Developing an Online Music Theory Module for Adults Based on Multiple Intelligences

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Abstract

Education is undergoing a significant transformation due to digital technology, especially accelerated by the COVID-19 pandemic, which has made remote and hybrid learning more prevalent. In this context, adult participation in online music theory classes demonstrates how digital learning can complement lifelong education. This study aims to develop and validate an online music theory module for adults using the ASSURE learning model and principles of Multiple Intelligences Theory. Qualitative research was conducted in two phases: needs analysis and content validation. Ten experienced music teachers identified module requirements based on the ABRSM Grade 1 to Grade 3 Music Theory Syllabus, which was then validated by three experts. The final module consists of ten units, emphasizing Multiple Intelligences Theory to create engaging online learning experiences. The needs analysis revealed key challenges, including limited student engagement and difficulties with interaction. While tools like video conferencing and collaborative platforms were effectively utilized, students generally responded positively, appreciating the flexibility but desiring more interactive support. Expert reviews confirmed the module's alignment with educational best practices and suggested enhancements to improve clarity and engagement. This study contributes to online music education by providing a validated framework that enhances adult learners' engagement and addresses their diverse learning needs.

Keywords: students, music theory, multiple intelligence, online learning

Introduction

Online learning, delivered either synchronously or asynchronously, offers flexibility, cost savings, and accessibility (Baber, 2020; Lim et al., 2021). Research supports its effectiveness and benefits over traditional education (Pei & Wu, 2019; Gonzalaz-Gomez et al., 2016). In music education, online courses provide interactive lessons and virtual instruments, facilitating independent learning (Ng et al., 2021; Pike, 2021). However, challenges such as reduced interaction, technical issues, and limited hands-on experience remain (Fang et al., 2024). To address these limitations, alternative instructional approaches can better meet diverse learner needs in online settings. Gardner's Multiple Intelligence (MI) Theory provides a

framework for recognizing diverse learning styles, though its application in music education remains underexplored (Albenti, 2020).

This study aims to develop an online music theory module tailored to MI Theory, focusing on adult learners' challenges in online courses. The research objectives are:

a) To identify the challenges adult learners face in online music theory courses.
b) To develop content that addresses these challenges by applying Multiple Intelligence (MI) Theory.

By integrating the ASSURE Learning Model and MI principles, the study develops a module that employs diverse instructional strategies. Findings suggest that MI-based instruction can enhance online music education, offering a more personalized and effective learning experience for adults. This paper is structured with a literature review, methodology, findings, discussion, and conclusion.

Literature Review

Online learning, defined as instruction delivered over the internet, offers flexibility, cost savings, and accessibility, making it a popular alternative to traditional education (Baber, 2020; Lim et al., 2021). Studies increasingly affirm its effectiveness, with benefits that include interactive, self-paced learning, especially useful in music education (Pei & Wu, 2019; Gonzalez-Gomez et al., 2016). Online music courses allow students to engage with lessons and virtual instruments independently, though challenges such as reduced in-person interaction, technical difficulties, and limited hands-on experience persist (Ng et al., 2021; Rafiq et al., 2024).

Gardner's MI theory includes intelligences like logical, musical, and interpersonal, which can be tailored to diverse needs (Gardner, 1983). Research indicates that incorporating MI in online environments enhances engagement and accommodates varied learning styles (El-Sabagh, 2021; Mankad, 2015). In music, MI complements traditional methods like Orff and Kodály, enriching the curriculum and aligning with standards (Tabuena, 2021). MI supports diverse instructional designs, enhancing students' learning pathways (Ferrero et al., 2021).

For adult learners, online education must include practical applications and flexibility to reduce dropout rates, as organizational support and time constraints significantly affect learning persistence (Park & Choi, 2009). To address these needs, the ASSURE model (Analyse, State Objectives, Select Methods, use media, require participation, Evaluate) provides a structured approach that integrates engaging activities with technology, enhancing motivation and fostering problem-solving skills in online environments (Heinrich et al., 1999). Together, MI and ASSURE offer an adaptive framework that supports diverse learning needs, creating engaging and effective online modules. Despite advancements in online education and adaptive instructional models like MI and ASSURE, there remains a research gap in understanding how these frameworks can be specifically applied to enhance adult learning in online music theory courses.

