

Effectiveness of Multimedia Package on Academic Achievement of Music Students of Senior Secondary School

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Abstract

This study aimed to find out the effectiveness of multimedia packages on the Academic Achievement of music students of senior secondary school. Seventy students of senior secondary schools were selected randomly having music as a subject. A pre-test-post-test design was used. One group was taught through using a multimedia package (experimental) and the other group through conventional method (control). 't'-test was employed for the analysis of data. It was found that the value of 't' (15.004) was significant at 0.01 level of confidence. The results showed that teaching using multimedia packages significantly enhanced the academic achievement in music as compared to the conventional method. Hence, teaching using a multimedia package was found to be more effective than the conventional method of music teaching.

Keywords: Conventional method, Multimedia Package, Academic Achievement, Music.

Introduction:

Music students are using multimedia technology to learn new skills and knowledge at their homes or anywhere they wish to learn. The use of the chalkboard method of teaching has become somewhat unattractive now; students are more inclined to use multimedia technology. Many countries have adopted the use of multimedia technology in the education sector (Hamidi, Ghorbandordinejad, Razae, & Jafari, 2011). However, educational institutions in India are yet to use multimedia technology for teaching in the classroom. The use of multimedia in the classroom has become necessary to meet the global standard of education, in general, and music education in particular to increase music students' academic achievement (Anshumati, 2016).

Multimedia:

People use smartphones, laptops, televisions, and other digital devices in which they see the combination of various types of media—e.g. text, sound, video, animation, picture, graphic, etc.- this combination of digitally manipulated media is called multimedia (Vaughan, 2011; Savage & Vogel, 2013).

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Multimedia has emerged as an essential tool that people use to do various activities on digital devices—for example—watching foreign-language movies with subtitles in native languages, having a virtual map experience, video conferencing, online shopping, teaching students with the help of PowerPoint presentation, interacting with people on social media, playing video games, etc. Multimedia technology has benefitted many sectors—for example—education, entertainment, advertisement, business, defense, agriculture, medical services, and many more. Due to various technological advancements, multimedia has become a powerful tool; virtual reality will make it more powerful in the future (Vaughan, 2011). Virtual reality is a new form of multimedia through which we can learn driving, surgery, and other important activities without any risk (Mandal, 2013).

Music Education:

Music Education is a process of teaching and learning Indian classical music to create great musicians, musicologists, music teachers, music therapists, music critiques, music producers, music listeners, and researchers. Music education has two parts: theory and practical. The theoretical part deals with grammar, history, philosophy, psychology, research methodology, teaching methodology, iconography, acoustics, aesthetics, and criticism of Indian classical music. The practical part deals with stage performance, performance ethics, voice cultivation techniques, playing techniques of instruments, sound engineering, and music production, etc. Music education plays important role in the overall development of students (Shastri, 2015).

Conventional Methods of the teaching of Music:

Guru-Shishya parampara has been the main method of music education since the ancient period (Shastri, 2015); the institutional method has been introduced to teach and learn music in schools, colleges, and universities in the modern period. Guru-Shishya parampara is an oral tradition where shishyas learn and practice the nuances of music in front of guru in gurukul or guru's house—training has no time restriction (Hindlekar, 2016). In the institutional method, the teacher gives lectures on theoretical and practical aspects of music—demonstrates ragas, talas, technical terms, and different styles of Indian classical music—organizes workshops in which professional artists and subject experts teach various topics—assigns projects to students in which they have to do a little research and submit the project report. At the end of the course, the teacher administers an academic achievement test to assess the performance of the students.

Academic Achievement:

Academic achievement is an intellectual performance outcome of the students in school, colleges, and universities—it shows the level of intellectual education of students, class, school, or a whole nation (Spinath, 2012). Grades, educational degrees, and standardized achievement tests are the main indicators of academic achievement (Spinath, 2012). Individual student characteristics, classroom characteristics, educational system characteristics, and socioeconomic status are the main factors that affect academic achievement (Spinath, 2012).

Importance of multimedia in the classroom:

Multimedia learning helps to make a better mental representation of the complex theoretical topics for students in the classroom (Mayer, 2002). Multimedia helps to elaborate, explain, and discuss the topic in the classroom in an interesting manner (Vyas, 2014). Students enjoy multimedia technology in music class to understand music issues and to improve music practices (Ho, 2009). The teacher can teach students various concepts of music through videos of the performances of the artists—through PowerPoint presentations to make theory understandable.

