

COMPUTER AIDED TEACHING AND PRIMARY SCHOOL PUPILS' MOTIVATION TO LEARN MUSIC: THE PROSPECTS AND CHALLENGES

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ABSTRACT

The integration of computer-aided teaching presents a unique opportunity to inspire and motivate young learners in their musical journey. Interactive software, digital instruments, and online resources can make music education more engaging and accessible, enabling pupils to explore the wonders of melody and rhythm in innovative ways. The study assessed computer aided teaching and primary school pupil's motivation to learn music: the prospects and challenges. The study explored concept of music, the concept of computer aided teaching, learning motivation of computer aided teaching, the prospect of computer aided teaching, the effects of computer aided teaching on pupil motivation to learn, challenges of computer aided teaching, roles of music in learning, and the types of music. On this basis the study concluded that the prospect of employing computer-aided teaching to motivate primary school pupils in their music education journey is an exciting and promising avenue. The intersection of technology and music education holds the potential to inspire, engage, and enrich the musical experiences of young learners. One of the recommendations made was that professional programs should be developed for music educators to enhance their digital literacy and the effective use of technology in the classroom. This will empower teachers to leverage technology to motivate and engage students.

KEYWORDS: Computer Aided Teaching, Primary School Pupils, and Music Learning

INTRODUCTION

Primary school music education with computer-assisted instruction has the potential to transform how young students interact with and are inspired to learn music. Since ancient times, music has played a major role

in human society as a universal language. It provides primary school students with a platform for creative expression as well as a way to hone critical social, emotional, and cognitive abilities. Children's skills in areas like problem-solving, teamwork, and emotional intelligence have been demonstrated to improve as a result of music education (Hanna-Pladdy & Mackay, 2011). Young students can be inspired and motivated to pursue music through the incorporation of computer-aided teaching, which offers a special opportunity. Interactive software, digital instruments, and online resources can make music education more engaging and accessible, enabling pupils to explore the wonders of melody and rhythm in innovative ways (Dammers, 2005). According to Daniel (2018), computer-aided teaching is a self-descriptive term that literally means learning with computers. However, our understanding of what a computer is and can do has changed considerably over the past century, meaning that the definition has evolved considerably too. Now, computer-aided learning means learning on mobile phones, in virtual reality, and in augmented reality, in addition to desktop and laptop computer interaction.

The idea of incorporating technology into the teaching of music in primary schools is exciting, but it is not without difficulties. As the use of technology in the classroom increases, there are a number of difficulties that must be resolved, including the need for qualified teachers who can successfully integrate technology and the dangers of excessive screen time (Hewitt, 2013). Computers have also been useful to students in helping them visualize ideas that are otherwise highly challenging. Because they include media like formula-driven images, animations, and the selection of random occurrences, topics typically focus on features that are challenging or impossible to handle properly by conventional techniques (Orim & Igwe 2017). Gordon (2023) defines music as the art of blending vocal or instrumental sounds for aesthetic beauty or emotional expression, typically in accordance with cultural standards of rhythm, melody, and—in the case of the majority of Western music—harmony. The simple folk song and the intricate electronic composition both fall within the umbrella of music. Both have been conceptually and acoustically constructed by humans, and both may be found in music of all genres and across all eras of history. Every human community is infused with music in one way or another. Music is an auditory art that consists of meaningful arrangements of sounds in relation to pitch, rhythm, and tonality, according to the New World Encyclopedia (2023). Another definition of music is "a natural and intuitive phenomenon operating in the spheres of time, pitch, and energy and under three distinct and interrelated organization structures of rhythm, harmony, and melody." Since music is natural, it can be produced in nature by various creatures, and since it is intuitive, humans can recognize their sounds as musical. This embarks on a journey through the harmonious intersection of computer-aided teaching and primary school music education, drawing from scholarly research and practical experiences to shed light on the exciting possibilities that lie ahead. At the same time, it will explore the obstacles that must be



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navigated to ensure that technology serves as a tool for motivation and empowerment while preserving the timeless beauty of musical traditions.

