

Animation Technology enhance the learning capabilities of individuals in School education

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Abstract: Use of animation in unique training has received top notch attention currently. Consequently, using animation for helping people with special needs has end up an critical research question and this observe aims to have a look at and speak the role of using animation as a tool to decorate mastering of people with special desires. That is a qualitative observe wherein report evaluation was used to accumulate the facts. Results found out the traits in the use of animation in training and the advantages of animation for reinforcing gaining knowledge of of people with unique needs. This observe attempted to provide a complete evaluate at the effectiveness of the use of animation in education and mentioned the existing and viable blessings of the usage of animation for people with special wishes. Results are discussed with relevant literature and tips for similarly studies and practices are supplied within the examiner.

Key Words: 2D Animation, 3D Animation, special education, Teaching, Elementary Education, Technology, Learning habit, school teaching, students' attitude.

1. INTRODUCTION:

Technology is developing unexpectedly in the twenty first century and these traits are bringing many innovations in education as well. The use of technology in training also impacts mastering and teaching environments It has been advised that with using animation in schooling, there is a tremendous boom in the attitudes and educational achievements of the scholars in a superb manner. It has been shown that animations as technological gear used in schooling have contributed lots to the students in phrases of security, rushing and slowing time, examining very rare events, simplifying complicated systems, being beneficial and cheap and motivation in addition to supplying a full-size boom in students' attitudes and academic achievements toward the guides in fine manner. Rising technology and needs have caused visuality to emerge as greater prominent through the years. The speedy development of the records also effects in the failure of a lately produced know-how to become dysfunctional. This requires timely and effective use of statistics. In this case, tools have been had to make available information reachable by way of big hundreds quick and correctly without looking ahead to the present statistics to get old. Sharing and the usage of statistics are as crucial as producing information. Consequently, there may be a need for data dissemination systems that shop money and time for sharing and using facts produced by using the massive hundreds. Due to this, the paintings of visualization and visualization systems have become crucial. Animation as a multimedia device is at the leading edge of the visualization systems.

This digital era make a contribution to the improvement of instructional plans to permit students to research in an expansion of approaches. In parallel with the growing advances in computer generation, the use of multimedia technologies which includes animation, sound, photos and textual content inside the instructional environment is likewise increasing. This lets in for the layout of education and training via supplying a greater diversity of mastering processes and richer educational environments for college students. Tendencies in pc software play an essential function in including functions inclusive of sound, snap shots and text to educational gear. Increasingly more, academic styles and tendencies use multimedia gear that incorporates academic packages and educational guides. Animation is a technical process that, in fashionable, produces motion phantasm inside the viewer by means of sequencing the nevertheless pictures produced inside the analogue or virtual environment in collection. As a manner of manufacturing a movie as a lot as it is technically viable, the improvement of the animation, which is blanketed inside the style movie itself, can now go past the judgment that it's far especially an leisure for the mass audience of kids. The conclusion of 3d

Animated movies attractive to human beings of all ages have been influential in bringing the idea of animation out of the target market notion of conventional animation movies by way of giving them contemporary dimensions.

Animations and digital maps make it less complicated to recognize summary principles and make sure that studying is permanent. Paintings and cartoons will now not be animations in the event that they display no change and are

nevertheless. That is due to the fact animations should no longer be constantly neither transferring, nor need to they stay in motion permanently. Researchers have endorsed the idea that animations will be used as a trendy in our future training like the alphabet. In step with, animations are the process of animating images in a certain scenario and that they must be seemed as alternative coaching approaches so that it will visualize information.

Inside the case of animated education, events that arise at some point of a time while a human being cannot look at in actual time, can without difficulty be presented to students in a more elevated shape and the student can see a point that he/she does not apprehend in this structure via preventing the animation and taking it again extra efficaciously and permanently.

Furthermore, visible notion occurs whilst human beings depart five sensory organs (sound, photograph, and so forth.) absolutely open to the stimuli coming from the surroundings and comprehend the aware notion by way of an accumulation of beyond physiological and mental reports. In this belief system, the sensory kingdom of the human frame, which occurs kinetically inside the nervous gadget, causes mental loading of the man or woman, leaving everlasting or temporary effects within the mind. Mental practices which include gathering, identifying, comparing, organizing similarities, categorizing and decoding significant records on the idea of the psychological sub-shape of the mind on this sort of perception also are interacting. Now not tremendously, in this belief process, the eye itself is the organ of which the person is most actively concentrating interest with. Depending on the eye, it's also a visible perception that occupies the human thoughts fantastically greater than different types of perception. It is a recognized fact that visual notion intensifies interest to systematically shifting gadgets. This real animation has been a crucial component in taking the momentum of movement as a reference to itself.

