

Development of Performing Arts Education Module to Improve Self-Regulation Skills among Students with Exemplars at Guizhou Vocational College, China

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Abstract

Literature reveals students in vocational schools frequently encountered difficulties to develop self-regulation skills that are a crucial factor in achieving academic success and personal growth. This article reports part of a bigger scale study aiming improving self-regulation skills and emotional management among vocational college students through development of a performing arts sustainable development education training module using 'Design and Development Research' (DDR) using mixed-research method but only qualitative data collection and analysis (including findings from observation rubric, reflective journal, informal interviews or open-ended responses collected from validated survey questionnaire) are reported in this paper. The key elements of the performing arts education module integrating ASSURE instructional model will be elaborated. The integration of quality educational music therapy (EMT) with teaching methods such as Orff-Schulwerk music therapy (OSMT) and 'Nordoff-Robbins' Method of Music Therapy' (NRMMT) will also be reported. This includes illustration of evidences of improvement in 'Learning' (Level 2 of Kirkpatrick's evaluation model) among vocational students' emotional regulation. Discussions of findings include the positive effects of performing arts education training module on the improvement of students' self-regulations, impulse control, and emotion regulation skills.

Keywords: design and development research (DDR), performing arts as 'educational music therapy' (EMT), Nordoff-Robbins and Orff-Schulwerk, self-regulation skills, sustainable development education, vocational college students

Introduction

Vocational school students often experience difficulties in developing self-regulation skills, a key factor in academic success and personal growth. The inclusion of performing arts education in the curriculum has been suggested as a potential solution to improve students' self-regulation skills. Self-regulation is a process that helps students manage their thoughts, behaviours and emotions in order to successfully navigate the learning experience (Baranovskaya, 2015). The available evidence indicates that performing arts education has the capacity to enhance not only cognitive abilities but also emotional regulation, which is a crucial element in the development of self-regulation (Hallam, 2010). Furthermore, educational music therapy (EMT) and 'Nordoff-Robbins' Method of Music Therapy' (NRMMT) have been demonstrated to be efficacious in fostering emotional control and self-management, particularly within educational contexts (Ludovico, 2014; Wang, 2022).

In light of the distinctive challenges encountered by professional students, such as the management of academic responsibilities and emotional stress, performing arts education presents a promising avenue for addressing these concerns. Research on the impact of music therapy on

education indicates that structured music activities can equip students with the tools to regulate their emotions, thereby enhancing self-regulation and academic performance (Zimmerman, 2008).

This article illustrates the development of performing arts education module through 'Design and Development Research' (DDR) in fostering self-regulation skills among vocational school students. This type of research aims to produce practically usable methods to improve existing practices or create new methods. This method employs a wide range of methods, including qualitative and quantitative techniques, as well as a thorough examination of the literature (Richey & Klein, 2014).

Methodology

This study employed qualitative methods within the framework of the DDR programme. Although mixed methods were used in the larger project, this paper reports only the qualitative findings. Design and development research is often seen as a key link between theory and practice (Richey & Klein, 2014). The research was conducted in two vocational colleges in Guizhou, focusing on students enrolled in music education modules. The participants were 100 vocational students aged 18 to 24, selected from several institutions in Guizhou. All had attended at least three music classes. Random sampling was used to ensure the group was representative of the wider student population, with equal distribution across gender and academic programmes. To minimise bias, only students with no prior experience in formal music education were included (Govorova et al., 2020).

Research Design and Data Collection

This study employed Design and Development Research (DDR) methodology in conjunction with a qualitative research design, with the objective of developing and validating a music education module incorporating educational music therapy to enhance self-regulation in vocational school students. By utilising the ASSURE instructional model, the study guaranteed that music education activities were customised to students' requirements and facilitated enhancements in emotional expression and behavioural control. In addition, the ASSURE model does not require extensive design modifications, deep knowledge of instructional design (ID), or complex instructional media (Gustafson, 2002). Data collection was conducted using three principal instruments: an observational rating scale, a reflective journal, and open-ended responses to a questionnaire. The objective was to gain insight into the emotional responses and self-management behaviours exhibited by students during the music education module.