CONCEPT OF MUSIC

According to Gordon (2023), music is the art concerned with combining vocal or instrumental sounds for beauty of form or emotional expression, usually according to cultural standards of rhythm, melody, and, in most Western music, harmony. Both the simple folk song and the complex electronic composition belong to the same activity, music. Both are humanly engineered; both are conceptual and auditory, and these factors have been present in music of all styles and in all periods of history throughout the world. Music is an art that, in one guise or another, permeates every human society. There are so many different types of modern music that it is mind-boggling, some of them created in more recent times, some in earlier ones. Music is a versatile art form that lends itself well to symbiotic relationships with both verbal and physical movement, as in song and dance. Music has always been a significant complement to ritual and drama and has been recognized for its ability to both reflect and affect human emotion. Radio, film, television, musical theater, and the Internet are the mediums that popular culture has constantly used to take use of these opportunities. There is a belief in music's ability to influence human behavior, as evidenced by the implications of its usage in psychotherapy, geriatrics, and advertising. Publications and recordings have effectively internationalized music in its most significant, as well as its most trivial, manifestations. Beyond all this, the teaching of music in primary and secondary schools has now attained virtually worldwide acceptance. Music is generally defined as the art of arranging sound to create some combination of form, harmony, melody, rhythm, or otherwise expressive content (Wikipedia, the free encyclopedia 2023).

Music is an auditory art that consists of meaningful arrangements of sounds in relation to pitch, rhythm, and tonality, according to the New World Encyclopedia (2023). Another term for music is "a natural and intuitive phenomenon operating in the spheres of time, pitch, and energy and under three distinct and interrelated organization structures of rhythm, harmony, and melody." Since it is a natural phenomenon, music can be created by a variety of animals in the wild, and because music is intuitive, people can identify these sounds as musical. Additionally, due to the intuitive nature of music, individuals can practically perform and even hear music in their heads. In general, one learns about music by cognizing particular sound combinations and the emotional response they elicit. Whether the music is a complex and intellectually demanding orchestral composition or a plaintive folk song, the range of responses can encompass the full range of human emotions. This makes the musical arts a universal expression of human experience.

CONCEPT OF COMPUTER AIDED TEACHING

According to Daniel (2018), computer-aided teaching is a self-descriptive term that literally means learning with computers. However, our understanding of what a computer is and can do has changed considerably over the past century, meaning that the definition has evolved considerably too. Now, computer-aided learning means learning on mobile phones, in virtual reality, and in augmented reality, in addition to desktop and laptop computer interaction. Consequently, any differences between computer-aided learning and eLearning have all but vanished, and eLearning has become the more commonly used overarching term for learning with computers. Computer-aided teaching involves the use of computers and other electronic devices as an integral part of the learning environment, whether they are employed by teachers or students (Moran, 2023). Educators are the leaders in their schools by their job characteristics; they can be responsible for setting academic targets, constructing lessons, and optimizing the academic educational experience. The scenarios in which instructors hold positions as commanders in schools have been altered by the advent of computer-aided teaching and learning and its capability to stimulate learning. Computer-aided teaching, or computer-assisted instruction, is a pedagogical strategy that makes use of computers and other digital infrastructures to deliver content to an individual or group of learners. CAI provides a customized, engaging, flexible, and adaptive learning experience to students. CAI can be used to enhance students' motivation and academic performance. CAI is also a mixture of self-learning principles with computer technology that students can use according to their learning speed (Kaleli, 2020).

Computer-aided teaching enables personalized and differentiated learning experiences. Educational software and digital resources are designed to assess individual student progress, adapt content, and provide targeted instruction to meet the specific needs and abilities of each learner (Anderson & Hager 2010). Multimedia elements, including videos, animations, simulations, and interactive games, are integral to computer-aided teaching. These engaging resources cater to diverse learning styles and promote active participation and comprehension (Clark & Mayer 2016). Computer-aided teaching provides students and teachers with access to a wealth of information and resources, thanks to the internet and digital libraries. This access expands the horizons of learning and research (Cheung & Slavin, 2013). Teachers need ongoing training and support to effectively implement computer-aided teaching. Professional development programs are crucial to building educators' confidence and skills in using technology in the classroom (Inan & Lowther, 2010). Computer-aided teaching evolves as technology advances and new research emerges. It represents a dynamic and powerful approach to education that, when effectively employed, can enhance learning outcomes, engagement, and the overall educational experience.

