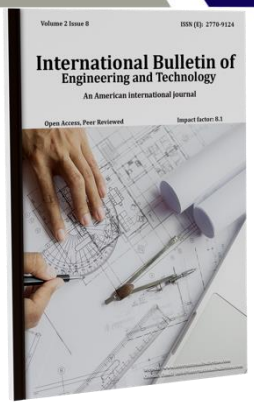

USE OF ELECTRONIC EDUCATIONAL RESOURCES IN TEACHING MATHEMATICS IN CONDITIONS OF DIGITIZATION.

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Keywords: Digitization, Mathematics Education, Electronics training Resources, Education technologies, Interactive Education, Online education Platforms, Learning process Optimization, Innovation teaching methods, Virtual classrooms, Pedagogical technologies

Abstract: This in the article digitization under the circumstances mathematics in teaching electronic training resources place and importance analysis Education in the process modern technologies application through mathematics science of education efficiency increase, students knowledge level and interests improvement possibility Electronic resources, that's it including interactive study programs, video tutorials, online tests and simulations mathematical thinking in development help gives.

Key words: Digitization, Mathematics teaching, Electronic educational resources, Educational technologies, Interactive education, Online educational platforms, Optimization of the educational process, Innovative teaching methods, Virtual classes, Pedagogical technologies

Abstract: This article analyzes the role and importance of electronic educational resources in teaching mathematics in the conditions of digitization. It is shown that the use of modern technologies in the educational process can increase the effectiveness of teaching mathematics, improve the level of knowledge and interests of students. Electronic resources, including interactive tutorials, video tutorials, online tests and simulations, help develop mathematical thinking.

Key words: Digitization, Mathematical training, Electronic educational resources, Educational technologies, Interactive education, Online educational platforms, Optimization of the educational process, Innovative training methods, Virtual classrooms, Pedagogical technologies

Annotation: In this state, the role and meaning of electronic educational resources are analyzed in mathematics training and digitization. It is shown that the use of modern technological and educational processes allows to increase the effectiveness of mathematical training, increase the level of knowledge and interests of students. Electronic resources, including interactive tools, video tutorials, online tests and simulations, help develop mathematical thinking.

Today on the day education system world along is being digitized, this and to teach methods fundamentally to change take is coming. Especially mathematics such as clear sciences to teach in the process digital technologies and electronic study resources application of the students to education was interest increases, their knowledge in strengthening effective to the tools becomes. Digitization main purpose of education efficiency increase, students knowledge deepening and to the students education process facilitate opportunity from creating consists of. Electronic study resources, such as interactive

programs, videos textbooks, simulations and online tests mathematics science in education complicated concepts simple and effective in a way explanation opportunity gives.

Proof in the process one how many main thoughts show possible. First, pedagogical experience and scientific research this shows that the electron training resources using students own knowledge in strengthening traditional to classes relatively more success they win. Example for, online simulations and interactive study materials through students mathematician concepts in practice to apply they learn, this and their concepts further deeper to their understanding help It also gives students mistakes analysis to do and immediately correction opportunity, their training in the process participation activates.

Secondly, digital technologies mathematics individual approach to teaching provides. Students at their own individual pace their studies and appropriations it is possible, this and every one student's to the needs suitable education presented Electronic resources using students lessons further interactive and innovative in the form organization they reach possible. Such education methods, students complicated mathematical issues solution in doing motivation gives and they between competition develops.

Meanwhile, online platforms and virtual classrooms to students mathematics in understanding how much useful that about one how many the facts to bring possible. For example, in China held in research, online mathematics lessons studied students traditional methods with education to those who received 15% higher than results This indicator digital of technologies education efficiency in progress potential confirms.

In this way, digitization under the circumstances mathematics education methodology, not only students mathematical knowledge increases, maybe of education general It also improves the quality of the article electronic study resources mathematics in teaching their place, their benefits and opportunities about in detail analysis does.