Data Analysis

The qualitative research methodology entailed the collection and analysis of data in accordance with the Kirkpatrick model. The model was first introduced by Kirkpatrick in the 1960s and has since been widely accepted as a framework for the evaluation of training and learning programmes. Moreover, it has become a widely accepted standard for monitoring and validating training programmes (Zhao & Liu, 2022). The results were then compared with level 2 (learning) of Kirkpatrick's evaluation model, which focuses on changes in affective and self-regulation skills. The data analysis section of this paper will provide a detailed thematic analysis of data from observation scales, reflective diaries, and open-ended questionnaires, and the specific data resulting from the analysis is presented below:

Classroom observations were conducted with 60 vocational students enrolled in a performing arts module and their performance in a variety of activities, particularly emotional responses and behavioural regulation was assessed using a standardised observation rating scale. See Table 1 for data analyses. The majority of students showed significant improvement in emotion recognition, impulse control, teamwork and emotional stability, especially in musical activities such as rhythmic exercises and improvisation.

Table 1

Observation Scale Data

Evaluation criteria	Average scores (5)	Percentage of students
Enhance emotional recognition and expression	4.2	86%
Improve impulse control	4.0	82%
Enhancing cooperation and team interaction	4.3	88%
Keeping emotional stability in the face of challenges	4.1	85%

Following each session, students recorded their emotional changes and self-regulation experiences in a reflective diary. Key themes and common self-regulation insights were extracted from the diaries of 60 students. See Table 2 for data analyses. The reflective journals indicated that over two-thirds of the students demonstrated an improved capacity to recognize and express their emotions through music activities, applying these skills in their daily lives to regulate their emotional states. Furthermore, the students reported an enhanced ability to engage in self-reflection, gaining insight into the underlying causes of their emotional responses.

Table 2

Analysis of Reflective Journal or Diaries as Qualitative Data

Themes	Percentage of students mentioned	Example
Better recognition and expression of emotions	76%	I used to feel anxious a lot, but the music activities taught me how to recognize and control my anxiety.
Emotion regulation through music	72%	When I'm stressed, I use the rhythms and melodies I've learnt to calm myself down.
Enhancing capacity for self-reflection	66%	The musical activities have facilitated introspection regarding emotional responses, enabling enhanced emotional regulation.

The survey included an open-ended question inviting students to share their perceptions of the impact of the music education module on their ability to self-regulate. The key statistics from the survey are presented below. The survey included an open-ended question inviting students to share their perceptions of the impact of the music education module on their ability to self-regulate. The key statistics from the survey are presented below. See Table 3 for data analyses. The majority of students indicated that their abilities to recognise and regulate emotions had improved considerably following their participation in the music education module. Furthermore, they reported utilising these skills in their daily lives to enhance their emotional control and resilience in the face of adversity.

Table 3

Percentages of responses from open-ended questionnaire data

Items in the questionnaire requiring open-ended responses	Percentage answering 'yes'
1. Do you agree that your participation in musical activities has enhanced your capacity to discern emotional states? If yes, please share your feeling.	80%
2. Following participation in musical activities, do you perceive an enhanced sense of emotional regulation? If yes, please share your perception.	85%
3. Do you think you have the emotional regulation skills acquired through music activities been integrated into your daily routine? If yes, please elaborate.	80%

A total of 80% (i.e. 24 out of 30 respondents) of the samples responded that they agreed that their participation in musical activities has enhanced their capacity to discern emotional states. The following are their sample responses: Previously, I found it challenging to discern when I was becoming anxious or angry. However, through engagement in musical activities, I have developed the ability to halt and reflect when my mood shifts, thereby enhancing my capacity to discern my emotional state with greater alacrity.

A total of 85% (i.e. 26 out of 30 respondents) of the samples perceived an enhanced sense of emotional regulation following their participation in musical activities with the exemplary responses below:

My involvement in music has enabled me to develop an ability to regulate my emotions by engaging in deep breathing exercises and focusing on the rhythm, particularly in situations where I am experiencing elevated levels of anxiety. Furthermore, I utilise these techniques on a daily basis to facilitate relaxation.

A total of 80% (i.e. 24 out of 30 respondents) of the samples agreed that their emotional regulation skills acquired through music activities have been integrated into their daily routine. The following are some of their responses:

I have recently adopted the practice of listening to some light music each morning as a means of establishing a positive frame of mind in preparation for the day ahead. This is a routine that I initially developed during my studies in music. It engenders a more positive emotional state and a reduction in anxiety.