LEARNING MOTIVATION OF COMPUTER AIDED TEACHING

Students are motivated when a teacher explains the lesson well and when homework is given appropriate feedback. Teachers' emotions impact teachers' and learners' cognition, motivation, and behaviors (Buric & Moe, 2020). Therefore, it is very important for teachers to undergo professional development activities to further enhance their technological pedagogical content knowledge. Computer-aided instruction (CAI) is defined as instruction in which computers play a central role as the means of information delivery and direct interaction with learners. Computer-aided instruction has become mainstream in medical school curricula. For example, a three-dimensional (3D) computer module of the larynx has been created to teach laryngeal anatomy. Although the novelty and educational potential of CAI have garnered much attention, these new technologies have been plagued with low utilization rates. Several experts attribute this problem to a lack of motivation in students. Motivation is defined as the desire and action toward goal-oriented behavior. Psychologist Dr. John Keller developed the ARCS theory of motivational learning, which proposes four components: attention (A), relevance (R), concentration (C), and satisfaction (S). Keller believed that motivation is not only an innate characteristic of the pupil; it can also be influenced by external factors, such as the instructional design of the curriculum. Thus, understanding motivation is an important step to designing CAI appropriately (Amanda et al. 2016). Learning motivation in the context of computer-aided teaching is a critical aspect of the educational process. When students are motivated, they are more likely to engage actively in their learning, persist through challenges, and achieve better academic outcomes. Several factors contribute to learning motivation within the framework of computer-aided teaching, as supported by research and educational literature.

Computer-aided teaching often includes interactive elements such as gamification, simulations, and multimedia content. These features capture students' attention and create a dynamic and engaging learning environment, which, in turn, boosts their motivation (Hamari et al., 2014). Educational software used in computer-aided teaching can provide personalized learning experiences. By assessing students' progress and tailoring content to their individual needs, this customization keeps students challenged and motivated (Kizilcec et al., 2017). Computer-aided teaching offers the advantage of immediate feedback on students' performance. This feedback helps students understand their strengths and weaknesses, supporting their motivation to improve and master the material (Hattie & Timperley, 2007). Online and digital resources in computer-aided teaching offer flexibility in learning. Students can access content at their own pace and convenience, making learning more adaptable to their schedules and preferences (Means et al., 2010). The use of technology allows students to access a wide array of resources, from

online databases to multimedia content. This variety can spark curiosity and motivation by offering different ways to explore a topic (Koszalka & Ntloedibe-Kuswani, 2010). Computer-aided teaching, when effectively designed and implemented, has the potential to significantly enhance learning motivation. By incorporating strategies such as interactivity, personalization, feedback, and flexibility, educators can create a learning environment that fosters student engagement and enthusiasm for learning. The interplay between technology and motivation is an essential consideration in modern education, contributing to improved learning outcomes and a deeper love for learning.

PROSPECT OF COMPUTER AIDED TEACHING

Students have also found computers helpful in visualizing concepts that are quite difficult to visualize otherwise. Topics usually emphasize aspects that are difficult or impossible to deal with satisfactorily by conventional means because they encompass media such as formula-driven graphics, animations, and the choice of random events (Orim & Igwe 2017). On the part of the teacher, he can use the computer to evaluate, monitor, and report on students' progress. This can be made easier by recalling from hard disk memory a record of student's activity at the end of a computer session. If the student's responses and approach to problem solving could be used to diagnose his or her learning difficulties, this could be feedback for future software designs. A part of the benefit of developing programming skills is that the crisis crosses of algorithms involved in program coding and implementation would enhance the deductive/inductive process, thus yielding great cognitive development. Students stand to acquire some skills that improve transferrable cognition (Mezzacappa & Buckner, 2010); such skills, if transferred to other areas of learning, could improve the overall learning enterprise. Automation of routine tasks usually encountered in education is one of the prospects of CAI, readily increasing communication between the student and instructor (through the computer) and making more information available to the learners. It reduces the tedium, speeds up the solutions involved in problem solving, and allows the analysis of a wide range of very difficult problems. The prospect of computer-aided teaching is promising and transformative, offering numerous advantages and opportunities for education in the 21st century. This approach, which integrates technology into the teaching and learning process, has the potential to shape the future of education. The prospects of computer-aided teaching are indeed bright, but it's essential to use technology in education thoughtfully and effectively, considering factors like digital equity, data privacy, and the need for human interaction in the learning process. A balanced approach that combines technology with traditional teaching methods can harness the full potential of computer-aided teaching and lead to improved educational outcomes.

