



The Use of Digital Technology in Teaching Mathematics in Higher Education Institutions

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Annotation: *this article describes the methods of effective use of digital technologies in improving the quality and effectiveness of education through teaching mathematics.*

Keywords: *Edraw Max, Microsoft Mathematics, GeoGebra, Jivaya geometry, Graphics.*

Digital technologies are demonstrating its very large and effective results in the educational system that is, online, distance forms, virtual education, virtual laboratories, 3D technologies are giving positive results in the educational process. It certainly fulfills important tasks in the interesting conduct of educational processes of educated young people, the meaningful Organization of their free time, the targeted, effective use of technical means.

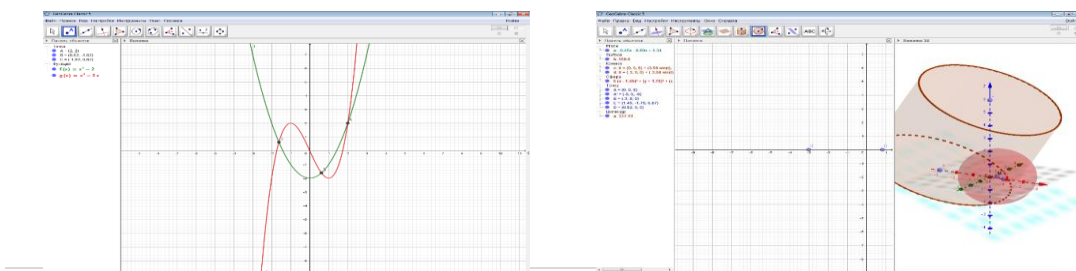
Today, it is becoming a difficult issue to imagine an educational process without digital technologies with great results and an interesting educational process. There are computer applications and pedagogical software tools, which are desirable to use in improving the effectiveness of the educational process. Programs designed to prepare visual didactic dissemination materials and e-learning resources for educational processes: <https://canva.com>, <https://piktochart.com>, <https://quiz.com>, <https://kahoot.com>, we can cite autoplay, iSpringPro, etc.

