes the importance of developing self-regulation and practicing self-efficacy in a more organized manner. This collaborative independent practice model also fosters a supportive learning environment where each participant's strengths complement the other's weaknesses,

creating a dynamic and mutually beneficial educational experience.

Skill-Based Collaboration and Bowing Technique Exploration

For Student B, the self-regulation principles imparted by A during practice sessions serve as a crucial guide for future independent practice. A profound reflection on the importance of each practice phase, executed to the best of their ability, becomes the foundation for effective independent learning. This approach is particularly relevant because both A and B possess sufficient cognitive levels to understand the feedback provided, including that from the instructor. Observational data indicate that B initially exhibited lower self-regulation and self-efficacy levels than A. Although B has a strong background as a proficient electric bass player, their ability to develop self-regulation skills on the Contrabass requires further refinement. This evidence suggests that B's mastery of the electric bass has not significantly influenced the development of equivalent self-regulation characteristics when transitioning to a different instrument.

Although Student B demonstrates high potential in self-efficacy, their lack of self-regulation often leads to a lack of direction during practice. A suitable pedagogical approach for B involves teaching self-regulation strategies through structured practice guidelines, daily goal-setting, and scheduled feedback. As a mentor, A can employ a collaborative approach to enhance B's discipline. Skill-based collaboration between A and B can also address boredom, benefiting both participants. B plays a crucial role in providing stimuli for A, particularly by introducing new techniques or improvisations that A might not have yet mastered. With their rapidly acquiring skills, B can demonstrate methods for quickly grasping specific techniques. For instance, B may introduce advanced playing techniques or explore musical elements such as bowing variations or vibrato. At more advanced stages, B could intuitively master challenging sections of the repertoire, offering inspiration to A. This collaborative exploration of new techniques stimulates both students, fostering higher motivation. As a cyclical process, A can then adopt the strategies demonstrated by B and provide feedback on how these explorations can be integrated into a structured practice schedule. Ultimately, this mutual learning environment enables A and B to develop personalized self-regulation and self-efficacy strategies for independent practice.

The collaborative teaching model provides valuable support for students in the classroom, facilitates professional development, and offers mentorship for educators (Bingham, 2024). Collaborative teaching also promotes a more holistic approach to preparing educators. Discussions and interest in exploring collaborative learning concepts through various approaches in music education have grown significantly, especially in today's digital era. In collaborative music classes, students actively contribute to their learning processes. Pucihar & Pance (2024) emphasize that a supportive and nurturing collaborative environment can transform learning into an enriching experience, where challenges are addressed and overcome with support from peers, teachers, and parents. Within such settings, teachers' and instructors' roles shift toward facilitating and coordinating learning. Learning music no longer centers solely on transmitting knowledge and skills but evolves into an engaging learning community. New friendships are forged in this community, and a lifelong commitment to music is

nurtured, with the potential to contribute to personal growth and broader societal enhancement.

Reflection

The two students, A and B, engage in mutual feedback during their independent practice activities. Both students review recordings of their practice sessions and provide constructive feedback to one another. This process is followed by collaborative discussions on the strengths and areas for improvement in their respective performances.

This approach enhances B's self-reflection skills, making evaluating their practice outcomes more structured. For A, these discussions serve as a means to build confidence by appreciating their contributions to supporting B's progress. This reciprocal dynamic strengthens their individual growth and fosters a collaborative and supportive learning environment.

According to music performance pedagogy, a music instructor or lecturer must follow a particular teaching pattern. The methods to guide students are the main focus of this teaching pattern; the pattern of autonomous learning or practice described in this article encourages self-regulation to help students become dependable. In the long run, this consistency will help with long-term independent practice. This teaching approach must, however, adjust to the many objectives that students seek while also considering their unique characteristics and cognitive capacities. The educational practices used in the Contra Bass class encourage students to evaluate themselves, which is crucial to skill growth. Generally speaking, learning music involves motor exercises, particularly during lectures on musical instruments. Students who can think independently and concentrate on self-regulation will gain methodological awareness that they can utilize immediately. In actuality, studying music nowadays is fraught with difficulties, particularly those related to self-awareness. The gap between the field of musical instruments being studied and the advancement of autonomous practice is the issue that frequently emerges from this. For instance, the material's constraints or uniformity must be upheld and protected while pupils learn Contrabass. It becomes problematic when kids have no idea what or how the standardization is created.

