

The Application of Multimedia Teaching in Primary School Classroom

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Abstract. With the rapid development of science and technology, multimedia teaching has become one of the important trends in the field of education. This paper thoroughly explores multimedia teaching in primary school classrooms, focusing on its significance, advantages, and challenges. Multimedia teaching plays a pivotal role in enhancing the educational experience for young learners. Through an in-depth analysis of literature and case studies, this research highlights its profound impact. Multimedia resources, including interactive digital content, videos, and animations, can engage students, enhance comprehension, and create interactive learning environments, fostering intellectual development. However, implementing multimedia teaching is not without obstacles. This study exposes difficulties with using multimedia effectively and how to mix it with traditional teaching methods. To offer practical insights, the study showcases effective approaches and solutions in multimedia education by examining examples of useful methods. Teachers' perspectives on how to select multimedia, convey information reasonably, and develop multimedia literacy are presented. In conclusion, this paper sets the foundation for the use of multimedia in primary school instruction in the future. It offers practical suggestions for teachers and researchers to improve and broaden the use of multimedia tools, thereby boosting the educational experiences of young pupils. This paper examines contemporary problems and makes suggestions for guiding primary education toward a technologically advanced and sound teaching environment.

Keywords: Multimedia Teaching; learning experience; teaching integration; primary education.

1. Introduction

Multimedia technology has become widely used in the teaching profession as a result of the advancement of contemporary information technology and the growing focus on education. Primary school teaching benefits greatly from the use of multimedia technology because it enriches lesson plans and increases student interest in learning. However, there are some issues that arise as a result of this application of technology in primary school instruction. Therefore, it is worth considering how to fully utilize the benefits of multimedia teaching and adopt effective solutions to potential problems, in order to seamlessly integrate them into traditional teaching methods. This paper will focus on the application of multimedia in primary school classrooms, analyze the advantages and disadvantages of multimedia teaching, and propose corresponding solutions based on the existing problems.

2. Shortcomings of the Traditional Teaching Model and Importance of Multimedia Teaching

2.1. Shortcomings of the Traditional Teaching Model

Traditional teaching generally refers to the teaching of a textbook in the form of narration by a teacher who relies on his or her existing experience. Traditional teaching is usually carried out in the classroom, mainly by the teacher to dominate and control the whole teaching situation, by virtue of the blackboard and oral narrative so that students passively absorb new knowledge. Traditional teaching activities tend to focus on the teacher's explanations, lack of student participation, and fewer opportunities for teacher-student interactions, which makes it impossible to immediately assess and diagnose the results of students' learning in the teaching activities. Students usually have to wait for



exams or assignments to get feedback, and timely feedback is lacking. Most of the time, the teacher acts as the narrator, and the students are in a passive state. Such a teaching mode relies too much on the authority of the teacher, which is likely to make the students lose the motivation to learn actively. The traditional teaching mode mainly relies on the teacher's speech and writing, and it is difficult to make students understand the abstract theoretical knowledge [1].

2.2. Importance of Multimedia Teaching

Against the background of social informatization, multimedia technology is constantly developing, and multimedia-assisted teaching methods are also playing an important role in the development of the information society. Multimedia teaching originated from audio-visual teaching and later developed into computer-assisted teaching and computer teaching. With the development of science and technology, multimedia technology and multimedia-assisted teaching with computers as the core emerged. According to S. Honcharenko, multimedia teaching aids are a set of hardware and software that allow the user to communicate with a computer, using a variety of natural environments: graphics, hypertext, sound, animation, and video [2]. In the traditional way of teaching and learning, the content in textbooks and tutorials is developed logically. In traditional teaching methods, the content in textbooks and tutorials is developed in a logical and linear sequence. Students are passively dependent on the teacher and lack the flexibility to learn on their own. In contrast, the organization of multimedia teaching is more in line with the laws of human cognition. It can make up for the shortcomings of traditional teaching [3]. The constructivist and cognitive learning theories are the two main pillars on which the multimedia classroom teaching paradigm is founded. According to the cognitive learning notion, learning should be an internalization process in which fresh information is digested and combined with the preexisting cognitive framework to create a new cognitive framework. Contrary to the traditional teaching approach, when students passively acquire knowledge, the cognitive learning idea emphasizes students' subjective agency. Students are frequently exposed to new information and have their curiosity piqued by the classroom teaching style based on network multimedia. Independently, students are able to digest and internalize the new information they wish to acquire. Constructivists think that learning needs to happen in a certain setting. According to constructivist learning theory, students actively create their own knowledge and understanding via their interactions and experiences. The use of network multimedia can compensate for the inability of traditional teaching methods to create context; teachers can use the abundance of online video and audio content as well as computer technology to help students create authentic situations and place them in those situations [4]. Multimedia and traditional teaching methods complement each other, both to reflect the characteristics of the digital age, but also to better meet the needs of teaching.