Mathematics of education digitization process and modern of technologies integration to students not only traditional in ways, but innovative approaches education through to take opportunity gives. Login in part as noted, digital resources and online platforms using mathematical knowledge mastery efficiency traditional education to the methods than noticeable at the level high to be possible. In this process mathematician issues solution process interactive and visual in the form expression, students further more active and independent to work encourages.

1. Electronic study resources mathematics in teaching application

Mathematics science often students for difficult and complicated In particular, algebra and geometry such as in sections concepts correct understanding, students mathematician thinking develop important importance has. Modern technologies, especially interactive study resources, for students complicated issues in solution many help gives. Example for, geometry according to students for created simulation programs, such as GeoGebra, mathematical shapes create them edit and various geometric of figures mutual dependence in showing very is useful. Example: If a student triangle perimeter to calculate studying if, using GeoGebra triangle on the screen create it, sides length entered without automatic in a way perimeter calculation This process is possible. to the student mathematician formulas to apply and their the results immediately to see opportunity gives.

Also, in algebra online textbooks and interactive The tests are also great. help gives. To the students equation solution, graphs drawing and formulas analysis to do like "Desmos" in teaching programs students for very effective tool will be.

Example: If a student square equation to solve studying if, in the Desmos program $x^2 - 5x + 6 = 0$ Visually understand the answer to a problem by graphing an equation and finding its roots. This interactive approach allows the student to see the graph of the equation and understand its roots. gives.

Solution:

First of the equation graphics on the "Desmos" platform Let's draw. On the graph It can be $x^2 - 5x + 6 = 0$ seen that the equation is represented in the form of a parabola.

From the graph x -axis of the parabola with intersected points seeing this points of the equation roots that determination possible.

As a result, this equation The roots are x = 2 and x = 3.

Geometry of the matter interactive solution

Geometry issues in solution modern technologies, for example, from the "GeoGebra" platform use very effective This will be program using geometric shapes, their features and average issues solution much It gets easier.

Issue: Triangle perimeter calculate if its sides a = 5 cm b = 6 cm and c = 7 cm if.

Solution:

First of all, in GeoGebra triangle we make it, its sides

a = 5, b = 6, and c = 7 cm as we mark.

Triangle perimeter using the following formula is:

P = a + b + c.

this formula basically: P = 5 + 6 + 7 = 18 cm.

Analysis: Using GeoGebra triangle create, its sides change and perimeter calculation to the student geometric shapes interactive in a way to understand help This program to the students complicated mathematician concepts clear and simple in a way understanding opportunity creates.

3. **Secondary equation and his/her solution**

Two variable equations electronic in the solution platforms using mathematician solutions effective will be. Example in general, two from the equation consists of the system seeing Let's go out.

Issue: The following the system solve: $\begin{cases} x + 2y = 7 \\ 3x - y = 6 \end{cases}$

Solution:

This system like "Khan Academy" or " WolframAlpha " online on platforms solution possible.

WolframAlpha to the platform this the system input through quickly solutions to take possible.

The system analytical in a way in solving, first Expressing x from the equation as x = 7 - 2y, the second to the equation We put: 3(7−2 y)− y=4 3(7 - 2y) - y = 4 3 (7 − 2y) − y = 4.

This solve for y = 1 we find, then and we consider x as x = 7 - 2 = 5.

Analysis: WolframAlpha platform or other interactive systems using equations solution process very fast and effective It will be like this. programs using student all calculations quickly done increase and solutions can check.

2. Individual approach to education provision

Digital technologies to the students every one to the individual needs of the student suitable accordingly education to give opportunity creates. For example, online tests and

problem solving platforms to the students own knowledge assessment and develop for independent work opportunity gives. Such platforms to the students often exercises to perform, to master materials repetition and complicated issues in solution help gives.

Example: On the Khan Academy platform mathematician exercises to perform through students various degrees according to issues solutions possible. If the student main concepts good mastered if so, even more complicated to issues On the contrary, if the student any misunderstanding to the surface if it comes, the system to him/her assistant lessons and additional materials offer This individual approach student 's variable to the needs quickly answer gives.