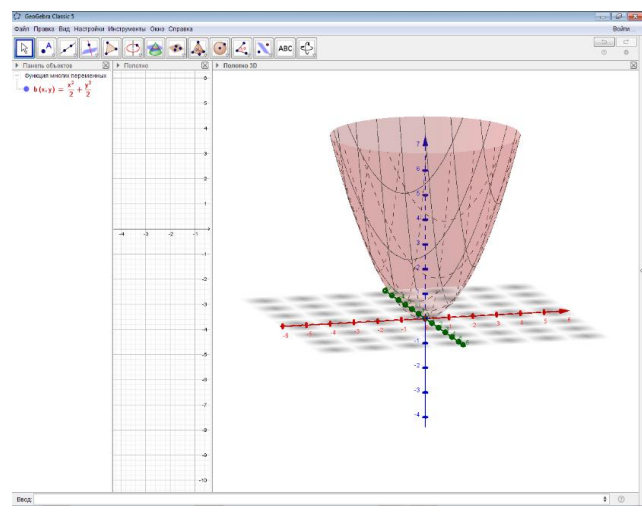
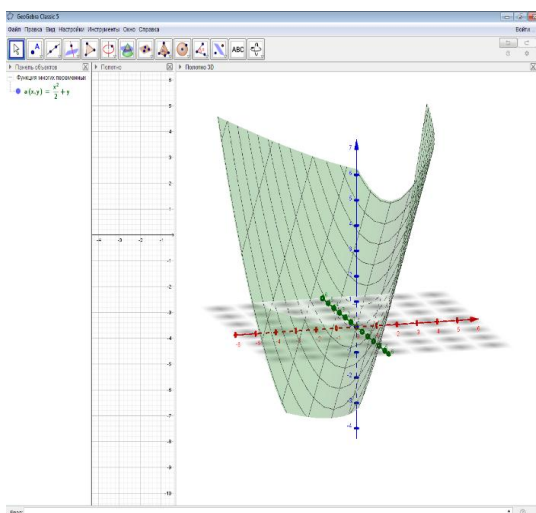
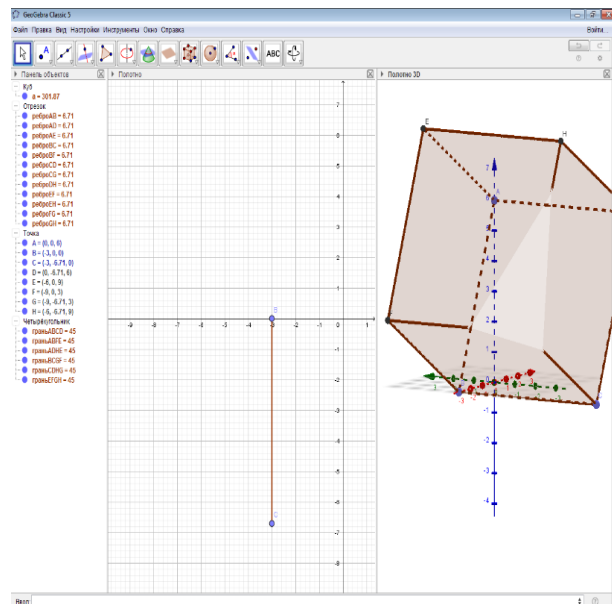
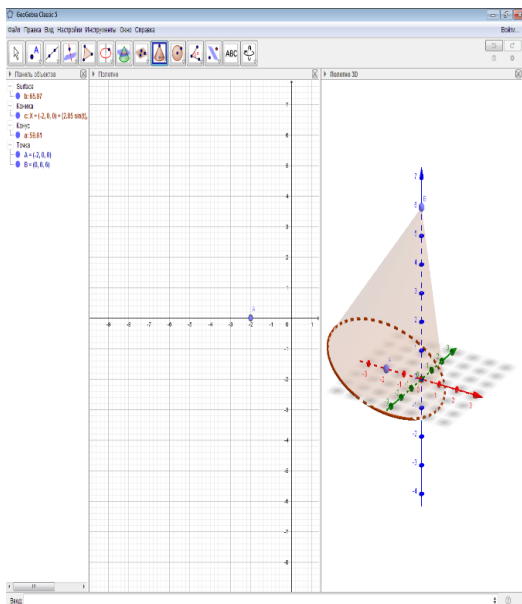
The course tools used in the educational process (textbook, handouts, technical tools, etc.) make the course process interesting and provide many opportunities for the teacher and students.

The use of these programs in pedagogical activity in improving the effectiveness of the educational process is of great effect.

Pedagogy and other higher education institutions carry out work with more examples, parables and graphs in the teaching of geometry. Describing certain complex graphs brings some difficulties from the teacher. In such cases, it is advisable to work with images and images of spatial bodies in Cartesian coordinates, use mathematical packet programs in solving examples and parables.

These are: "Maple", "Mathcad", "Graphics", "Microsoft Matemates", "Geogebra", etc. In Geogebra applications, generating functions and describing it on the exact Cartesian coordinate axis is easy and convenient compared to other mathematical packet applications. It is also possible to see the created images and spatial bodies from all sides.





A function to be included among the functions is entered and a function graph is generated by pressing the Enter key from the keyboard. The program enabled the graph of multiple functions to be generated and the intersection points to be specified. While using 3D capabilities, the Polotno 3D command is selected in the “vid” menu and the desired spatial body is selectively generated on the Affine coordinate axis. It is possible that we show spatial bodies on the Affine coordinate axis from all sides.

These programs also have options for solving examples and issues, and it is also possible to take advantage of the following possibilities.

It is also possible that in this program we solve natural numbers, which are taught in secondary schools, and actions on them, the largest common multiple of a number, the largest common divisor of a number, the irrational equations and inequalities, square functions, logarithmic equation and inequalities, trigonometric functions, etc.

