



Role of Technology in Music Education

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Abstract

“Information and communication technology (ICT) applications” in various fields of human endeavour, including education, appear to represent a paradigm shift away from the normal traditional concepts of operations and toward more refined and transformational processes, which is being greeted with great enthusiasm. “The social, political, religious, economic, and technical transformations that have occurred over the last several decades have made education and training for everyone more important than ever. However, educational systems around the world, to varying degrees, are struggling to provide equal educational opportunities for all, to equip their human resources with the knowledge and skills necessary for capacity building in rapidly changing economies and sophisticated living environments, and to prepare citizens for lifelong learning.

Key Words: Technology, Music, Education, Digitization etc.

Introduction

India is well-known around the world for its extensive musical tradition. Music may be found in a variety of formats and genres. Classical music is the most well-known and appreciated of them. The music indicates an excellent quality and a well-established philosophy or style that has been produced over a long period of time using procedures that have been developed over a long period of time. Over the past century or more, it has benefited in part by the elevation and widespread diffusion of certain elite music across national borders. As a result of shifting socio-economic realities over time, the spread and uptake of Indian classical music in the western world for more than half a century, and the emergence of critical voices among contemporary Indian students, new conditions and contexts have emerged that challenge a system that is fundamentally based on a court patronage environment. Almost every aspect of life is being restructured in the age of international integration, open world trade, advanced communication technologies, an internationalised financial market, and increased mobility of persons, goods, capital, data, and ideas. In the age of international integration, open world trade,



advanced communication technologies, an internationalised financial market, and increased mobility of persons, goods, capital, data, and ideas So it is with the music. Thus, the fast technical advancements of the past one or two decades have given a new form to the art of musical composition in India. The following are examples of technical advancements that have had an impact on classical music:

- Technology advancements in the recording and archiving fields
- Classes in virtual music are available.
- Music is available for purchase on the internet.
- Music and musical instruments are becoming digitalized.
- Shopping for musical instruments and other items over the internet

Throughout the twentieth century, music instructors made use of technological advancements to improve the quality of their instruction. When live musical accompaniment was not feasible, tape recorders were employed instead. Synthesizers were introduced into musical groups in order to provide a fresh, modern sound. Great performances and music theory were shown and taught via the use of films.

Traditionally, music instruction in the schools was more concerned with performance than with theory. Technology is enabling music instructors to enhance their students' performance while also increasing their students' self awareness by include reflection in the performance circle. It also allows for a change of focus to include music composition. Students are consuming and generating more music than they have ever done before in their lives. More of these technologically competent children will be drawn into the music classroom if technology is embraced.

Technology in educational settings offers a plethora of options and uses for instructors and students, and it aids in the achievement of effective and long-lasting learning by aiding the teaching process. It also provides a variety of viewpoints on various events and circumstances. The fields of technology and education are distinct divisions of science with their own ideas and approaches, yet they are utilised in conjunction to enhance the quality of learning and teaching settings. This application demonstrates the existence of a new subject, namely education technology. Both the substance of information and technology innovations are quickly changing and expanding in today's world. These forms have a natural influence on learning and teaching approaches. The



advancement of technology has an impact on both the structure of the educational system and the activities of learning and teaching. The use of technology into educational activities is critical to the advancement of education in the United States. According to the Works, motivation is emphasised as a requirement of the information era, innovative teaching methodologies, and the importance of incorporating technology into educational settings. The acceptance of educational innovations by teachers has a significant impact on the dissemination and implementation of these innovations. As a result, information and communication technology (ICT) not only assists students in obtaining knowledge more quickly and easily throughout their educational process, but it also creates more engaging learning environments.

Music Technologies

There are a plethora of iPhone applications that have opened up new possibilities for extending music pedagogies into exciting new teaching and learning environments, such as the Pocket Guitar, the TabToolkit GuitarToolkit, the OmniTuner, the TuneMaster, Chordplay, Chordmaster, the iReal b, the Guitar Lab, and the GrooveMaker. Besides that, they are simple to use, and learning how to use them involves little more than watching app demonstrations on YouTube and experimenting with the graphical user interface (GUI)

Pocket Guitar is a virtual touchscreen guitar that allows users to strum across the touchpad and position fingers in chord forms that precisely correlate to the chord shapes of a real guitar, as well as the ukelele and electric bass guitar, among other instruments. In addition, it makes use of realistic noises and guitar effects.

