Steam And Stem Education Systems, Their Impact On Ammunition Effectiveness

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ABSTRACT

In this article, the STEAM and STEM education systems, the creation of a STEAM education system, the influence of STEAM and STEM education systems on the effectiveness of education, the main goals and objectives of the STEAM educational program, STEAM in the education of children of primary school age. The role of the system modules and the basic pedagogical principles in organizing the STEAM educational program in schools are discussed.

The end in years in our country done being increased reforms as a result all in the fields qualified personnel and mature to specialists has been demand more is increasing . It 's self-explanatory of our students to lessons interests and different to the sciences has been abilities increase and comprehensiveness of teachers education to education has been attention requires strengthening .

Today's in the day modern education system main task in the student successful life to forgive for today and in the future need will be skills and vital knowledge is formation . Of this for creative thinking and vital situations critical-analytical aspects right assessment today's young people have to be need was important is a skill . This is a skill to them constant way and intensity with changing , simple from literacy except for "21st century " skills have workers requirement doing to the world to adapt will help .

In general in fact , today student in the future now even there is didn't happen in the fields performance , new problems new technologies through solution reach is expected . In the student creative thinking skill formation to them more and more getting complicated local and global issues unusual approach through solution reach enable will give.

Above requirements modern education system for very important the fact that that's it with together mostly foreign in countries as, education and science fields development assessment and monitoring through education quality to increase directed progress experiences analysis did without pedagogical to the activity attraction reach need means

Uzbekistan on April 29, 2019 regarding the development of methodological training of primary school teachers republic of the president Decree No. 5712 on "The concept of development of the public education system until 2030" acceptance done. Based on that primary school teachers emphasized the development of students' critical thinking, independent search for information, analysis skills and competencies [1].

President of the Republic of Uzbekistan on November 26, 2019 " Modern schools organize reach measures on decision No. PQ -4537 common medium education in the system advanced international experience and of society modern requirements according to good

quality education get opportunities create , people education institutions material and technical base strengthening and from the budget with funds of provision efficiency increase , youth education for addition conditions to create directed measures done increase according to consistent reforms done being increased about telling passed [2].

STEM is real life requirements come came out without academic scientific and technical concept within integrated without is teaching. Today's in the day science and of technique fast progressive reach , digital of the economy to practice current in students to study healthy , strong and impressive motivation formation , modern occupations take over ability in development theoretical knowledge in practice apply skills harvest to do main from tasks is one in the territory of the Republic of Uzbekistan action done going continuously education in the system today's in the day developed Europe countries education system from experience example get through the world education with to face get , experience exchange , competition enter , continuous in touch to be works significant level is developing . Including dual education , inclusive education , externship distance learning education and STEAM education forms to our opinion obvious example will be This is it education from the forms today's in the day wide used high to the results is being achieved . Right now we are thinking about STEAM education technology about continue we deliver

STEAM is a new educational technology that integrates several disciplines as a means of developing critical thinking, research skills and teamwork skills. If this abbreviation let 's say the following we get: STEAM is S – science, T – technology, E – engineering, A – art and M – math. English in the language it 's natural sciences, technology, engineering, art and mathematics. This directions modern in the world the most famous being coming do n't forget That's why for today's STEAM system per day main from trends one as is developing.

STEAM education direction and practical the approach apply as well as all five single education in the field to the system integration based on Science and art combine the necessity of the 11th century mathematicians and teachers such as thinkers by written Almost all inventors and scientists are also musicians , artists , writers or poets were : Galileo a poet and Literary scholar was Einstein the violin played , Morse portrait artist was and etc. , that is of the brain right half with depends actions STEAM curriculum students interdisciplinary and practical approach using teaching to the idea based on STEAM each of the five disciplines separately study instead of them one education to the way unites

STEM education scientific of methods, technical from manuals, math from modeling, engineering from the design to use possibility will give. XXI century of the student innovative thinking, skills to form take will come. STEAM education in the environment children to knowledge have will be and immediately from him to use they learn That's why for, they grow up when they grow up and vital to problems face when it comes, around of the environment contamination or global climate change whether it's like that complicated issues only different in the fields to knowledge relying on and together work through solution to do possible they understand. Here only one topic according to to knowledge rely on enough do n't eat To education this new approach how appear it has been? This is a theory and practice to combine makes sense is the result [3].