EFFECTS OF COMPUTER AIDED TEACHING ON PUPIL MOTIVATION TO LEARN

Computer-assisted teaching, or computer-assisted instruction, is a teaching method that uses computers and other interactive media to communicate learning materials and new knowledge, as well as assess learning outcomes in a systematic way to aid students' academic performance and retention. CAI refers to all types of computer applications in an instructional setting, comprising drill and practice, simulations, instructional and supplementary exercises, database development, programming, and composing using word processors for the advancement and retention of knowledge amongst students (Gana 2013). These types of learning activities are often associated with quality learning experiences, retention levels, and academic performance (Koksal, Yagisan, and Aksoy 2013). Studies have shown that CAI is an instructional approach for bolstering students' interest, skills, academic performance, and retention capacity (Osemwinyen, 2009; Suleman et al., 2017).

According to the National Center for Education Statistics, close to 5.8 million students are enrolled in online courses at degree-granting institutions, which represents an upward trend in higher education (Hussain F. 2012). George et al. conducted a systematic review of the knowledge, skills, attitudes, and satisfaction of dentistry, medicine, nursing, pharmacy, and physiotherapy students regarding the effectiveness of online learning and found that health professions students perceived online learning to be equivalent to traditional teaching styles. Computer-aided teaching has had a profound impact on pupils' motivation to learn. This narrative delves into the effect of computer-aided teaching on student motivation, drawing upon research and studies in the field of education. In the digital age, the integration of technology in education has redefined the way students engage with learning materials. Computer-aided teaching encompasses a wide range of tools and resources, including interactive software, multimedia content, online platforms, and educational apps, all of which have the potential to transform the learning experience. At the heart of this transformation lies a significant change in student motivation. Although the effects of computer-aided teaching on student motivation are predominantly positive, it's important to acknowledge that not all technology implementations yield the same results. The quality of educational software and the way it is integrated into the curriculum play a significant role. Additionally, some students may still require the guidance and encouragement of a skilled teacher to fully harness the benefits of technology. The effect of computer-aided teaching on pupils' motivation to learn is substantial and promising. The integration of technology has the power to engage, inspire, and personalize the learning experience, making education more accessible and enjoyable. However, it is essential that educators and policymakers continue to refine their approaches to ensure

that technology is effectively utilized to enhance motivation and learning outcomes.

CHALLENGES OF COMPUTER AIDED TEACHING

Aspiring Youths (2023) emphasis on the following as the challenges of computer aided teaching.

- **Technology issues:** Computer Aided Learning relies heavily on technology, which can sometimes fail or malfunction. This can lead to frustration and disruptions in the learning process, as well as potential data loss or security breaches.
- **Reduced social interaction:** Computer Aided Learning may also reduce social interaction between students and teachers, which can be an important aspect of the learning experience. Students may miss out on opportunities for in-person collaboration, discussion, and feedback.
- **Over-reliance on technology:** Computer Aided Learning may also lead to over-reliance on technology, which could be a problem if students don't have access to the necessary tools or if they become too dependent on the technology for their learning.
- **Limited feedback:** Computer Aided Learning can provide instant feedback to students; it may not always be as detailed or personalized as feedback provided by a human teacher. This could limit students' ability to understand their mistakes and improve their performance.
- **Lack of motivation:** Finally, Computer Aided Learning may not be as motivating for some students as traditional learning methods. Some students may find it difficult to stay focused or engaged without the structure and accountability provided by a physical classroom and teacher.