Guitar Toolkit: There are many tools included in Guitar Toolkit: a digital tuner, scales for standard and open tunings, an extensive chord library with more than 550,000 chord voicings, and a metronome. With the interactive fingerboard, the user may view, play, and hear different scales at the same time. The user can also touch any note in a scale to hear the sound of that note individually. An adventurous guitarist may use its chord finder to identify the chord name of freshly produced experimental voicings of chords using the program's keyboard. In addition, it has a left-handed guitar option for left-handed guitarists.



Tab Toolkit : Music notation reader Tab Toolkit (for iPhone and iPad) offers a surprising amount of capability for such a little package. It also has multi-track audio playing capabilities. Listening to individual instrument tracks may be accomplished by turning off the mute controls, and touching the screen can be used to go to any point in a piece of music. It also shows finger positioning in real time while the song is being played, which is useful.

Omni Tuner : Among the powerful tuners available are Omni Tuner, which is designed for 17 various string, woodwind and brass instruments, and Tune Master, which is designed for tuning all string instruments on a PC.

Chordplay has a library of over 1600 chords as well as a large collection of guitar sounds. Each finger bubble has a specific chord shape representation that instructs the student not just where to position their fingers on the fingerboard, but also what each pitch's letter name is in each chord shape representation.

Chordmaster is a comprehensive collection of guitar chords that is suitable for both right- and left-handed musicians.

Guitar Lab is an iPhone application that broadcasts video guitar lessons with standard notation, tablature, and text straight to the user's device through the internet.

Groovemaker Users may build dance music grooves over eight tracks, each of which has total control over the volume, pan, speed, solo, mute, and mixing of the music they're creating.

Written/Recorded Music

According to Widdess, Indian music is dependent to a large extent on oral transmission, memorization, and improvisation; and although these processes may be aided by various systems of 'oral notation,' for drums, dance, and melody, these oral systems serve a mnemonic function, and are rarely written down. 3 The term 'notation' is seldom used to describe them, and they are hardly given substantial attention as such by Indian music scholars. Furthermore, he asserted that –In India, collective memory can transmit a complex tradition with astonishing accuracy over centuries while writing is perishable and leads to corruption, forgetfulness, or misuse. This contrasts with the western belief that memory is short-term, limited in capacity, and treacherously fallible whereas writing is comparatively long-term and reliable.



Digitization

The development of electronic media has been a boon for Indian music. In Indian classical music, technology is increasingly being used, from gramophones to 45-rpm records and radio to Compact Discs (CDs) to mobile applications, YouTube, iTunes, and electronic and robotic instruments. The use of technology in Indian classical music is increasing day by day, with more updated versions being added to keep up with the changing times. It is necessary to define digitization as the process of converting analogue information into digital information. Almost everything in the realm of entertainment has been entirely digitalized in our age. The whole musical industry, from listening to manufacturing to selling musical instruments, is entangled in the web of digitalization. When compared to previous methods of distribution and production, digitization has reduced the cost of recorded music distribution and production. The internet has become more important in the marketing and promotion of music. The ability to download individual songs has reduced the necessity for conventional music products, which comprise a full-length album as well as other components. Using social media, independent artists may reach a wider audience and get recognition. Because the electronic tabla and tabla mobile apps have mostly supplanted the manual tabla at least for practising purposes, they constitute a significant invention in Indian Classical Music. The tabla is a fundamental instrument for musicians.