Literature Review:

Using Multimedia in classrooms is found to be helpful for music students and teachers (Ho, 2009; Wang, 2012; Cano and Ramon, 2015; Tong, 2016). Multimedia technology makes learning effective and interesting, students can learn various theoretical topics of music easily (Ho, 2009; Anshumati, 2016). Teaching with the help of multimedia technology promotes communication, initiative, and creativity (Ho, 2009; Vyas, 2014; Tong, 2016). Students enjoy multimedia technology in music class to understand music issues and to improve music practices (Ho, 2009). The quality of music teaching and comprehension of students improves through this technology (Anshumati, 2016; Tong, 2016). Self-confidence, self-esteem, and attitude towards learning improved with multimedia in the classroom (Anshumati, 2016). Students' enthusiasm for learning is increased by using multimedia technology (Wen, 2018). The use of Multimedia technology in music education increases academic achievement (Anshumati, 2016; Manisha, 2018).

Objective:

- To find the Effectiveness of multimedia package on Academic Achievement of music students of senior secondary school

Hypothesis:

- There is no significant difference in the academic achievement of music students of senior secondary school taught through using the multimedia package and through conventional methods.

Method:

- The experimental method was used in this study.

Sample:

For this study, researchers randomly selected a sample of 70 students studying in various senior secondary schools having music as a subject.

Tools:

- Multimedia package (developed by the researcher)
- Criterion reference test (developed by the researcher)

Variables:

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Independent variable- Multimedia package

Dependent Variable- Academic achievement

Methodology:

In this present study, 70 students studying music in senior secondary schools were randomly selected. Two groups were formed randomly: the experimental and control group. After taking pre-tests from both groups, one group was taught through using a multimedia package (experimental) and the other group through the conventional method (control). A post-test was conducted to find the academic achievement after the experiment.

Analysis of Data:

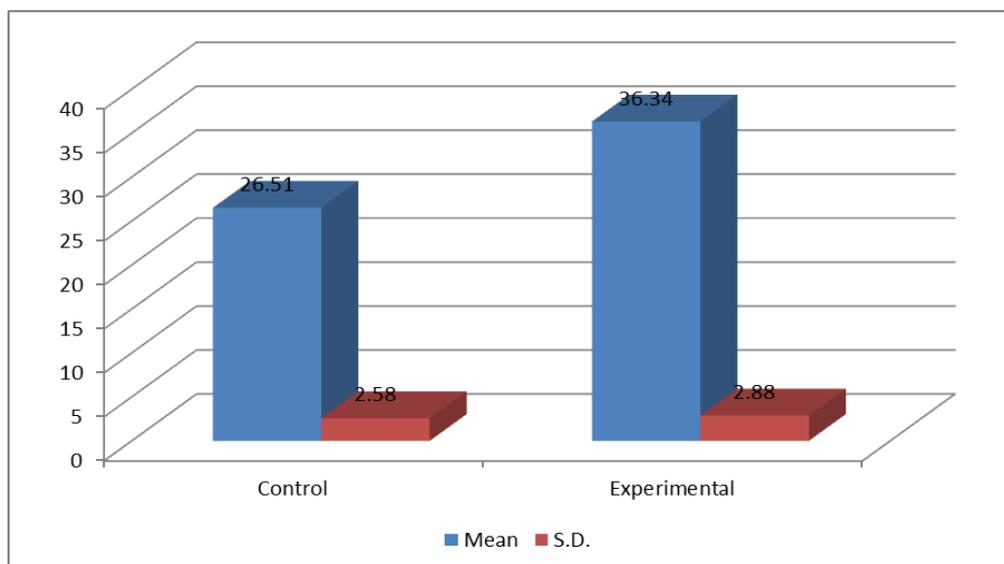
The pretest scores of both the groups on music were used to find out whether the two groups differed in their initial knowledge of music. 't-test' was employed for this purpose. A value of $t=1.632$ was obtained (for $df=68$) which was not significant even at 0.01 level of confidence. Hence, it was clear that both the groups were not differing significantly in their initial level of knowledge of music. The posttest scores were used for determining the effectiveness of the multimedia package on the Academic Achievement of music students of senior secondary schools. A comparison of mean scores of both the groups was done using 't-test'. Table 1 shows the value of means, standard deviations, and value of 't'.

Table 1: Table Showing Means, SDs, and value of 't'

Groups	Mean	S.D.	N	't'
Control	26.51	2.58	35	15.004*
Experimental	36.34	2.88	35	

$df=68$

* Significant at 0.01 level of confidence.



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It is clear from Table 1 that the value of $t = 15.004$ ($df = 68$) is significant at 0.01 level of confidence. This shows that both the groups differ significantly in their performance. The mean score of the experimental group ($M = 36.34$) is higher than the mean score ($M=26.51$) of the control group. Hence, it may be inferred that the group taught through the multimedia package performed better than the group, which was taught using the conventional method.

Hence, it may be concluded that the multimedia package is more effective in teaching music to students as compared to the traditional method of teaching. Hence, the hypothesis that ‘*There is no significant difference in the academic achievement of music students of senior secondary school taught through using the multimedia package and through conventional method*’, is rejected.

