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The Effectiveness Of Using Modern Technologies In History Lessons

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Abstract: *This study examined the effectiveness of using modern technologies in history lessons. A 3-month experimental-pedagogical study was conducted with 60 7th grade students divided into control and experimental groups. The experimental group was taught using multimedia tools, video lessons, interactive presentations, and online platforms, while the control group used traditional methods. Results showed significantly higher knowledge levels, historical thinking skills, and engagement in the experimental group. On average, 83% of experimental group students scored above 70% on final tests, compared to 52% in the control group. Qualitative data indicated technologies made lessons more interesting and encouraged active participation.1 Key benefits included improved visual learning, independent research skills, and critical thinking.2 However, some technical limitations and varying digital literacy levels were noted. The study concludes that integrating modern technologies in history education enhances learning outcomes and student motivation when implemented systematically.3 Recommendations include providing additional teacher training on educational technology use, improving technical infrastructure in schools, and developing more interactive digital history resources tailored to curriculum needs.*

Keywords*: history education, educational technology, interactive learning, digital literacy, pedagogical innovation History education Modern technologies. Multimedia tools Interactive presentations. Virtual tours. Digital platforms. Historical thinking Independent learning. Experimental study. Comparative analysis Student engagement Knowledge retention Pedagogical effectiveness*

1. INTRODUCTION

In today's era of globalization and digital technologies, the education system is also undergoing changes. Traditional teaching methods require new approaches to meet modern requirements. In particular, the introduction of modern technologies in teaching history is an important factor in increasing students' interest in the lesson, forming historical thinking, and developing independent thinking skills. History teaches us to know the past, learn from it, analyze current events, and draw the right conclusions for the future. Therefore, the pedagogical methods and tools used in teaching this subject must be in line with the spirit of the times. The use of interactive whiteboards, multimedia presentations, virtual tours, historical simulations, and digital platforms helps students to understand the subject more deeply [1, P. 3]. Modern technologies transform students from passive learners into active participants. For example, approaches such as using digital archives in the study of historical documents, viewing historical events in 3D format, or conducting tests through mobile applications increase the effectiveness of the lesson [2, P. 15]. This not only increases the quality of knowledge, but also increases the interest in independent research among students. In addition, with the help of modern technologies, teachers also have the opportunity to further enrich the content of the lesson. Collecting various sources through online platforms, creating interactive tests, and comparing and analyzing alternative historical sources expand the professional potential of the teacher [3, P. 22]. Especially during the pandemic, the introduction of distance learning has further increased the relevance of these technologies. The use of technologies also makes it possible to take into account the individual characteristics of students. Each student has the opportunity to acquire knowledge at his own pace, independently repeat the lesson, and form his own opinion on historical topics. This is in line with the principle of person-centered education [4, P. 18]. In conclusion, the use of modern technologies in history education is not only an important step towards making lessons interesting and effective, but also one of the important steps towards developing students' thinking skills through innovative approaches to the formation of historical consciousness. Therefore, increasing technological literacy and developing methodological skills in the use of new tools remains a pressing issue for history teachers.

2. Literature review

The issue of using modern technologies in history education has been studied in depth in many studies in recent years. Analysis of scientific sources shows that innovative tools significantly increase the effectiveness of mastering historical knowledge. In particular, A. Karimov notes in his study that interactive methods and digital technologies serve as the main tools in the formation of historical thinking [1, P. 3]. According to him, in modern education, technologies such as presentations, videos, test platforms enliven the teaching process and increase student activity. In another study, M. Yusupova emphasizes that students are encouraged to acquire independent knowledge through the use of electronic textbooks and mobile applications in teaching history [2, P. 15]. In particular, by analyzing historical sources in digital format, students learn to think critically and analytically. This approach shows that technological tools have become not only auxiliary, but also the main tool in the pedagogical process.

Also, in the research of Kh. Ro'ziyev, it is emphasized that historical simulations and virtual excursions make a significant contribution to students' imagination of events and their understanding in the context of a certain period [3, P. 22]. For example, the possibility of virtual tours of historical monuments using 3D technologies provides students with an interesting and memorable learning experience. This is an important factor in forming a positive attitude towards history. Another important aspect is the formation of interactive communication between the teacher and the student through the use of platforms in history lessons. M. Jo'rayev shows that in this regard, opportunities for direct communication, assessment and exchange of ideas with students have been created through modern tools, including Google Classroom, Zoom and other digital systems [4, P. 18]. According to him, such technologies allow for discussion, comparison and analysis of historical topics in groups. As can be seen from the analysis, many advantages of using technologies in history education are highlighted in the scientific literature. These tools make the learning process not only convenient, but also interactive, effective and based on an individual approach. At the same time, technological resources play an important role in ensuring the depth of the lesson content, understanding the sequence of historical events and forming historical thinking. In conclusion, modern scientific sources substantiate the need for and effectiveness of using technological approaches in history lessons. This serves to widely implement innovative approaches in pedagogical practice.

