



THE IMPACT OF MULTIMEDIA ON STUDENT ENGAGEMENT AND LEARNING OUTCOMES

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ANNOTATION

This article sheds light on the importance of modern technology, multimedia tools in enhancing the engagement of students and their performance during the class. It also emphasizes on the usage of multimedia tools including but not limited to audio-visual aids, that cater to the learning styles of students. The article also compares the performance of students who learn in a traditional way, relying solely on one learning style in a classroom deprived of any multimedia applications and those who are exposed to a mixed environment combining all types of styles whether it is visual, audio or kinesthetic in a digitally enhanced classroom. By introducing these multimedia aids, not only is it possible to keep students focused on the lesson, but it also allows them to experience other styles of learning irrespective of their preferences.

Keywords: Modern classroom, multimedia, learning styles, visual, audio, kinesthetic, traditional learning, student engagement.

The importance of multimedia tools in modern classrooms

Modern technology has become an integral part of education with multimedia tools being no longer just a desired tool but a necessity of the current classroom. Nowadays it is not uncommon to see the elements of multimedia tools at every corner of the educational environment to increase the effectiveness of the lesson, enhance student performance and engagement as well, particularly in this digital age full of distractions. Before diving deep into the role of multimedia in an educational context, it is reasonable to clarify what multimedia means and why it has gained recognition for the past few years, making traditional methods obsolete. First and foremost, not every learner is gifted with the ability to comprehend academic concepts, terms and explanations which rises an idea that some simply grasp complex notions better with the help of pictures rather than solely relying on book definitions. What is missing to make that learning process smoother is multimedia tools. As mentioned by Richard E. Mayer (2009), it 'refers to the presentation of material using both words and pictures, with the intention of promoting learning'. Multimedia offers diverse ways to present educational content, including text, audio, video, animations, and simulations, catering to various learning preferences and styles. (Muzamil Hussain ALHussaini, et al. 2024). In other words, it is not limited with words or pictures alone, it can include audio, visual, animated materials – each in an according context separately or combined - adapting to the desires, abilities and preferences of the learners. The concept of learning styles, in

this context, simply proposes that “different people learn information in different ways” (Pashler, McDaniel, Rohrer & Bjork 2008, p.106),

To be more precise, multimedia per se can be defined in a different way, for some, anything presented on screen coupled with sound coming from a speaker is multimedia while others see it as something moving, animated like a video. Even in a low-tech classroom where there is no such moving thing, a tiny part of multimedia can be observed in the form of a ‘chalk and talk’ in which an instructor presents the information by writing or drawing on the board. These are all basic examples of multimedia being used in one way or another in any learning environment, be it traditional or contemporary. (Richard E. Mayer. 2009)

Enhancing student engagement through multimedia

For a long time, conducting a lesson was nothing more than a lecture with printed books only, but as technology has advanced, so too has the availability of visual aids to present materials in a more engaging and appealing way. As for the role of multimedia in engaging students, initially, it is preferable to categorize learners’ desired learning styles and opt for technological devices accordingly based on their preferences. The most common learning styles proposed by Fleming (2001) are visual, aural, read/write or kinesthetic, most of whom (40%) apparently belonging to the multimodal category, meaning that they learn more effectively with the combination of each.

Although depending on their learning styles, learners feel comfortable acquiring knowledge in various atmosphere (for example, visual learners perform better with graphic designs, pictures, colors and those who belong to aural or auditory style learn best by listening to conversations), it is suggested that including multimedia elements to the materials can only serve to improve the quality, making the classroom more inclusive and engaging. As focusing on only one form of learning style can be a boring experience for some students in the same classroom, incorporating two or more results in a significant improvement in a learning process (Birch & Burnett 2009; St Hill 2000).

This combination, in turn, “allows students to experience learning in ways in which they are most comfortable, while challenging them to experience and learn in other ways as well” (Picciano 2009 p. 13). In essence, students will have the opportunity to try their hand at the way that aligns with their preference, which keeps them engaged during the lesson and also leads them to better performance. Meanwhile, multimedia challenges learners to discover other forms of learning. A bright epitome of this is when an aural student who primarily learns by listening might benefit from visual elements by engaging with graphs, videos or animations. By integrating multiple forms of media, educators can ensure that students feel more comfortable and confident to express themselves while also encouraging them to develop new skills and adapt to different learning approaches. This balance fosters better comprehension and prepares students for real life, where information can be presented in diverse formats in diverse situations. Fadel (2008) mentions that, “students engaged in learning that incorporates multimodal designs, on average, outperform students who learn using traditional approaches with single modes” (p. 13). This shows that even low-achieving students benefit from this incorporation as their attention is more directed to the classroom and the context of the lesson, leading to an improved performance. Afterall, the

engagement of the student in the lesson has a profound effect on their comprehension as it is based on their interest, ability not just the standard one-size-fits-all methods.

In conclusion, considering all the mentioned facts, it is possible to deduce that multimedia will continue being an indispensable aspect of life and education is no exception. The chances of using multimedia tools in the near future is undoubtedly high as in this information-driven world with new technological devices popping up in a window of time, it is essential to keep up with this fast pace to be in line with the contemporary world. Otherwise, there is no guarantee that so-called, conventional style of educating will not bore the already attention deficit students with very little attention span. That being said, this does not mean that multimedia tools are the only driving force in educational system, but it is the most important contributing factor. All in all, the primary goal here is not necessarily forcing students to immerse in this digitally enhanced atmosphere unwillingly, but rather allowing them to make most use of the available technologies, thus removing redundancies and completing the missing parts.

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