Methodology

Research Design

This qualitative study involved semi-structured interviews with music teachers to explore challenges in teaching online music theory to adult learners. The goal was to develop an instructional module based on Multiple Intelligence (MI) theory to improve online music education for adults. Ethical approval was granted by Universiti Sains Malaysia (USM/JEPem/22060345).

Sample and Population

Ten experienced music teachers from Penang and Kuala Lumpur, each with over eight years of teaching experience, participated. Teachers lacking experience with adult learners were excluded. Three experts with music theory and adult pedagogy backgrounds reviewed the module, providing feedback for refinement.

Data Collection

Interviews (15–20 minutes each) covered instructional strategies, online resources, and challenges. Open-ended questions allowed teachers to share in-depth insights. Experts evaluated the module on clarity, relevance, and applicability using a Likert scale.

Data Analysis

A qualitative approach was used to analyze music teacher interviews, with coding to identify themes and patterns in their experiences teaching adult music theory. Expert feedback on the module's clarity, relevance, and practicality was similarly coded and analyzed, providing insights to refine the module in line with educational practices.

Findings and Discussion

Research Findings

When the study successfully developed and validated an online music theory module for adults using the ASSURE Learning model and MI theory, demonstrating enhanced student engagement and effectively addressing diverse learning needs. The sample comprised ten experienced music teachers from Penang and Kuala Lumpur, with teaching experience ranging from five to twenty years and diverse educational backgrounds.

Research objective one, which focused on identifying challenges faced by teachers, revealed significant issues in providing personalized feedback and maintaining student engagement without physical cues. One teacher stated, "Without seeing the student, it's hard to gauge their understanding." Additionally, technological barriers, such as unstable internet connections and software glitches, forced teachers to troubleshoot during lessons.

In research objective two, the development of content using MI theory effectively addressed these challenges by catering to various learning styles. Teachers employed multimedia resources like scanned scores, pre-recorded videos, audio samples, and YouTube to clarify concepts in rhythm, melody, and harmony. One teacher remarked, "Visual aids and interactive exercises keep my students engaged and cater to their different strengths."

The ABRSM Grade 1 to 3-aligned module consisted of ten units covering essential topics such as pitch, notes, time signatures, intervals, lines, key signatures, scales, triads, and composition. Each unit integrated MI principles, utilizing visual, auditory, and kinesthetic activities to enhance comprehension and engagement. Expert validation highlighted the module's strengths and areas for improvement. Recommendations included refining objectives, adding creative activities, and incorporating modern platforms like TikTok and Instagram to increase engagement. Overall, the refined online music theory module effectively aligns with educational standards and meets adult learners' needs. This study underscores the importance of tailored instructional strategies in online adult education, demonstrating that diverse learning approaches can significantly enhance satisfaction and engagement. The findings imply that structured, intelligence-based modules can lead to more effective and inclusive online learning experiences for adult music theory students.

Discussion

The study's findings demonstrated that the tailored online music theory module, grounded in the ASSURE Learning model and MI Theory, significantly enhances adult learning engagement and satisfaction. Teachers highlighted key challenges in online teaching, including reduced face-to-face interaction and difficulties in providing timely, personalized feedback. These challenges align with existing literature on online music education, which points to the limitations of traditional online platforms in maintaining student focus and interaction (Baber, 2020; Liu et al., 2024). Limited direct interaction, combined with technological barriers like connectivity issues, often creates a less immersive learning environment, resulting in students who may struggle to stay focused during lessons.

To address these challenges, teachers utilized a range of multimedia resources, such as scanned scores, pre-recorded videos, and audio clips. Research suggests that these tools can stimulate aspects of in-person learning and support various learning styles (Ng et al., 2021). However, without a structured instructional design model like the ASSURE model, teachers may lack a systematic approach to integrating these resources effectively. The ASSURE model's sequential steps ensure resources align with learning objectives and are tailored to student needs, providing a coherent and adaptable framework for organizing and delivering content.