STEAM is in America work developed Some schools of graduates their careers attention they got and science, technology, engineering and mathematics such as sciences to combine decision they did and the STEM system that's it way was formed. (Science, technology, engineering and mathematics). Later on this joined by Art and now to the end of STEAM was formed. Teachers this topics, more precisely this from the sciences knowledge in the future of students high qualified expert being to reach help they believe that it will give The end finally, guys good knowledge to get they strive and him immediately in practice they use

the STEAM approach main idea practice theoretical knowledge such as important important have Stenax in class it's winter learning fast variable the world with step by step it's not . of STEAM main difference this is it

on the ground children in topics thoughts successful study for their own thoughts and from his hands they use

STEM education is what it is study process, career and next professional to grow connecting to himself special bridge Innovative education concept the children technical in terms of developed to the world at a professional level to prepare possibility will give.

Modern the world education to the front difficult tasks is eating: the child future in society to life preparation, this while from him first of all fast variable data with to work directed special intellectual requires skills. Acceptance done information acceptance do, re work and of them practical use skills development of STEM education of the program is the basis. A STEM approach to the children the world regularly respectively learning around happen happening events logic deep learning, mutual dependence discover reach and understand, themselves for new, unusual and very interesting things discover reach opportunity will give new thing with get to know waiting interest and knowledge activity develops ; himself for interesting the problem identify the child future in society to life preparation , this while from him first of all fast variable data with to work directed special intellectual requires skills . Acceptance done information acceptance do, re work and of them practical use skills development of STEM education of the program is the basis .

STEM education main structural parts current reach each main at school talented the children determination for the most good conditions to create help will give.

STEAM of the 21st century innovative technologies based on new study system as, his main purpose in children of thinking new type is to develop. This is traditional school education from the model sharp difference who does and creative and analytical skills to develop based on fundamentally new approach His main idea methods choose and him solution to do algorithm make up the need, the results critical assessment the ability to think engineering style development; collective activity in the team work skills develops. Of these all of them of the child development fundamentally new, high

level provides and occupation in choosing in the future more wide opportunities creates

 STEM of education main structural parts current reach each main at school talented the children determination for the most good conditions to create help will give. That is, learning during we not only our brain with, perhaps our hand we also work with need Only class on the walls study fast variable the world with step by step it's not . Practice theoretical knowledge like important

STEAM transfer main difference that is, children different different topics successful study for both the brain and the hands they use They are received knowledge themselves" hearing they will get". Of teachers to his opinion according to, integration the majority in professions successful to be possibility will give. Almost all of experts stated that advanced or technologies design and programming in the field main knowledge learning and expand motives increases. STEM training is it our our children skills increase new to the stage to exit possibility giving innovative methodology. His help with we economic in terms of independent and competitive to the country to our circulation possibility giving progress personnel base form we can

of STEM advantages:
➢ topics according to not but topics integral study on;
➢ scientific and technical knowledge in life use
➢ critical thinking and problems solution to do skills development.
➢ to himself has been confidence formation;
➢ active communication and collective the work;
➢ technical to the sciences interest development;
➢ to projects creative and innovative approach
➢ each of the child age and individual characteristics account received without children activity through technical creativity motivation development;
➢ initial to the profession to direct;
➢ the children of life technological news preparation

Close in the future in the world and also in Uzbekistan engineers, high technology work release Specialists are in great demand high will be Long in the future we are natural sciences with together technology and high technology work release with dependent has been to professions have we will be, especially bio and nanotechnology experts will be in great demand. Specialists technology, natural sciences and of engineering different from the fields wide comprehensive education and to the experience needs will be

This approach objects life with from binding except, students creativity for opportunity opens. This approach with small school of students project activity solution to be done need has been one series tasks puts The only correct one decision no, to the student to creativity complete freedom is given Such tasks not only with the help of the child interesting ideas creates, perhaps them immediately to life take will come. So so, he is activities planned task and there is to resources based on planning learns that of course in life useful will be.

Also STEAM education main from the rules one this small in groups couple with learning is learning. For example, robotics in class two student one on the computer works and one the constructor collects This is a lesson materials savings for in general will not be done. This approach the children to cooperation teach children in the team to work learning, communication ability development and in the group to work own into takes Many STEAM education in countries the following reasons according to priority is considered Activity planned task and there is to resources based on planning learns, this of course in life useful will be

Many STEAM education in countries the following reasons according to priority is considered Advanced technology specialists, programmers, engineers, higher technology industry specialists and others Long in the future now imagination to do difficult was occupations appear will be their all of them natural sciences with when combined technologies and high technologies work release with depends will be Bio and nanotechnologies according to to experts

especially in high demand will be The future specialists natural science, technology and of technologies different different education in all directions preparation and requires knowledge [4].

