VOLUME 04 ISSUE 01 Pages: 30-36

SJIF IMPACT FACTOR (2021: 5. 376) (2022: 5. 561) (2023: 6. 895)

OCLC - 1276789625











Publisher: Frontline Journals



Website: Journal https://frontlinejournal s.org/journals/index.ph p/fsshj

Copyright: Original content from this work may be used under the terms of the creative commons attributes 4.0 licence.



CURRENT APPLICATIONS FOR TEACHING MATHEMATICS AT A SECONDARY SPECIALIZED EDUCATIONAL INSTITUTION

Submission Date: January 20, 2024, Accepted Date: January 25, 2024,

Published Date: January 30, 2024

Crossref doi: https://doi.org/10.37547/social-fsshj-04-01-05

Holboy Ibrahimovich Ibraimov

Director Of The Uzbek Scientific Research Institute Of Pedagogical Sciences Named After Kara-Niyazi, Doctor Of Pedagogical Sciences, Academician, Uzbekistan

ABSTRACT

Today, the development of digital technologies has received a massive scale, and we are faced with this in all aspects of our lives. More than 4 billion people around the globe have access to the world Wide Web and according to estimates, almost every inhabitant of our planet has some kind of mobile device and half of them are smartphones. This development has influenced the way people interact with other people, learn the news and see the world around them. This is especially true of the learning process, which today has transformed from traditional to digital.

KEYWORDS

Electronic whiteboard, interactive panel, interactive display, applications, program, digitalization, mathematical literacy.

INTRODUCTION

VOLUME 04 ISSUE 01 Pages: 30-36

SJIF IMPACT FACTOR (2021: 5. 376) (2022: 5. 561) (2023: 6. 895)

OCLC - 1276789625











Publisher: Frontline Journals

The purpose of this article is to identify the most promising applications relevant and technologies in the process of teaching mathematics in secondary special educational institutions.

Electronic whiteboards are one such example of the actual digitalization of learning. Today, almost every general educational and higher educational institution in our republic has at least several panels interactive (interactive displays/electronic boards). With this device, the teacher can interact with students much faster and more visually than with a traditional blackboard. And having access to the Internet opens up limitless opportunities for learning. Next, we will talk about using one of the most useful electronic whiteboard devices and applications for this device.

The use of an electronic whiteboard is especially important in the process of learning mathematics. Because mathematics is usually presented in a boring and dry way. This device also allows students to build graphs of functions themselves by changing variables, look at various solutions of equations, build three-dimensional geometric shapes, as well as sections in them, etc. That is, in a classroom (group) where there is an electronic

blackboard, students actively participate in the educational process. It also makes the learning process more enjoyable. Students (students) will be happy to come to classes, solve problems, receive game rewards and play in this fun learning support system. During such a game, they will develop their mathematical literacy.

The language of mathematics is universal, which means we can use the world experience of the best mathematical applications. Improve lesson content with the best math learning software that perfectly matches your electronic whiteboard and students' personal devices, thanks to the open Android platform. You will immediately notice changes in the behavior of your class.

Applications play one of the main roles in learning using an electronic whiteboard. Because today, with their help, we can greatly facilitate and speed up the learning process. Next, the most effective applications used in teaching basic mathematical knowledge will be described.

Photomath is a mega-popular application for solving mathematical problems among schoolchildren and students. The principle of the application: You point the camera at an example, an equation, a root expression and after scanning

31

VOLUME 04 ISSUE 01 Pages: 30-36

SJIF IMPACT FACTOR (2021: 5. 376) (2022: 5. 561) (2023: 6. 895)

OCLC - 1276789625











Publisher: Frontline Journals

the selected area, the application gives you a ready answer. Mainly because of the well-tuned scanner, which allows you to get a ready-made solution within a few seconds when pointing the camera at an example. Degrees, roots, equations, inequalities, algorithm, you can calculate almost any example. In addition to the ready-made solution, you get its details, which is very important for students and schoolchildren. If you need to go back to solving a previous task, you can easily find the last 10 solutions in the history. But with hand-written examples, there may be certain difficulties that can be solved by making corrections manually.