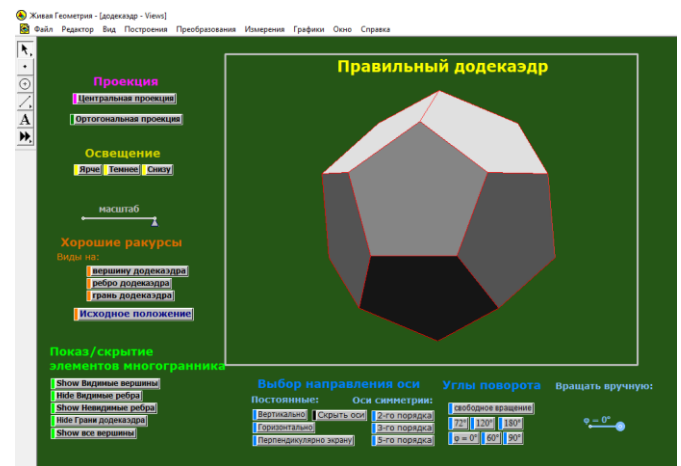
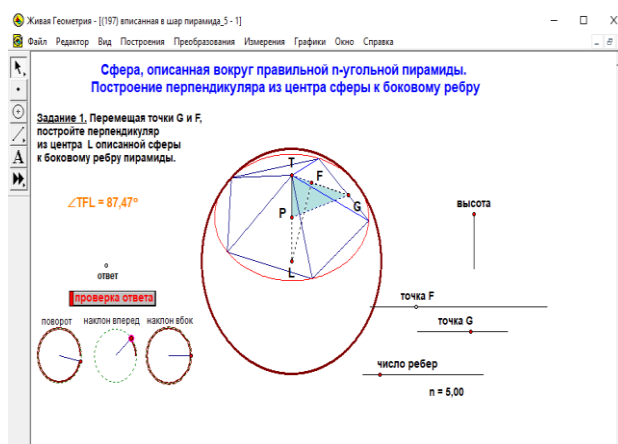
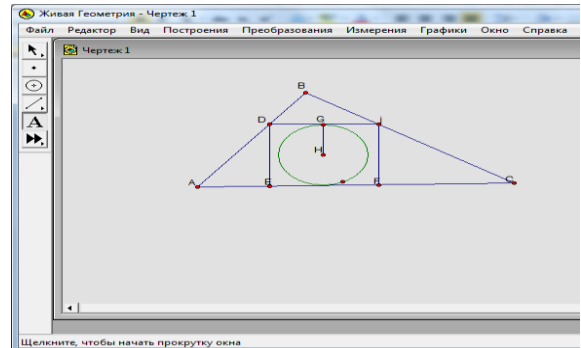
For example: $\sqrt{x-2}-2=16$ solve the irrational

Дист		Построение графиков	
1			
Ввод	solve($\sqrt{x-2}-2=16, x$)		
Шаги решения			
Прибавить 2 к обеим частям уравнения.			
$\sqrt{x-2}-2-(-2)=16-(-2)$			
Вычитать -2 из самого себя дает 0.			
$\sqrt{x-2}=16-(-2)$			
Вычесть -2 из 16.			
$\sqrt{x-2}=18$			
Возвести в квадрат обе части уравнения.			
$x-2=324$			
Прибавить 2 к обеим частям уравнения.			
$x-2-(-2)=324-(-2)$			
Вычитать -2 из самого себя дает 0.			
$x=324-(-2)$			
Вычесть -2 из 324.			
$x=326$			
Решение	$x=326$		



equation.

The Jivaya geometry program allows you to create complex images and calculate its values, view geometric images under different degrees. In the upper classes, there are some problems in drawing spatial bodies in the science of geometry using a board and showing its sides, which the current digitization provides opportunities for its implementation in the period with the help of practical programs of computer technology.



Conclusion: Through programs, it provides opportunities to solve problems in training and organize lesson processes in a meaningful and interesting way and bring to the surface many ideas in students. The use of modern methods or computer programs that help to increase the effectiveness of teaching can be a solid ground in students to increase their interest in education, develop computer literacy and logical, mental, creative thinking, etc. To this end, the use of innovative technologies in the organization of the educational process is one of the important factors in the supply of competitive personnel.

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