The data indicate that the Music Education Training Module, which incorporates the Orff-Schulwerk Method of Teaching (OSMT) and the Nordoff-Robbins Method of Music Therapy (NRMMT), has yielded favourable outcomes in terms of enhancing students' capacity to recognise emotions, regulate emotions, and manage impulsive behaviour. A comprehensive analysis of observation scales, reflective diaries and questionnaire data revealed that vocational students exhibited a significant improvement in their emotion regulation skills following their participation in the module. This finding aligns with the learning level requirements of the Kirkpatrick assessment model.

Results

The findings of this study indicate that the music education module had a notable positive effect on the self-regulation abilities of the vocational school students. The analysis of the observation and reflective diaries revealed that 86% of the students exhibited a notable enhancement in their capacity to recognise and express emotions. This was evidenced by their heightened acuity in recognising emotions and their ability to express these emotions through musical activities. With regard to impulse control, 82% of the students exhibited enhanced emotional regulation following participation in rhythmic training with the Orff-Schulwerk Method (OSMT) and improvisation with the Nordoff-

Robbins Method of Music Therapy (NRMMT). This was evidenced by a notable reduction in impulsive responses, particularly in the context of teamwork and mood swings. These changes were not only evident in the classroom setting; 80% of the students who participated in the study provided feedback via an open-ended questionnaire indicating that they were utilising the emotion regulation skills acquired through music activities in their daily lives.

The findings of this study corroborate the effectiveness of the music education module at Level 2 of the Kirkpatrick Assessment Model of Learning. They demonstrate the distinctive contribution of music education in fostering self-regulation, emotion management and teamwork among vocational school students. Moreover, they offer a practical foundation for emotional health interventions in vocational education. In response to RQ 1, the Music Education Training Module is comprised of three principal elements that facilitate the enhancement of self-regulation competencies among vocational students.

Part I: Improvisation in Music the Nordoff-Robbins Music Therapy Method (NRMMT) facilitates the enhancement of emotional awareness and anxiety management abilities in students through improvisation.

Part II: Rhythm and Cooperative Training In conjunction with the Orff-Schulwerk Method (OSMT), students exhibit enhanced impulse control and teamwork during collaborative endeavours.

Part III, which takes place during musical activities. Additionally, students exhibited enhanced capabilities in identifying emotional cues and regulating their emotions. In response to RQ 2, the integration of NRMMT and OSMT was found to significantly enhance students' capacity to recognize emotions, regulate impulses, and manage overall emotional responses. These results satisfy the criteria for the "learning" evaluation at Level 2 of the Kirkpatrick Model. The skills acquired enabled students to effectively navigate high-stress scenarios and enhance their capacity for self-regulation.

Discussion

The findings of this study indicate that the performing arts education module was markedly efficacious in augmenting the emotional management and self-regulation competencies of vocational school students, particularly in the domains of emotion recognition, impulse control, and teamwork. It was found that students not only acquired emotion regulation skills within the classroom setting, but also applied them in their daily lives. This suggests that the skills taught in the module were transferable and enduring. The findings support the potential of music education in emotional health education and suggest further validation of its effectiveness in a wider educational context in the future. This provides an innovative practical approach to emotional intervention in vocational education.

Conclusion

The present study illustrates the effectiveness of a music education-based intervention module in enhancing the self-regulation and emotion management skills of vocational school students. The integration of the Nordoff-Robbins Music Therapy Method (NRMMT) and the Orff-Schulwerk Method of Teaching (OSMT) resulted in a notable enhancement of students' abilities in emotional recognition, impulse control, and teamwork. These findings indicate that music education is not merely a means of developing skills; it can also be utilized as an efficacious method of emotional health education, enabling students to apply emotion regulation techniques in their daily lives and thereby facilitate personal growth as well as emotional stability. The findings of this study lend support to the potential of music education to be widely utilized in vocational education. By integrating music education modules on emotion management into vocational school curricula, educators can provide students with more comprehensive training in emotion regulation and facilitate their balanced development in terms of academic and social adjustment. Future research could further explore the effectiveness of music education as an emotional intervention for student groups of other ages and backgrounds, thereby providing theoretical and practical support for innovations in emotional health education within the education system.