ROLES OF MUSIC IN LEARNING

It is very well known to everyone that, right from the mother's lullaby and the infant stages, humans are attracted to and get solace (relief) and peace from music, singing, and the verbal melody. In all cultures all over the world, music (vocal and instrumental) is considered an integral part of qualitative life. Song and dance are an indispensable part of all festivals and celebrations. This innate inclination in man towards harmonious sound and rhythmic movement sets him apart from other beings on earth. We have placed too much importance on developing the mental and intellectual aspects of children and neglected the emotional and creative aspects of their personalities. This serious imbalance in the educational outlook is taking a heavy toll on children's lives. It is high time that we gave serious thought to this and took steps to save the tragic situation by introducing and strengthening the study of music and other performing arts at all levels of our educational system. Benefits that children can derive by learning music in schools and colleges:

- Music can be a comforting activity to many students. It is a way to relieve stress. It is almost everybody's experience that, when angry or frustrated, playing or listening to music has a soothing effect.
- Music education opens doors that help children pass from school into the world around them a world of work, culture, intellectual activity and human evolution.
- Studies conducted all over the world have shown that music is directly connected to intellectual, emotional, and social evolution.
- Research found that learning music facilitates learning in other subjects and enhances skills that children necessarily use in other areas.

TYPES OF MUSIC

- **Art music:** Primarily includes classical traditions, including both contemporary and historical classical music forms. Art music exists in many parts of the world. It emphasizes formal styles that invite technical and detailed deconstruction and criticism, and demand focused attention from the listener. In Western practice, art music is considered primarily a written musical tradition, preserved in some form of music notation rather than being transmitted orally, by rote, or in recordings, as popular and traditional music usually are. Historically, most western art music has been written down using the standard forms of music notation that evolved in Europe, beginning well before the Renaissance and reaching its maturity in the Romantic period.
- **Reggae music:** Originating from the late 1960s Jamaica, is a genre of music that was originally used by Jamaicans to define themselves with their lifestyle and social aspects. The meaning behind reggae songs tends to be about love, faith or a higher power, and freedom. Reggae music is important to Jamaican culture as it has been used as inspiration for many third world liberation movements. Bob Marley, an artist primarily known for reggae music, was honored by Zimbabwe's 1980 Independence celebration due to his music giving inspirations to freedom fighters. The music genre of reggae is known to incorporate stylistic techniques from rhythm and blues, jazz, African, Caribbean, and other genres as well but what makes reggae unique are the vocals and lyrics. [citation needed] The vocals tend to be sung in Jamaican Patois, Jamaican English, and Iyaric dialects. The lyrics of reggae music usually tend to raise political awareness and on cultural perspectives.
- **Traditional and folk music:** These are very similar categories. Although the traditional music is a very broad category and can include several genres, it is widely accepted that traditional music encompasses folk music. According to the ICTM (International Council for Traditional Music), traditional music are songs and tunes that have been performed over a long period of time (usually several generations). The folk music genre is classified as the music that is orally passed from one generation to another. Usually, the artist is unknown, and there are several versions of the same song. The genre is transmitted by singing, listening and dancing to popular songs. This type of communication allows culture to transmit the styles (itches and cadences) as well as the context it was developed. Traditional folk music usually refers to songs composed in the twentieth century, which tend to be written as universal truths and big issues of the time they were composed. Artists including Bob Dylan; Peter, Paul and

Mary; James Taylor; and Leonard Cohen, transformed folk music to what it is known today. Newer composers such as Ed Sheeran (pop folk) and The Lumineers (American folk) are examples of contemporary folk music, which has been recorded and adapted to the new way of listening to music (online)—unlike the traditional way of orally transmitting music.

- **Pop music:** Pop is a genre of popular music that originated in its modern form during the mid-1950s in the United States and the United Kingdom. The terms popular music and pop music are often used interchangeably, although the former describes all music that is popular and includes many disparate styles.

CONCLUSION

The study concludes that the prospect of employing computer-aided teaching to motivate primary school pupils in their music education journey is an exciting and promising avenue. The intersection of technology and music education holds the potential to inspire, engage, and enrich the musical experiences of young learners. Nevertheless, the realization of these prospects is not without its fair share of challenges, which need to be addressed to ensure a balanced and effective integration. When done right, computer-aided teaching can enhance motivation, creativity, and musical development in primary school pupils.

RECOMMENDATIONS

- Professional programs should be developed for music educators to enhance their digital literacy and the effective use of technology in the classroom. This will empower teachers to leverage technology to motivate and engage students.
- Adaptive technology that tailors lessons to individual student needs and progress should be Implemented. This can enhance motivation by ensuring that pupils are appropriately challenged and supported.
- Promotes collaboration among students by incorporating technology that allows for group music-making activities. Encourage ensemble experiences and peer learning, which can motivate pupils through shared creativity.

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