The Contrabass class's independent practice stresses practical learning and students' active participation in forming their knowledge from a constructivist standpoint. Knowledge development requires active participation, but not all activities are created equal (Shively, 2015). In the context of a specific music education practice, educators must think about the behaviors that could have the most impact. Students actively communicate with one another to generate knowledge. Students A and B work together to attend lectures in-depth. Every beneficial action carried out on one's own is transformed into knowledge. Particularly with every issue encountered during practice, potential solutions that anticipate the issue are learned as new information. The Contrabass lesson's concepts of learning or practice are reviewed in the independent learning exercises. Every comparable string music class must take constructivist learning ideas into account.

4. CONCLUSION

This article's theoretical contribution focuses on the evolution of self-regulation within the framework of performance pedagogy.

Integrating peer methods, performative approaches, and disciplined, systematic practice can increase self-directed learning strategies. It is necessary to operationalize complex technical and musical skills to incorporate performance pedagogy and self-regulation elements into the music education curriculum. Performance pedagogy in music education stresses a comprehensive approach that incorporates both musical and technical proficiency and interpretive and reflective elements crucial in forming artistic performance. This approach is relevant for investigating how self-regulation influences independent learning practices on a complex instrument like the Double Bass. Students with good self-regulation can combine playing techniques with profound musical interpretation, resulting in honest and communicative performances. On the other hand, low self-regulation makes it difficult for students to achieve peak performance, even if they are technically competent.

The requirement to practice music independently necessitates significant motivational resources that must be maintained regularly, with the attention and participation of teachers. Evans (2023) examined the significance of basic psychological needs and autonomous desire to practice, self-regulated learning, enjoyment, and long-term persistence in music learning in various circumstances as vital capital. However, because students' levels of musical expertise vary, instrument classes focus not just on acquiring technical skills but also on counseling issues that are sometimes disregarded.

This study demonstrates that peer teaching, which combines self-regulation, self-efficacy, and collaboration, is an effective pedagogical strategy in music education, particularly in performance pedagogy. Learning music focuses not only on teaching but also on the conditions and instructional processes learners require. Self-regulation is a concept of independence that promotes individual awareness. So far, the strategy utilized in Contrabass lectures has encouraged the simultaneous development of technical abilities, critical thinking, and artistic discovery while developing crucial social and pedagogical skills for future learning. The performance process includes structured and rigorous practice. Music learning is more than just mastering an instrument; it is also a pedagogical process that fosters self-regulation and instills important ideals in musical performance. In music performance as a discipline, solo practice is viewed as an essential stage in preparing students to tackle technical, emotional, and aesthetic performance problems.

Peer techniques based on regulation and self-efficacy should be advocated for developing a music education curriculum to stimulate collaboration and the development of reflective abilities. The partnership includes a performance simulation step as a crucial component in creating a highly contextual experience. The collaborative experience gained via joint independent practice also serves as a framework for structured student practice that can be tailored to students with diverse backgrounds and degrees of skill. The Major or music specialization class at MESP (and several other universities) follows a similar approach, with a significant amount of time dedicated to solo practice. In the Major class type, particularly in the Music Study Program or Music Education, lecturers can use student participation in peer learning practices to determine the level of individual social conformity, skill understanding, and repetition of additional individual skill

sequences during the class. Saccardi (2023) believes that if teachers wisely plan peer learning and objectively examine the results, this teaching and learning technique can become an important element of music teachers' classroom routines and instructional resources. Finally, policymakers and curriculum developers must create learning models that may anticipate independent practice spaces while being collaborative for students.

AUTHOR CONTRIBUTION

A three-person team conducted this research: (1) Riyan Hidayatullah as the research leader; (2) Prisma Tejapermana as research member 1; and (3) Chamil Arkhasa Nikko Mazlan as research member 2. The research leader was responsible for the research design, performance formulation, and data analysis workflow. Research members 1 and 2 were tasked with conducting a literature review on the research focus.

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