Connecting these instructional strategies to MI theory is particularly significant in music education, where individual differences in musical aptitude and learning preferences are often pronounced. Gardner's MI theory emphasizes the importance of catering to diverse types of intelligences – such as musical, spatial,

and kinesthetic – which are especially relevant in music learning contexts (Gardner, 1989). The study findings suggest that students with high musical intelligence benefit from listening exercises, while those with logical intelligence excel in theoretical tasks. These observations align with previous research highlighting the role of MI in creating inclusive and engaging learning environments (Harirudin, 2023). By offering varied learning activities, such as visual aids for spatial learners, rhythm exercises for kinesthetic learners, and collaborative projects for interpersonal learners, the module applies MI principles effectively.

The practical implications for music teachers are considerable. First, the module can serve as a ready-to-use resource, reducing the preparation time required for lesson planning and offering teachers a range of structured, adaptable activities. As teachers noted during the interviews, managing online classes is particularly challenging without direct cues from students, making it essential to have well-organized content that facilitates engagement. By adhering to MI theory, the module allows teachers to meet students' diverse needs, encouraging them to adopt flexible, student-centered teaching strategies that promote active participation and engagement. The inclusion of quizzes, discussions, and collaborative exercises fosters interactivity, which is critical for adult learners who often benefit from real-world applications and group learning.

Moreover, the module provides a framework for addressing common online teaching issues, such as reduced engagement and technological disruptions. By following the ASSURE steps to integrate media and require learner participation, teachers can create lessons that sustain interest and mitigate disengagement. Brief quizzes and collaborative tasks help maintain lesson momentum, resonating with students' preferred learning styles and boosting focus and motivation.

In conclusion, the study underscores the importance of an instructional framework that combines structured pedagogy with adaptable, intelligence-based strategies. The integration of MI theory with the ASSURE model enables a flexible, learner-centered approach to online music theory education that supports teachers in delivering a more inclusive and effective learning experience. By addressing both the cognitive and practical needs of adult learners, the module developed in this study offers a valuable tool for music teachers navigating the complexities of online instruction, ultimately enhancing both student engagement and satisfaction

Conclusion

The key findings of this study reveal that the tailored online music theory module, developed using the ASSURE Learning Model and grounded in MI theory, significantly enhances adult learners' engagement and satisfaction. Teachers reported challenges related to maintaining student focus and providing personalized feedback in an online environment. However, the incorporation of diverse multimedia resources and interactive activities helped mitigate these issues, fostering a more engaging learning experience. This study contributes to the improvement of online music theory teaching for adults by providing a structured framework that not only addresses common teaching challenges but also aligns

instructional strategies with students' varied learning preferences. Despite its contributions, the study has limitations, including a small sample size and a focus primarily on music teachers from a specific region. Future research could explore the effectiveness of similar instructional modules across different age groups and in various geographical contexts beyond University Sains Malaysia (USM). Expanding the research could provide deeper insights into the applicability and adaptability of the module in diverse educational settings. Ultimately, this study has the potential to significantly impact music education by demonstrating how a structured, intelligence-based approach can enhance online learning experiences, paving the way for more inclusive and effective instructional practices in music theory education.

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Biography

Joyce Low Xue Wen a PhD candidate in University Sains Malaysia, specializing in innovative approaches to music education. With background in classical piano and violin, she brings over a decade of experience in performance and teaching to her research. Her research explores the application of Multiple Intelligence Theory and digital learning models to enhance music theory instruction for adult learners. As an educator and musician, she aims to bridge the gap between traditional and online teaching methods, making music theory more accessible and engaging for diverse learners in today's digital age.

Yumi Yoshioka is a senior lecturer in the School of the Arts at University Sains Malaysia. She specializes in piano pedagogy, with a focus on piano teaching, group piano keyboard class, and community engagement programs. Her recent research explores students' perceptions of piano pedagogy in pre-internship programs, finding motivation for participation in public performance events, and raising awareness of continuous professional development (CPD) among piano teachers.

Pravina Manoharan is currently the Chairperson of the Music Department, School of The Arts, University Sains Malaysia. She is classically trained in the piano and is actively involved in research work in the areas of Music Education, Ethnomusicology, Popular Music, Diaspora studies and Identity issues. Her PhD explored the narrative of contemporary Indian identity expressed through the medium of Tamil Hip Hop, shedding light on the complex interplay of culture, music, and identity in the modern world. She is currently working on an industry grant to develop a blended learning Ed Tech platform on Arts Education to assist EFL and ESL postgraduate and undergraduate students.