Desmos (Graphing Calculator) is one of the best mobile applications for plotting functions and equations. This application allows you to build any function from lines and parabolas to derivatives and Fourier series. How it works: You manually type in a function or equation, the program displays graphs in a Cartesian coordinate system, allowing you to change the values of variables with a slider or input and watch online for changes in the drawing. There are functions for scaling, plotting by points. This is an extremely useful application for students to visually understand functions and equations.

GeoGebra is an ideal application that can be safely to the arsenal for teaching both added schoolchildren and students. This unique application combines the creation of graphs, spreadsheets, geometry, algebra and probability theory in one place. But it will be especially effective to use it in geometry lessons. In the application, you can build both 2-D and 3-D geometric shapes, there are ready-made layouts of shapes. It can even be used for science lessons. Try interactive features with clear image detail to teach your class math. You will not need to rely on poorly drawn parabolas or 2D shapes designed to represent 3D images. With the help of an interactive whiteboard, students will be able to have a more accurate idea of how to solve their tasks. GeoGebra features include: The ability to build graphs and solve equations; Interactive geometric designs and the ability to interact with 3D graphics; 3D graphics functions; Statistical analysis in spreadsheet mode; A computer algebra system that solves any equation; Free tasks built into the application; The ability to store and share your results

XSection is an application for constructing sections of polyhedra. The program contains more than 100 ready-made tasks in 11 sections -

Volume 04 Issue 01-2024

32

VOLUME 04 ISSUE 01 Pages: 30-36

SJIF IMPACT FACTOR (2021: 5. 376) (2022: 5. 561) (2023: 6. 895)

OCLC - 1276789625











Publisher: Frontline Journals

from the simplest to the real puzzles. Built-in mini-textbook and dictionary of geometric terms. Step-by-step tips and simple controls. This device is an excellent simulator for stereometric tasks. He teaches how to work with images of polyhedra, lines and planes. All tasks are solved without cumbersome calculations. The application contains all the necessary information on the theory, and the forgotten definitions can be found in the dictionary. XSection is a great opportunity for students to practice before a test or exam. The program will not allow you to build an impossible figure, for example, to "cross" intersecting lines (a typical mistake when building sections on paper). The best way to learn how to solve mathematical problems is to solve a lot of problems.

MalMath: Step by step solver is an application with which you will be able to solve mathematical problems not only by getting a step-by-step description of the calculation process, but also by building the necessary graphs. The MalMath Android app itself is completely free, besides it does not contain any ads at all. You also have the option to use it without an internet connection. This is a big plus for him. The program will primarily appeal to high school students, college

students, as well as universities and academies. The fact is that MalMath is able to solve integrals. derivatives, limits, logarithms, trigonometric equations and inequalities, examples with roots and modules. At least most of it. However, you will have to manually enter the task condition, since the camera recognition function is not provided here. As for his abilities, they are limited only to tasks of medium complexity with a more modest description of solutions than other applications.

But most of all you will be interested in the "task generator" function. You can use it to create random math problems with several categories and difficulty levels set in the settings. All expressions and graphs can be saved to favorites. The process of adding a task is very similar to inserting formulas in Microsoft Word. From my own experience, I note that everything seems to be clear and simple, but sometimes it is quite inconvenient, especially with regard to entering complex combinations with fractions and roots. It will take a little time to get used to a certain set principle, but it's still worth it.

As a result, the use of these applications will allow a much more in-depth understanding of the principles of solving mathematical problems, the essence and methods of solving, the principles of

Volume 04 Issue 01-2024

33

VOLUME 04 ISSUE 01 Pages: 30-36

SJIF IMPACT FACTOR (2021: 5. 376) (2022: 5. 561) (2023: 6. 895)

OCLC - 1276789625











Publisher: Frontline Journals

plotting functions and the functions themselves, the construction of geometric shapes, sections of polyhedra. These applications are extremely relevant when teaching mathematics both at school and in secondary specialized educational institutions. But applications alone are not a panacea for studying mathematics, first of all you need to study theory and consolidate it with practice using ICT tools.