3. Advantages of Multimedia Teaching

3.1. Multimedia Teaching Helps to Increase Students' Motivation to Learn

Primary school students are young; mental and other aspects have not yet matured; their performance in the classroom is generally active, and curious; attention is difficult to concentrate [5]. If the teacher only uses the traditional teaching approach of imparting a lot of theoretical knowledge to the students in response to this personality trait, it will not only make the students feel dull and lifeless but will also put some pressure on them to learn. However, cutting-edge multimedia teaching strategies can effectively match the academic requirements and personality traits of elementary school pupils. Through visual, audio, and interactive components, multimedia instruction is vivid and appealing, enhancing the classroom experience. This draw may pique students' interests and inspire them to engage more fully in the sessions.

Through the presentation of information in text, graphics, images, audio, and video, multimedia offers a complex multi-sensory exploration of our world, and there is evidence to suggest that combining words and pictures makes it more likely that people will be able to process a lot of information [6]. The best way to help students learn is to demonstrate the worth and significance of the lessons being

taught in the classroom [7]. The multi-sensory stimulation brought about by the use of multimedia helps to attract students' attention and enhance their motivation.

3.2. Multimedia Teaching Helps to Enhance Interactivity

Multimedia teaching human-computer dialogue function, a non-linear way of organising teaching, is conducive to the development of diversified and flexible teaching activities, to provide conditions for classroom interaction [8]. Reasonable use of the functions of multimedia equipment can increase the interaction between teachers and students and enhance the teaching effect. Multimedia teaching platforms can integrate online discussion boards, collaboration tools and social media, enabling students to interact with peers and teachers in real-time, share ideas and answer questions. Multimedia teaching can also provide interactive quizzes and exercises that allow students to test their understanding and receive instant feedback as they learn. Students can make adjustments based on the instant feedback without having to wait until the end of the exam. This also encourages students to actively participate in learning as they can see their progress. Technologies such as Virtual Reality (VR), for example, can also be embedded into multimedia teaching to create an immersive learning experience. Students can interact with the learning content through virtual reality headsets, for example, to experience real historical scenarios in a history class.

3.3. Multimedia Teaching Helps to Enrich Students' Imagination and Enhance Their Creativity

In the traditional primary classroom teaching in the past, most of the teachers due to the long-term influence of the concept of exam-oriented education, teaching is often to improve students' test scores, every day to instil a large number of theoretical knowledge to students, requiring them to master and memorize. Although this mode of teaching can improve students' test scores, it will lead to students' learning thinking being limited to textbook knowledge, and imagination is relatively scarce. It will also lead to some students in the classroom only according to the teacher's learning, not independently exploring the teaching materials and life in the existence of a large number of knowledge, so as to innovate and enrich their own knowledge system. Along with the rapid development of information technology, the new and advanced multimedia teaching mode not only changes the teacher's educational philosophy, but also allows teachers to focus on the cultivation of students' imagination and creativity, the classroom back to the students, as a guide to guide the students to learn correctly as a guide to guide the students to independently explore and excavate the theoretical knowledge of life and teaching materials, and thus promote the comprehensive development of the students [9]. It has been proved that teachers form a teaching atmosphere that primary school students are happy to accept through guided imagination, language rendering and multimedia images, etc., and stimulate the creativity of primary school students in the interaction. Learning in such an atmosphere, the students' learning effect is very obvious. According to this way of teaching, multimedia courseware with cheerful music, a good learning environment and a pleasant state of mind can effectively improve the thinking level of primary school students [10]. Multimedia teaching usually allows students to learn according to their own interests and learning speed, which encourages their independent thinking and creative learning. Students can select learning materials according to their interests, think about unique issues, and come up with new ideas and thoughts.

4. Application Issues of Multimedia Teaching

4.1. Teachers Overly Rely on Multimedia Technology

Multimedia instruction, as a fundamental teaching strategy, has greatly benefited both teachers and students in the classroom. On the other hand, relying too much on multimedia might be harmful. First of all, multimedia instruction is merely a supplemental technique for teaching that can aid students in comprehending the material found in textbooks. For instance, using animation, music, and other media to impart textbook knowledge to pupils can improve their retention and comprehension. It is

not helpful for a thorough examination of the textbook, though, if this approach is the sole one used for the majority of class time. Furthermore, an excessive dependence on multimedia within the classroom may cause students to divert their whole concentration from the teacher's explanations to their electronic screens. Students will lose out on a lot of information as a result, and it will be challenging for them to understand the classroom as a whole once class is over. This is especially noticeable in classes at primary schools. In addition, it is simple to stray from the textbook and learning objectives when multimedia is utilized carelessly to direct instruction in daily instruction. These days, a lot of teachers utilize multimedia course materials that are directly downloaded from resource libraries rather than being independently produced, which means that the thought process is missing.