Twelve principles beneath the name "basic principle of animation" have been diagnosed. These standards, which were determined within the 1980s by means of the need to decide the policies of a 2D animation international, are nonetheless legitimate these days and ought to be taken under consideration if you want to attain realistic motion in a 3D animation platform.

- Squash & Stretch
- Anticipation
- Arcs
- Secondary Action
- Timing
- Staging
- Straight Ahead Action & Pose to
- Follow Through & Overlapping Action
- Slow In & Slow Out
- Exaggeration
- Solid Drawing
- Appeal

Found out that relation of education with animation and approaches the education attains to individuals are the issues that need to be solved while determining the features of the animation in schooling. The idea that animation ought to be used in the field of schooling is due its very own inner visible preparations and movement relations. Pc-aided animation structures made for instructional functions simplify the transmission of modern, very complex, very fast, very gradual, top secret reactions with their analytical fluency as a visual communication medium and pay attention on fundamental actions. The narrative consists of narrative performance into the instructional arrangements in it and helps the remembrance of the occasion. Meaningful learning makes it smooth to keep both records and recollect from memory. Animation is the act of transferring many photographs and portraits into situations. Animations are created with the aid of linking consecutive pictures. Animations that are not sufficient for education on my own are technological alternatives utilized in many specific areas of education and animation, which is used in lots of areas, particularly preferred for describing complicated concepts. It's far widely recognized that the use of era in special education facilitates studying and coaching sports of individuals with unique desires and have nice consequences on freshmen' overall performance and gaining numerous skills which includes studying, writing and mathematical talents. Visuality, shifting objects and making visible gadgets extra narrative are the most vital benefits of using animations in coaching people with unique needs. Thinking about the typical and efficient use of animation in training and generation in unique education based on its advantages, using animation in special schooling has lately come into prominence. For instance, investigated the capability advantage of animated educational tools for

students with dyslexia in higher education and confirmed that appropriate lively academic materials facilitate learning greater when as compared to static substances.

There are numerous studies analyzing the position of animation in teaching and getting to know of individuals with special needs and imparting proof based on various researches. However, whilst the literature is examined, it's miles visible that the variety of review research analyzing the usage of animation in special training as a prime subject matter and providing a framework is restrained. Consequently, these study pursuits to offer a complete overview on using animation in unique schooling and its advantages for individuals with special needs. Considering the fact that, the use of animation in special training received interest these days, it's far aimed to introduce the concept of animation as an academic device which may be used in unique training and make the studies in this discipline extra widely known. It is also aimed to collect and gift studies on the use of animation to enhance gaining knowledge of people with special wishes performed in distinct nations, settings and members. Through presenting a evaluation in this issue, its miles assumed that studies performed in the beyond would light the way for research with a view to be performed in the destiny. Therefore, its miles expected that this observe would provide a complete angle on the usage of animations for enhancing teaching of individuals with special needs.

2. METHOD:

Research model, records collection and information analysis of the cutting-edge observe are furnished in this section.

2.1 Research model

Document evaluation, that's one of the qualitative research techniques, changed into used because the studies model on this observe. Record evaluation is the examination of substances related with a positive studies subject matter. These substances might be written substances involving books, journals, newspapers, files or diaries and different substances consisting of films, video or pictures. File analysis is specially used when it is not viable to perform interview and remark. It is able to be extensively utilized to make affiliation between the records obtained from interview and commentary. When it's far used with facts series methods along with interview and commentary, it results in statistics triangulation and therefore the validity of the studies increases. Moreover, it's far indicated that report analyses have nice characteristics which includes topics that can no longer be accessed effortlessly, loss of responsiveness, long term length of evaluation, significance of pattern, individuality and originality, relatively low value and satisfactory.