Conclusion:

Multimedia technology is very effective in learning the contents of music to the students. Multimedia packages on music prepared using several media like audio, video, text, images, animation, etc., are found to be more effective. The music students of senior secondary schools have shown high academic achievement when taught through multimedia as compared to the traditional teaching method.

Educational Implications:

For interesting and effective teaching, the teacher should use multimedia technology in the classroom. For this, the teachers should be oriented to use multimedia packages in the subject of music. Teachers should use multimedia technology for better communication and effective learning.

Reference:

- Anshumati. (2016). *Impact of the multimedia package in music on the achievements of senior secondary school students of music of Punjab*. (Doctoral thesis, Department of Music, Guru Nanak Dev University, Punjab, India). Retrieved From <https://shodhganga.inflibnet.ac.in/handle/10603/169231>
- Cano M.D., & Ramon S.L. (2015). On the use of a multimedia platform for music education with handicapped children. *Computers in education*, 87, 254–276. <https://doi.org/10.1016/j.compedu.2015.07.010>.
- Channabasappa, D.G. (2011). *Effectiveness of computer multimedia interactive strategy on achievement in the geography of secondary school students*. (Doctoral thesis, Department of Education, Karnataka, India). Retrieved from <https://shodhganga.inflibnet.ac.in/handle/10603/95900>
- Hamidi, F., Ghorbandordinejad F., Razaee M., & Jafari M. (2011). A comparison of the use of educational technology in developed/developing countries. *Procedia computer science*, 3, 374–377. <https://doi.org/10.1016/j.procs.2010.12.063>
- Hindlekar, A.S. (2016). *Comparative study of Hindustani vocal music education from gurukul learning to e-learning*. (Doctoral thesis, Department of Music, Rashtrasant Tukadoji Maharaj,

UGC-CARE enlisted & Indexed in EBSCO International Database of Journals

- Nagpur University, Maharashtra, India). Retrieved from <https://shodhganga.inflibnet.ac.in/handle/10603/251304>
- Ho, W.C. (2009). The role of multimedia technology Hong Kong higher education music program. *Visions of research in music education*, 13. Retrieved from <http://www-usr.rider.edu/~vrme/v13n1/Vision/Ho.finalfaedits.01.15.09.pdf>
- Mandal, S. (2013). Brief introduction of virtual reality and its challenges. *International journal of scientific and engineering research*, 4(4). 304–309 Retrieved from <https://www.ijser.org/researchpaper/Brief-Introduction-of-Virtual-Reality-its-Challenges.pdf>
- Manisha. (2018). *A comparative study on the effectiveness of programmed instructional package and multimedia instructional package for teaching biology to senior secondary school students*. (Doctoral thesis, Department of Education, Maharishi Dayanand University, Haryana, India). Retrieved from <https://shodhganga.inflibnet.ac.in/handle/10603/301851>
- Mayer, R. E. (2002). Multimedia learning. *Psychology of Learning and Motivation*, 41, 85–139. [https://doi.org/10.1016/S0079-7421\(02\)80005-6](https://doi.org/10.1016/S0079-7421(02)80005-6)
- Savage, T.M., & Vogel, K.E. (2013). An introduction to digital multimedia (second edition). MA, U.S.A.: Jones and Bartlett Learning, Retrieved from <https://www.oreilly.com/library/view/an-introduction-to/9781449688394/>
- Shastri, K. (2015). Music Education. New Delhi, India: Aryan Publication.
- Spinath, B. (2012). Academic Achievement. In Ramachandran V.S. (Eds.), *The encyclopedia of human behavior*, pp.1–8. <https://doi.org/10.1016/B978-0-12-375000-6.00001-X>
- Tong, J., (2016). Design and implementation of music teaching platform in college based on android mobile technology. *iJet*, 11(5), 4–9. Retrieved from <http://dx.doi.org/10.3991/ijet.v11i05.5686>
- Vaughan, T. (2011). Multimedia: Making it work (eighth edition). U.S.A.: McGraw Hill. Retrieved from <https://yslaiseblog.files.wordpress.com/2013/10/gfx-multimedia-making-it-work-8th-edition.pdf>
- Vyas, P. (2013). *A comparative study of conventional and multimedia supported techniques for imparting communication skills at the tertiary level*. (Doctoral thesis, Department of humanities and social sciences, Birla Institute of Technology and Science, Rajasthan, India). Retrieved from <https://shodhganga.inflibnet.ac.in/handle/10603/26182>
- Wang, X. (2012). Multimedia Systems in Music Teaching of Normal University. *Procedia environmental sciences*, 12(B), 1248–1252. <https://doi.org/10.1016/j.proenv.2012.01.416>
- Wen, T. (2018). Study on the usage of multimedia in music theory teaching. *Advances in Computer Science Research*, 83, 1234–1236. Retrieved from <file:///C:/Users/hp/AppData/Local/Temp/25895443-1.pdf>