Issue: Acceleration and acceleration graphic image drawing and to him/her related issues solution

Example: If one of the body start speed v_0= 0 and If the acceleration is a = 2 m/s^2, then its movement last The formula for speed is v = v_0+ at. through calculation possible. If time t = 5 sec. If, the velocity will be v = 0 + 2 5 = ×10 m/s.

Analysis: This issue students themselves created in graphs, for example, in the "Desmos" program graphic in the form of drawings possible. Such approach to the students issue visual in a way to understand help gives.

3. Interactive and online platforms mathematics in teaching efficiency

Digital technologies, especially interactive and online platforms, mathematics in teaching students motivation to increase service does. The students various interactive games, simulations and exercises through mathematics in learning themselves interesting and effective in a way try they see. Online classes and virtual class in their rooms students own knowledge evaluation, mutual idea exchange and collective accordingly issues solution to do to the possibility has they will be.

Example: For example, on the "Brilliant.org" platform students complicated mathematician issues solution to do through own knowledge They strengthen. On this platform issues different in a way presented is solved: problem solving process step by step is explained, as well as the issue solution with related various kind interesting and current questions offer This process is the student further deeper to think encourages and of issues various aspects seeing to go out help gives.

4. Readers for opportunities

Electronic study resources not only to students, maybe mathematics for teachers too teaching efficiency in increasing help gives. Readers lessons further interactive and flexible in a way organization they reach possible, that's it with together, students the results permanent accordingly evaluating to go to the possibility has will be. Online platforms to the students students knowledge in evaluation clear and fast analysis to do opportunity gives.

Example: Readers like "Google Classroom" for platforms students their work assessment and individual assistance to them show opportunity Students ' test results, assignments and manuals based on teachers immediately students mastery level determine, appropriate recommendations give possible.

Digitization under the circumstances mathematics in teaching electronic training resources and modern of technologies application, to students own knowledge deeper mastery and mathematical thinking develop opportunity Creates. Interactive and online platforms, simulations and programs using students mathematician issues more understanding and independent to work They learn. Such education methods not only

mathematical knowledge increases, maybe of the students It also increases motivation. Electronic study from resources effective use mathematics in teaching new approaches current in the process of important factor is considered.Now and modern technologies using mathematician example and issues to solve examples through seeing if we go out:

Conclusion

Digitization under the circumstances mathematics education modern technologies application through effective and interactive of teaching new opportunities presented In the article cited examples and issues, especially electronic study resources, interactive programs and online platforms using mathematics science of teaching importance open These technologies to the students complicated mathematician concepts in mastering them visual in a way in understanding and training activity in strengthening big help gives.

Algebra, geometry and other mathematician departments according to students for interactive and visual approaches students further active and independent to study encourages Algebraic, geometric and other kind of issues solution modern technologies using transfer students mathematician thinking develops. Electronic study resources, for example, "GeoGebra", "Desmos", " WolframAlpha ", "Khan Academy" and other platforms through students mastered the material further they strengthen, that's with together mathematician concepts the most effective in a way understanding to the possibility has For example, GeoGebra and Desmos programs using geometric forms and algebraic equations ease with drawn, solution This approach is shown in to the students issues deeper understanding and them independent accordingly solution in doing help It also provides digital technologies using students lessons interactive and in an individual approach organization to grow to the possibility has they will be, this and students knowledge level further increases.

The students social networks and online platforms through mathematics science to study attraction to do, their mutual in cooperation their work, their knowledge share to see and questions discussion to do encourages. This approach of the students mathematician to issues was interest increases, they between idea exchange and further deeper to study provides.

With this together, digital resources not only to students, maybe education for teachers too process further effective and effective to manage opportunity creates. Readers, online platforms and interactive systems using students the results quickly assessment, individual assistance show possible. Such opportunities education process optimization, students knowledge reinforcement and their to study was interest to increase help gives.

In general when receiving, digital of technologies mathematics in teaching application, students knowledge level education, training process further interactive to do, and teachers for education process in management new opportunities create point of view from the point of view big importance has. Digitization, mathematics education methods in development and education system general quality in increasing important tool become remains.

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