2.2 Inclusion criteria

With a view to determine the studies to be protected in the literature assessment, the subsequent standards were taken into consideration:

- Open-get entry to complete papers posted in countrywide or international reviewed journals
- Open-get admission to proceedings posted within a symposium or a congress as complete papers
- Research on using animation for coaching concepts or talents to people with unique needs

2.3 Data Collection and Analysis of the Data

Document analysis includes three steps of evaluation which incorporates description, analysis and interpretation. The records collection and evaluation process is proven in below graphical presentation.



Firstly, inclusion standards had been decided in order to decide which studies may be blanketed inside the take a look at. After a comprehensive literature assessment, the published materials in instructional journals and books were collected from databases, introduced together and analyzed by means of the researchers within the have a look at. Then, all of the materials had been categorized based totally on issues. Ultimately, these categories have been analyzed in detail so one can constitute a framework for important dimensions based totally on the purpose of the examiner and the consequences of the look at had been received on this manner.

3. RESULT & DISCUSSION:

3.1 Use of animation in special schooling

Unique education can be described as a specifically designed shape of education for students with specific gaining knowledge of needs. Special schooling is the form of training in which individuals with special wishes get hold of training primarily based on their competencies, necessities, developmental characteristics and current overall performance stage so as to meet their academic and social wishes by means of experts through the use of especially designed instructional programs, materials and methods. It's miles taken into consideration that the technology so as to guide the unbiased existence of folks who need unique training could be useful. These technologies can be utilized in all areas of life, in addition to in the development, maintenance and enhancement of the useful abilities of the rookies in the school room surroundings. For this reason, it's miles of extreme importance that assistive technologies and laptop and animation technology are blanketed inside the schooling manner. Animation technologies are appeared to guide people' unbiased lives and facilitate their lives through assisting individual mastering while it is used correctly, supplying possibilities for people to make their lives less difficult, enhancing communication abilities and supporting to collect social talents. There may be additionally a very crucial difficulty, consisting of the strengthening of the connection among non-public education and generation and the right to same gets right of entry to technology for all individuals with the support of the rules.

Whilst the substances are visualized through animation, they end up greater concrete and narrative and therefore individuals with special needs may without difficulty examine. The potential of laptop and animation technologies to create learning surroundings consistent with individual variations and characteristics is visible as one of the most vital reasons for using those technologies in training. Effective use of computer and animation technology in the subject of unique education, where individual differences are very important, and the dissemination of this usage is a completely essential factor in terms of our training gadget.

Unique schooling research has gained momentum in recent years and parallel to those research, new tactics had been commenced to be blended with era inside the discipline of special schooling. Technological help and education paths are produced inside the twenty first century mainly within the regions of integration, individualized education packages, unique education access and teaching techniques. The use of laptop and animation technology with the aid of an effective educator, which has a vital ability for facilitating the teaching of particularly educated individuals, ought to be one of the vital goals. In addition, those technologies could be powerful in solving the problems with a purpose to be met in the day by day lives of people who have unique needs.

Visual and auditory schooling should be taken into consideration as one of the maximum critical methods of contemporary training in special training seeing that people with special desires study greater without problems while the substances are visualized. The abilities gained on this method and the experience received with these capabilities play an essential position in bringing the present ability of the child to the best stage. The kid will make sense of what he/she can do. Students with unique desires can see themselves as part of an event they watch even as looking the animation display. She/he thinks the person or hero who is being defined is himself/herself. Through animation, confidence, concord, capacity to act together, trusting and sharing the surroundings can give them the capability to do an activity and finish a task they started out.

In addition, hand moves, motor competencies and hand-eye coordination may be susceptible for people with intellectual disabilities and animations may be used to overcome this case. The choice for animation in special schooling will permit youngsters to have amusing through gaining knowledge of, letting those help their creativity and also permitting them to actively participate in their sports. Kids can show the whole lot they've with the help in their countless imagination and lively participation makes energetic and everlasting gaining knowledge of. Active participation may be facilitated if the activities are organized in accordance with the hobbies and goals of special desires individuals, attention span and developmental traits. In unique education, the use of animation events may encourage youngsters who're mainly shy. They examine to speak well and correctly, to influence what they're pronouncing and others, as a way to control voice tone and actions even as talking, to take initiative, and to manipulate themselves and others. Individuals with unique wishes participate in animation activities and benefit the potential to remedy issues with their buddies by using themselves. Those experiences convey youngsters the essential habits of tolerance, patience, notion, right and vital response, adherence to the rules, and prepare them to experience group work.