References

- Baltazar, M., Västfjäll, D., Asutay, E., Koppel, L., & Saarikallio, S. (2019). Is it me or the music? Stress reduction and the role of regulation strategies and music. *Music and Science*, 2. <https://doi.org/10.1177/2059204319844161>
- Baranovskaya, T. (2015). Self-regulation skills: Several ways of helping students develop self-regulated learning. *Journal of Language and Education*, 1(2), 56–64. <https://doi.org/10.17323/2411-7390-2015-1-2-56-64>
- Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, 84(4), 822–848.
- Chong, H. J., & Kim, S. J. (2010). Education-oriented music therapy as an after-school program for students with emotional and behavioral problems. *Arts in Psychotherapy*, 37(3), 190–196. <https://doi.org/10.1016/j.aip.2010.03.004>
- Cristiano, J., Cunha, R., Carvalho, S., & Cunha, J. C. R. (1975). Experienced emotions through the Orff-Schulwerk approach in music education: A case study based on flow theory. In Sloboda & Juslin. *Juslin & Sloboda*. <https://www.researchgate.net/publication/260037278>
- Dingle, G. A. (2013). “To be heard”: The social and mental health benefits of choir singing for disadvantaged adults. *Psychology of Music*, 41(4), 405–421. <https://doi.org/10.1177/0305735611430081>
- Fan, C., & Liu, S. (2024). Exploring the associations among perceived teacher emotional support, resilience, Covid-19 anxiety, and mental well-being: Evidence from Chinese vocational college students. *Current Psychology*, 43(16), 14944–14954. <https://doi.org/10.1007/s12144-022-04112-9>
- Govorova, E., Benítez, I., & Muñoz, J. (2020). How schools affect student well-being: A cross-cultural approach in 35 OECD countries. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.00431>
- Hallam, S. (2010). The power of music: Its impact on the intellectual, social, and personal development of children and young people. *International Journal of Music Education*, 28(3), 269–289. <https://doi.org/10.1177/025576141037065>
- Hasanova, N. K. (2021). Possibilities of music education and upbringing in the formation of personal maturity. <https://doi.org/10.15863/TAS>
- Houseman, D. K. (2017). The importance of emotional competence and self-regulation from birth: A case for the evidence-based emotional cognitive social early learning approach. *International Journal of Child Care and Education Policy*, 13(1), 11. <https://doi.org/10.1186/s40723-017-0038-6>
- James, W. R. (2006). The concept of educedal music therapy: Between intuition and implementation. *Thesis Submission for Degree of MPhil (The Open University)*. <https://doi.org/10.21954/ou.ro.0000fe1f>
- Jiwak, R. B. (2019). Instructional design and models: ASSURE and Kemp. *Journal of Education and Research*. <https://doi.org/10.3126/jer.v9i2.30459>
- Kugler, M. (2011). Introduction. In Haselbach, B. (Ed.), *Texts of Theory and Practice of Orff-Schulwerk: Basic Texts from the Years 1932–2010* (pp. 14–42). New York: Schott Music, Mainz.
- Kappas, A. (2011). Emotion and regulation are one! *Emotion Review*, 3(1), 17–25. <https://doi.org/10.1177/1754073910380971>
- Laukka, P. (2006). Uses of music and psychological well-being among the elderly. *Journal of Happiness Studies*, 8(2), 215–241. <https://doi.org/10.1007/s10902-006-9024-3>
- Linnemann, A., Strahler, J., & Nater, U. M. (2016). The stress-reducing effect of music listening varies depending on the social context. *Psych neuroendocrinology*, 72, 97–105. <https://doi.org/10.1016/j.psyneuen.2016.06.003>
- Ludovico, L. A., & Mangione, G. R. (2014). Self-regulation competence in music education. In *International Conference on e-Learning* (pp. 46–54). IADIS Press.
- Ma, S., Yang, Y., Soh, K. G., & Tan, H. (2024). Effects of physical fitness on mental health of Chinese college students: A cross-sectional study. *BMC Public Health*, 24(1). <https://doi.org/10.1186/s12889-024-18097-6>

Biography

Qiao Pan is a Lecturer and PhD candidate at UCSI University. He is a full-time faculty member at Guizhou Urban Vocational College. He has guided students in the Guizhou Province College Students’ Innovation and Entrepreneurship Competition and the *Challenge Cup* National College Students’ Extracurricular Academic and Scientific Works Competition, where they won multiple first and second prizes. He received the second prize in the Music Education category of the Guizhou Province Vocational College Quality Course Competition, as well as the second prize in the university-level Art Education Project. He has published five academic papers indexed