But applications such as Google Forms and the Kahoot! application have proved to be especially effective in use.

Google Forms is a simple tool for creating electronic tests. Instead of spending time checking tests on paper, printing paper and reconciliation. It is much easier to fill out the test table once. Mark the form as a test, move the questions and the program will do everything for you. It will show the number of correct and incorrect answers, the total score, and the grade. All this is extremely convenient, interactive and fast. Having made several such ready-made forms, you don't have to worry about current and intermediate controls. You will have a complete picture of the group, the most difficult questions and tasks. And at any time, you can raise the

results and statistics with only access to the network.

As for the Kahoot app! Then this program does everything the same as Google forms, but with only one difference there is more interactivity, more colorful design and transitions. This is a very good way to move away from the traditional form of education, while involving students in a game of speed.

REFERENCES

- 1. https://ucheba.club.html
- 2. "Цифровизация образования: ОТ теории К практике" 2022г. Е.К.Герасимова
- 3. "Digital Education: Opportunities for Social Collaboration (Digital Education and Learning)" 2011th Edition, Kindle Edition
- 4. Ibragimovich I.K. et al. PEDAGOGICAL ABILITIES OF A TEACHER, STRUCTURE AND DEVELOPMENT //湖南大学学报 (自然科学版). - 2021. - T. 48. - №. 12.

VOLUME 04 ISSUE 01 Pages: 30-36

SJIF IMPACT FACTOR (2021: 5. 376) (2022: 5. 561) (2023: 6. 895)

OCLC - 1276789625









10.

12.



Publisher: Frontline Journals

- 5. Ибрагимов Х. И. ПЕДАГОГИКА И ВОСПИТАНИЕ //Экономика и социум. - 2021. - №. 1-1 (80). - C. 608-611.
- 6. Ibragimovich, **Ibraimov** Kholboy. "Intensive methods of teaching foreign languages at university." Вопросы науки и образования 27 (39) (2018): 78-80.
- 7. Атауллаев Ф. Ф. У., Ибраимов Х. И. Понятие профессиональнокоммуникативной компетентности будущих учителей В психологопедагогических исследованиях //Вопросы науки и образования. -2019. – №. 1 (42). – C. 70-74.
- 8. Ибраимов Х. И. Педагогические и психологические особенности обучения взрослых //Academy. -2019. – №. 10 (49). – C. 39-41.
- 9. Ибрагимов X. И. Организатсия самостоятельной работы студентов в условиях сифровизатсии вузовского образования //Наука и образование сегодня. - 2020. - №. 7 (54). - С. 74-75.

- Ibragimov, X. I., U. A. Yo'ldoshev, and X. Bobomirzayev. "Pedagogik psixologiya." 0'quv qo'llanma. 0'zbekiston faylasuflari milliy jamiyati nashiriyoti Toshkent (2009).
- 11. Ибраимов X. И. Теоретические аспекты социально-психологической адаптаtsіи студентовпервокурсников к обучению в вузе //Вопросы науки и образования. -2019. – №. 26 (75). – C. 12-16.
 - Ibragimovich, Xolboy Ibraimov. "0 'ZBEKISTON OLIY TA'LIM TIZIMIDA KREDIT-MODUL TEXNOLOGIYALARINI 00 **'LLASHNING** 0 'ZIGA XOS XUSUSIYATLARI." INTEGRATION OF SCIENCE, EDUCATION AND PRACTICE. SCIENTIFIC-METHODICAL **JOURNAL** (2021): 209-214.
- **13.** Ibragimovich, Ibraimov Kholboy. "Theoretical and methodological basis of quality control and evaluation of education in higher education system." International journal of discourse on innovation, integration and education 1 (2020): 6-15.

VOLUME 04 ISSUE 01 Pages: 30-36

SJIF IMPACT FACTOR (2021: 5. 376) (2022: 5. 561) (2023: 6. 895)

OCLC - 1276789625











Publisher: Frontline Journals