4.2. Multimedia Teaching Is Not Well Integrated with Traditional Teaching Methods

A large amount of animations and videos have been added to multimedia teaching, but the speed at which students write notes is far lower than the speed at which multimedia is used for projection. This results in most students no longer taking notes, which is very unfavorable for students to consolidate and review the knowledge explained in the classroom during their after-school time. Compared with previous teaching methods, this approach effectively prevents the boredom of teachers writing on the blackboard, which consumes a lot of time and energy. However, due to the rapid speed of teachers using multimedia to showcase knowledge in the classroom, students lack sufficient time for thinking [11]. The primary school classroom is the principal setting for instructors and children to collaborate on learning, and emotional communication between teachers and students is a critical component of classroom activities. When teaching with a chalkboard as the primary teaching tool, teachers frequently engage in emotional communication with their pupils while conveying theoretical concepts through language, conduct, and other means. The use of blackboard writing gives pupils enough room for thought, investigation, learning, and association while masking the teacher's emotional expression. However, when employing new technology like gadgets, screens, and projectors to educate, students' eyes and attention will not always be on the teacher, which will significantly lessen the teaching effect.

5. Application Strategies for Multimedia Teaching

5.1. Reasonably Display Information

The primary purpose of multimedia teaching, which primarily consists of animation, text, and videos, is to display information. Its main goal is to help students grasp the knowledge overview quickly, enhance their understanding of it, and then add the teacher's explanation to help them fully master the knowledge points [11]. It is important to make sure that the shown content is appropriately processed rather than just listed during the information presentation process. Additionally, different display formats should be used, and text should not take up the entire screen. This may raise the workload for pupils and make it harder to get the intended result. The balance of comprehensiveness and focus should be considered when providing an explanation. Colors, symbols, and other visual cues should be used to distinguish between minor and significant knowledge points, and students should be given clear instructions. Second, while it is important to speak out and provide students with thorough explanations of the major concepts, students can be urged to do their own independent study for the secondary concepts [12].

5.2. Selective Application of Multimedia

The wise and judicious use of multimedia teaching aids in primary school classrooms is essential and should not be pursued heedlessly. To increase teaching effectiveness and aid students in gaining a deeper understanding of concepts, teachers must carefully assess the learning needs of their students as well as the teaching material before selecting to use multimedia teaching aids. To prevent interfering with learning, multimedia instruction should be utilized sparingly since an over-

dependence on it may have negative impacts. Additionally, based on their own teaching experiences, teachers should anticipate the different situations that students might run into. They should then skillfully use multimedia teaching aids at the right times to pique students' interest, keep them in an active learning mode, or assist them in regaining focus. In other words, for bettering teaching efficacy and averting problematic situations, selective deployment of multimedia teaching aids is essential.

5.3. Strengthen One's Own Information Technology Application Ability

Teachers should learn more about how to use multimedia in the classroom, continually hone their all-around skills, and build their proficiency with using multimedia technology. Only in this way can one completely employ their teaching mechanism in the classroom, react flexibly to the actual circumstances of their pupils, and make primary school classroom teaching "live" in order to maximize learning outcomes for the students.

6. Conclusion

In conclusion, the use of multimedia instruction in elementary school settings has a huge influence. This approach is crucial and offers numerous benefits to satisfy the changing needs of students in the digital age. By allowing teachers to vividly present difficult topics, making learning more engaging and fun for young students, and encouraging their creativity, multimedia teaching can be a useful addition to standard teaching techniques. However, it is important to recognize the difficulties in integrating multimedia instruction. These difficulties include a possible over-reliance on technology, worries about the caliber of the content, and information overload. However, many associated issues can be resolved through focused information screening and reasonable content presentation.

Future prospects for multimedia education in primary schools are bright. Multimedia teaching has the potential to become more immersive, individualized, and effective with the ongoing development of technology. Teachers may make sure that technology strengthens rather than replaces the relationship between teachers and students by striking a balance between conventional and digital methods. Schools and teachers must invest in professional development and resources to make sure that all students make use of this cutting-edge method in order to fully realize the promise of multimedia teaching. In order to produce top-notch multimedia content that supports educational objectives, collaboration is also required.

In short, the application of multimedia teaching in primary school classrooms has had a profound impact on education. It is necessary to solve the issues in order to move forward while taking advantage of the chances they present. Multimedia teaching will continue to define the future of primary education via careful planning and ongoing improvement, giving children the skills and knowledge they need to flourish in an increasingly digital society.

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