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Dr Ng Khar Thoe is an advocate of technology-focused transdisciplinary studies, particularly STEM education integrated with the arts, including music, art, language, and culture. She is a Senior Lecturer at INTI International University, where she teaches postgraduate subjects in Educational Management and supervises postgraduate research. She has also served as an Adjunct Assistant Professor at UCSI University, with experience supervising doctoral students in music and arts education. In 2010, she was a Visiting Professor and foreign research fellow at Tsukuba University, Japan [<https://www.criced.tsukuba.ac.jp/staff.html>]. Further details of her academic work and biography are available at <https://orcid.org/0000-0002-4462-657X> and <https://tinyurl.com/ConsultancySpkProf>

Hou Huihui is a PhD candidate at UCSI University. During her employment, she primarily worked as a piano instructor and also taught sight-singing, ear training, and music theory. She was responsible for curriculum design and implementation, developing a systematic course framework that integrated theory with practice. She has guided students to success in piano competitions, earning recognition as an Outstanding Instructor. She has published six academic papers indexed in Google Scholar and the China National Knowledge Infrastructure (CNKI). Her research focuses on applied pedagogy in piano and composition technique, with a strong emphasis on advancing scientific research and innovation in music education.

Luo Junjie is a lecturer and PhD candidate at UCSI University. He is a full-time faculty member at the Guiyang Institute of Humanities and Technology. He has guided students in the Guizhou Provincial College Student Innovation and Entrepreneurship Competition and the Guizhou Provincial Innovation Practice Training Program, achieving multiple first and second prizes. He received the third prize in the National Teaching Innovation Competition for Art and Design Teachers in China. He has also presided over or participated in three provincial-level research projects. He has published six academic papers indexed in databases such as Google Scholar and the China National Knowledge Infrastructure (CNKI). His research interests include teacher strategy studies and museum education.

Chen Fanying is a Lecturer at Guizhou Medical University, where she works in the Mental Health Education and Counselling Centre. She is a Level II psychological counsellor. She has received first and second prizes in provincial-level skills competitions in Guizhou. Her academic papers have been published in several Chinese journals.

Xingfan Ke is a PhD candidate in Education at UCSI University, specialising in piano pedagogy and the application of the Alexander Technique in mind-body integration for performance. She previously taught at Minnan Normal University and has served as a jury member for the Liszt, Kawai, and Boya competitions. She has performed at cultural venues including Zuchang Music Hall, Wudian City, and Wulin Village. At Xiamen Music School, she developed innovative piano teaching modules designed to improve children's posture and musical expression. Her students have won national prizes and continued their studies at institutions in Europe.

Jin Jin is a piano teacher at the Music College of Jiangsu Second Normal University. She is a member of the Jiangsu Musicians Association, the Jiangsu Piano Association, and the Music Teachers National Association (MTNA). She has served as a judge for the Jiangsu Provincial Unified Examination of Music in general colleges and universities, an examiner for undergraduate admission interviews at Nanjing University of the Arts, and a member of the Grading Committee of the Jiangsu Musicians Association. Her research focuses on music education, piano performance, and piano pedagogy.

Guan Xingzhi is a PhD candidate at the Faculty of Social Sciences and Liberal Arts, UCSI University, Malaysia. His research interests include higher education, music education, curriculum and instruction, blended learning, and digital education. He is a visiting lecturer at SD UMP University in Indonesia, a member of the International Society for Music Education (ISME), and a reviewer for the American Educational Research Association (AERA) conference. He has published academic papers in journals, conference proceedings, and book chapters indexed in SCI, AHCI, and SCOPUS.

Qiao Suying is a doctoral candidate in Education at the Faculty of Social Sciences and Liberal Arts, UCSI University. She has extensive experience teaching music at Chinese universities, with a focus on higher education, music pedagogy, accordion performance, and chamber music instruction. She has published in leading Chinese journals such as *Art Education*, as well as in international peer-reviewed outlets including the



International Journal of Religion (IJOR) and the *European Chemical Bulletin*. Her work addresses both theoretical and applied dimensions of music education.