3.2 The usage of animation strategies in computer aided education

The most effective studying aspect of computer assisted education is to locate the animation effectively in the educational process and to address visible preparations for verbal exchange. Thus, said that the expertise and alertness of

the interplay of motion, sound, time and visible communication in the animation inside the schooling manner will give the best results for educational conversation.

The conveniences of state-of-the-art "multimedia" software program have made full-size structural adjustments in the sector of education. The presentation of an image, voice and movement is transmitted to the viewer extra easily. Animation is used within the visual expression of occasions in the produced education system programs. The message is more attractive while the colors, movements and texts used inside the schooling machine are offered in an amazing composition on the screen. Educational animations include motivating and enjoyable capabilities of laptop and education and may be used as an alternative, supplement and enrichment of different teaching strategies for instructional or academic functions. Animation-based totally gaining knowledge of aims at mastering of students in educational pc aided animations. The traits of getting to know with animation are as follows.

- It's far an academic course that scholars comply with usually.
- There can be many forms of educational animation video games and video animation.
- For every content material, students can provide a wide range of animation by way of combining different styles of animation with extraordinary learning methods.
- Academic animations offer hidden gaining knowledge of.
- The students play with or watch the animation with pleasure and when it finishes they realize that he /she has learnt something from it.
- Academic animations can be combined with different mastering techniques and provide entire learning.

4. CONCLUSION AND RECOMMENDATIONS:

Within the age that we're dwelling in, it is advocated for instructors and different professionals of training to comply with the developments in generation and use tools of records technologies in schooling in a powerful manner, as an instance in teaching process and offering lectures. Use of animation as one of the powerful tools of data generation in education has improved currently and its miles surprisingly advocated applying animation to decorate gaining knowledge of people with unique needs further to people with normal improvement. This look at provided a review for studies displaying the function of animation in unique schooling. Effects typically showed that primarily based on the growing use of technology in unique education, animations won notable attention lately and observed to be an effective instructional tool for enhancing getting to know of people with special desires. Research discussed within the modern have a look at showed that animations are in particular determined as useful for people with dyslexia, autism spectrum ailment and highbrow disability. In addition, language and social competencies were the maximum studied skills inside the research on the use of animations to beautify gaining knowledge of individuals with special wishes. It changed into located that instructional talents which include analyzing, writing and mathematical competencies have been now not often studied yet.

In end, this observe tried to provide a comprehensive review on the effectiveness of the use of animation in training and discussed the existing and feasible benefits of the usage of animation for people with unique desires. Primarily based on the outcomes received from the present take a look at, following recommendations for similarly studies and practices are provided:

- Experimental researches might be executed in order to reveal the effectiveness of animation in improving studying performances of individuals with unique wishes.
- Effectiveness of animations in teaching individuals from different incapacity agencies consisting of interest deficit hyperactivity disorder, listening to impairment and giftedness might be tested.
- In service trainings is probably prepared in order to boom special education teachers' know-how and talents on using and integrating animations in teaching.
- Instructor schooling packages in universities would possibly encompass greater publications on integrating technological tools into unique schooling environments that allows you to create cognizance amongst preserves special training instructors.
- Instructional abilities, especially reading, writing and mathematical talents, need to be investigated as well whether animations are effective gear for coaching academic competencies to people with unique needs.

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Author biography

Dr. Rahul Kushwaha, have 16+ years experience in 3D animation & education. After completing his M.Sc. In Multimedia he has been awarded Ph.D. in New Media from Amity University Haryana, India. He is working since 2003, for various national/international animation production studios. He has worked as 3D Team Lead/Supervisor for studios like UTV motion Pictures, DQ Entertainment ltd, MAAC and Color chips on Big Budget national/International animation movies like *The Legend Of Dragon* (2D), *Arjun-The Warrior Prince*, *Barbie Diaries* and Series DVD projects like Disney's *Mickey Mouse Clubhouse*, *Big Idea' 3-2-1-Penguins*, *Cosmic Quantum Ray*, *Donkey Ollie*, *Miki-Do*, *Tak" the Power Of Juju"*, Sony picture "GEO-TRAX" etc.. At present he is engaged with Amity University Haryana, (India), as *Assistant Professor - Animation & Multimedia* sharing his production experience and knowledge with students.