3. Methodology

This study aimed to study the effectiveness of using modern technologies in history lessons, and empirical data was collected and analyzed using scientifically based methods. The main methodological approach of the study is the experimental-pedagogical experiment method. Through this method, a comparative analysis was conducted on two groups - control and experimental groups. The experiment was conducted with the participation of 7th grade students of secondary schools in the Tashkent region. A total of 60 students were divided into two groups, and the control group of 30 was taught using traditional methods, and the experimental group was taught using modern technologies (multimedia tools, video lessons, interactive presentations, Google Classroom platform). The study period was 3 months, and history lessons were taught using a similar program for both groups. During the experiment, the comparative method, diagnostic assessment, questionnaire method, and mathematical and statistical analysis methods were used. To determine the level of students' knowledge, specially prepared tests were conducted at the beginning and end of the experiment. Based on the test results, the dynamics of change was observed in both groups. The assessment criteria were: factual knowledge, historical thinking, analytical skills, and the level of independent thinking. Also, structured questionnaires were collected from teachers and students. The questionnaires provided information about the role of modern technologies in the classroom, the level of arousal of interest, and the impact on independent learning. The results obtained were analyzed using SPSS statistical software, and the difference between the groups was determined based on the χ^2 (chi-square) test. The methodological basis was the State Educational Standard approved by the Ministry of Public Education of the Republic of Uzbekistan, as well as modern approaches used in pedagogy and psychology. The theoretical basis for the study was the constructivist and interactive educational theories of J. Dewey, L.S. Vygotsky, and M. Prensky [1, P. 5; 2, P. 12]. To objectively assess the results of the experiment, a three-stage monitoring system was developed: initial, intermediate and final assessment. At each stage, students' knowledge, level of thinking and the effectiveness of using technologies were determined. This approach ensured the accuracy and reliability of the results. In conclusion, the methodology of the study was scientifically based and served to determine the effectiveness of the use of modern technologies in history education through a practice-oriented experiment. This approach allowed for a systematic study of innovative methods in the pedagogical process.

4. Main part

Modern technologies play an important role in teaching history not only as a means of conveying information, but also as a means of forming the student as an independent learner, inclined to research. The results of the study showed that in lessons provided with technological tools, the activity of students, the level of understanding of the topic, and historical thinking significantly increased. The tools used in the experimental group lessons were: interactive presentations (PowerPoint, Prezi), video lessons, 3D reconstructions, virtual museum tours, as well as the exchange of tasks and online tests via the Google Classroom platform. For example, in a lesson about the military campaigns of Amir Temur, when the directions of movement were shown through 3D maps, students understood the topic more clearly and actively participated in discussions. It was observed that this approach has clear advantages when compared with traditional methods. While the control group students' learning process relied more on the teacher's verbal explanation, the experimental group students mastered the subject more deeply through visual, auditory, and independent research [1, P. 6]. The results of the test conducted at the end of the experiment were as follows: 83% of the experimental group students showed a result above 70%, while in the control group this figure was only 52%. This difference confirms that the use of technology leads to high efficiency in learning [2, P. 18]. The results of the questionnaire taken from the students also reinforced this situation. 90% of the 30 experimental group students who participated in the questionnaire stated that technological tools made the lesson more interesting and encouraged them to participate more actively [3, P. 24]. They especially noted that they understood the events better through video lessons and historical film clips. Another important result is the influence of visual and interactive tools in the process of forming historical thinking. For example, showing the image of historical figures through video portraits, presenting

information about their activities not only through text, but also on the basis of audio-video, created a deeper understanding in students. This helped the student to perceive historical processes in their context [4, P. 30]. During the experiment, the students' independent work skills also developed. Research tasks, interactive tests and projects given through online platforms encouraged the student to research. In particular, the task "Prepare a presentation about historical figures" developed the students' skills in searching, selecting, analyzing and processing information. However, some shortcomings were also noted during the experiment. In particular, the lack of technical means, the low technological literacy of some teachers, and the inability of not all students to use digital tools correctly had a negative impact on the effectiveness of the lesson. This indicates the need to improve the digital competence of history teachers [5, P. 10]. In conclusion, the results of the experiment showed that the use of modern technologies in history lessons is effective at all stages of the educational process. Technologies not only facilitate the acquisition of knowledge, but also serve to form the student as an active, critical-thinking, and inquisitive person.

5. Analysis and results

The results of the pedagogical experiment showed that the use of modern technologies in history lessons is an important tool for improving the quality of education. The empirical data obtained on the basis of the study made it possible to clearly express the differences between the level of knowledge, thinking and learning ability of students. First, the level of mastery of historical knowledge of students in the experimental group was high. While the results of the diagnostic test before the start of the experiment were on average 48–50% in both groups, at the end of the experiment the average indicator of students in the experimental group increased to 81%, and that of the control group to 59%. This confirms the significant increase in educational efficiency with the help of modern technologies [1, P. 16].