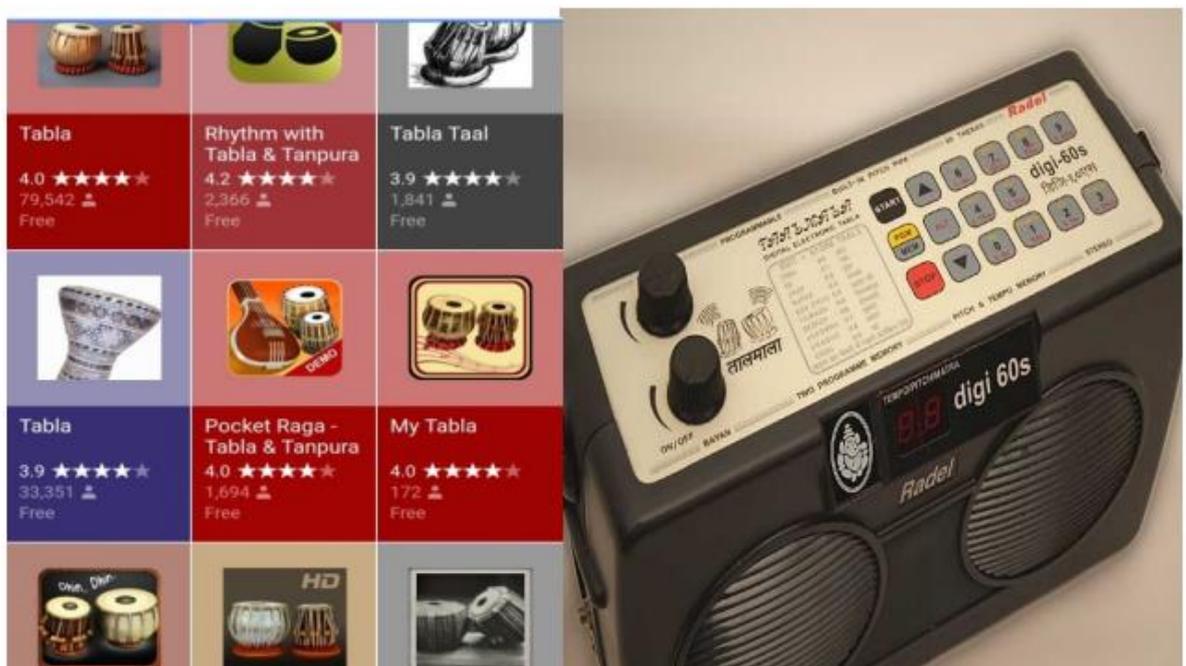




Fig. Electronic Tabla and Tabla aaps.

All of the elitist and exclusive characteristics of its pre-technological survival are progressively eliminated, and the public are granted access to what they had previously considered to be merely a cultic experience. Art, on the other hand, has its roots in local and unique conditions. Its democratisation has the potential to improve the cultural awareness of the general public while also improving the lives of artists and musicians. In addition, the method runs the danger of diminishing the indigenous roots from which all art derives its inspiration. As a result, there is both a loss and a gain. There is also the realisation that the gain is constructed on the back of a loss; on the other hand, the loss is the cost of adhering to a concept that is still seen socially valuable”. What is required is a healthy sense of proportion. Some steps may be shown to be feasible, such as:

- Westernizing music education in the conservatory system to its farthest extent will exacerbate the repercussions. However, notations are meant to be memorised and may be used as study materials if they are accompanied by appropriate supervision from the guru.
- Music universities should place equal focus on both practise and research in order to be successful.
- As part of their conventional education, young musicians should be well-versed in the use of contemporary technology. In order for the music to be heard by as many people as possible.
- In this era of time, competition needs erudite thinking, which in turn instils real scruple in the culture of the organisation.

Conclusion

Music, being one of the most inseparable components of civilization, is unable to separate itself from the shifting realities of time. Throughout its development, it has accepted undesirables while rejecting desirables at different points in time. The paradox may be resolved by keeping a healthy balance between the current fashion and the traditional way of life. Technology combined with traditional values may be a huge asset to the venerable institution of music, and it is already being used to great effect. Whether it's notation, current instruments, or musical genres, everything has evolved to meet the demands of the moment and will continue to evolve with more refined methods.



According to Rajeev S Patke, on the plus side, art is being more broadly distributed as a result of technological advancement.

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