Before school and small school age the children STEAM system in education of modules place offer being carried out." Before school and small school age kids STEM EDUCATION" is knowledge activity in the process intellectual abilities development and scientific and technical to creativity attraction to do directed partially modular before school education in the program reflection delivered. The STEM program is also an elementary school common medium of education main within the educational program from class except at work successful use possible and every one of them section - educational module - above education in organizations, in addition education is also independent in the system respectively application can

STEAM study area to people himself teaching and in the team work abilities with together efficient interactive education approach present is enough Come on, like this education process in detail see let's go: this on the ground traditional education from the type what with difference does and children thinking how develops. To the program what are enters and how education duties solution will be:

✓ F. Frebel's didactic system " learning module - surrounding the world objects with experience transfer

✓ geometric bodies and figures act with through mathematician the truth assimilation;

✓ spatial relationships assimilation;

✓ different corner and in projections construction;

✓ Live and lifeless nature with experience transfer "educational module - experimental in the activity around the world about ideas formation;

✓ visual and sensitive perception reach in the process all alive of creatures unity understanding

✓ ecological the mind formation " LEGO - construction " - practical and mental experiments transfer, generalization, cause and effect relationships installation , speech

planning and speech comment process and own activity results ;

✓ objects grouping ability;

✓ of life different in the fields awareness manifestation reach ability;

✓ experience transfer;

✓ of life different in the fields awareness manifestation reach ability;

✓ mother in the language fluency wealth of speech grammar structure, phonetic system, semantic structure about elementary ideas);

✓ new images create, fantasy do , analogy and from synthesis use ability

"Mathematician development" training module of B features age and individuality account received without the following in directions: size, shape, space, time, quantity and the number according to mathematician development problems complex solution to do

" Robotics " training module.

✓ makes sense and algorithmic thinking development;

✓ programming the basics formation;

✓ planning, modeling opportunities development;

✓ information again work;

✓ abstraction and patterns to find ability development;

✓ practical problems solution to do skills improvement;

✓ concentration acquisition, planning, text dialing;

✓ universal symbolic to use systems (symbols). to know and understand

✓ process and own activity the results assessment ability development.

✓ "I am the world i create" training module.

✓ ICT (information and communication technologies) and digital technologies assimilation;

✓ mastering media technologies;

✓ organization of production activities based on the synthesis of artistic and technical creativity.

Each module is aimed at solving specific problems that ensure the realization of the goals of STEM education in their comprehensive solution : the development of intellectual abilities in the process of cognitive research and the implementation of educational tasks for the involvement of young students in scientific and technical creativity includes a thematic selection of manuals that provide a comprehensive approach to development.

Each separate module develops intellectual abilities in the process of knowledge and research activities and develops the ability of young children to know and understand the use of universal symbolic systems (symbols) for scientific and technical creativity, and to evaluate the results of their activities in the educational process.

Basic pedagogical principles in the organization of the STEAM educational program in schools: it is known that not every lesson can be conducted on the basis of integration and project-based learning, because it is difficult to adapt such lessons to the standard 40-45 minutes, sometimes they are simply implemented in schools There is no equipment to be used in the upgrade. Therefore, in order for education to be of high quality and full value, cooperation between the teacher and the teacher of additional education is necessary. But in this case, an important condition is the compatibility of curricula for additional education teachers with the content of academic subjects, which may be more related to the content of its additional education program.

So and study material expand for from class out exit possible will be General and additional of education advantages obvious apparently is standing In addition education common of education variable structural part to strengthen provides and students knowledge done to increase help will give . From this besides , extra of education main content usually to practice directed will be Here student independent respectively practical problems solution to do ways seeks objects , nature events learning and observation during to knowledge have will be It's just creative to be can , to the reader himself for interesting has been to something according to own development the ways looking for for conditions creates

STEAM technology used without things organize in doing main pedagogical principles account get need:

✓ the goal designation, education content, its forms and methods defines study of the process all structural parts mutually dependence mean holding integrity;

✓ known and unknowns between makes sense connections to determine providing facilities and events between cause and effect connections of a child who understands to himself special knowledge to the activity based on deep and meaningful knowledge development own into received mind and activity individual interests of the student account get

✓ to teach visualization do, strict defined scientific laws own into received information ;

✓ consistency of students to his age looking education content and forms between dependence provide;

✓ to the student education and education to give between of relationships unity which provides availability and consistency;

✓ read the student physical and spiritual development laws according to respectively bring up and teaching which provides to nature compatibility;

✓ student upbringing and in education family and education institutions between mutually of cooperation unity

Summary by doing in other words, the project on work in the process students mutually in touch is the decision acceptance they do, different assessment of means they use , that is , universal education actions they absorb .

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