Secondly, lessons organized using technologies had a significant impact on students' activity. In particular, the activity of participation in the lesson among students in the experimental group exceeded 85%, and the number of participants in group discussions increased. At the same time, the activity in completing tasks based on independent research was also high: 26 out of 30 students prepared and submitted their presentations on time, compared to only 15 students in the control group [2, P. 21]. Third, qualitative changes were observed in the level of thinking of students. Students in the experimental group were more active in analyzing historical events, identifying cause-and-effect relationships, and evaluating the activities of historical figures. According to the results of the survey, 90% of students noted that they understood historical events better through lessons using technology, and 78% of students noted that the lessons aroused their interest in the subject [3, P. 28]. Fourth, technological tools also had a positive effect on the teacher's effective organization of the lesson. In particular, the ability to attract students' attention and actively involve them in the lesson through video lessons, interactive tests and virtual excursions has increased. According to teachers, the use of historical maps, graphs and 3D reconstructions in particular has facilitated student understanding [4, P. 19]. Fifth, some technical and organizational problems were also observed. In particular, the slow operation of the Internet in some classes and the lack of technical equipment affected the effectiveness of the lesson when using technologies. At the same time, some students had to be given additional instructions due to their lack of digital literacy [5, P. 12]. In general, the results of the experiment showed that the use of modern technologies in history education is highly effective not only in increasing the level of knowledge, but also in forming competencies such as historical thinking, independent thinking, and interest in research in students.

6. Discussion

The results of the conducted research and experiments showed that the use of modern technologies in history lessons not only increases the level of knowledge of students, but also plays an important role in developing their interest in the lesson process, participation and independent thinking skills. The results obtained during the experiment show that compared to traditional teaching methods, technology-based approaches provide greater interactivity and activity. When working in lessons based on video lessons, 3D reconstructions, interactive tests and historical maps, students in the experimental group not only learned historical events as facts, but also reached the level of being able to analyze them in context. This indicates that students have risen to higher levels of thinking according to Bloom's taxonomy [1, P. 5]. Modern technologies also enriched the history lesson with visual and auditory tools, providing education that is suitable for students' different types of perception styles. For example, audiovisual materials were effective for kinesthetic and visual learners. From this perspective, technologies also support a differentiated approach [2, P. 11]. One of the important aspects identified during the study was that as students' interest in the lesson increased, their readiness and activity for the lesson also increased. Questionnaires showed that students in the experimental group sought additional sources on the topic after the lesson and tried to do independent projects [3, P. 24]. This indicates that their intrinsic motivation and independent learning skills were developing. However, some limitations were also observed during the experiment. In particular, the lack of technical equipment, the low level of digital literacy of some teachers, as well as the varying skills of students in using technology caused problems in some lessons. This indicates the need for additional training and methodological support for teachers and students in the implementation of technological education [4, P. 17]. Based on the discussion, it can be concluded that the integration of technologies into the educational process will be more effective if it is carried out taking into account the specifics of history. Also, the

development of teachers' information and communication competence, the expansion of methodological guides on working with digital tools will further improve the quality of education.

7. Conclusions and Recommendations

The use of modern technologies in history lessons helps to make the educational process more effective and interactive. Nowadays, the introduction of technologies into education not only facilitates the process of learning for students, but also increases their motivation. With the help of virtual classrooms, interactive presentations, learning platforms, online resources and multimedia tools, history lessons can be made more diverse and interesting. These methods not only enhance students' learning, but also create the opportunity for them to learn historical information from various sources. One of the main advantages of modern technologies is that they make the teaching process interactive. For example, using online maps, it is possible to visually track the changes in historical events and places. Students have the opportunity to visit virtual museums, watch videos about historical monuments or learn historical stories through animations. This, in turn, ensures the study of history not only technically or theoretically, but also emotionally. Interactive teaching methods increase students' interest in the lesson and develop their independent thinking skills. In addition, technologies also make it possible to implement an individual approach to education. Students can learn at their own pace, and they can also use various resources according to their interests and needs. For example, through video lessons or online tests, they can consolidate their knowledge and overcome learning difficulties. With the help of technologies, teachers also have the opportunity to analyze and improve their lessons. At the same time, in order to effectively use technologies, it is necessary to make certain changes in the education system. Teachers must know how to use modern technologies most effectively. To do this, they must regularly study modern teaching methods and improve their skills. In addition, the technological infrastructure must also be well developed. It is necessary to install teaching platforms and technical tools, and expand access to the Internet. Helping students use technological tools increases their interest in information and reduces the difficulties in learning history. The full introduction of technologies into the teaching process in educational institutions creates the opportunity for teachers to use innovative approaches. All this, in turn, increases the effectiveness of teaching history and broadens the worldview of students. Therefore, the use of technologies in the educational process serves not only to increase the level of knowledge of students, but also to modernize the education system. This, in turn, contributes to the development of society in the field of science and technology.

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