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ANIMATION: A LEARNING TOOL

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Abstract - Childhood has changed rapidly over the past few years and the methods that we use as teachers and educators of children and young people should reflect these changes. Children learn best and most when they enjoy what they are doing. Using animation as a tool to encourage and develop children's learning is not only fun but effective! Use of animation in special education has gained great attention recently. Therefore, the use of animation for helping individuals with special needs has become an important research question and this study aims to examine and discuss the role of using animation as a tool to enhance learning of individuals with special needs. This is a qualitative study in which document analysis was used to collect the data. Results revealed the trends in using animation in education and the benefits of animation for enhancing learning of individuals with special needs. This study tried to provide a comprehensive review on the effectiveness of using animation in education and discussed the existing and possible benefits of using animation for individuals with special needs. Results are discussed with relevant literature and recommendations for further research and practices are presented in the study.

Keywords – Animation, learning, individuals with special needs, special education**.**

INTRODUCTION

In gift world of animation we've all quite technology we'd like to provide animation movies with higher graphics. Animated demonstrations square measure progressively used for presenting the practicality of assorted pc applications, in flick creating for camera work Associate in nursing additional or less additionally in education business as an education tool. Withal, our understanding of whether or not and the way students integrate this technology into their learning methods remains restricted. Although, many studies have examined animated demonstrations' learning potency, this study aims at investigation users initial attitudes towards animated demonstrations. Animation isn't simply the motion of few characters on screen however it's additionally a good medium to form folks perceive the message, particularly young children. Attitudes concerning data sources play a determinative role for his or her acceptance as a result of Quantitative and qualitative data each will be shown in animation. The recognition of mistreatment animations to assist learners perceive and bear in mind data has greatly inflated since the appearance of powerful graphics-oriented computers and animation creating code. This code permits animations to be made rather more simply and cheaply than hand drawn animation. Previously, ancient animation needed specialised labour-intensive techniques that were each long and big-ticket. In distinction, code is currently offered that creates it doable for individual educators to author their own animations while not the requirement for specialist experience. Lecturers are not any longer restricted to counting on static graphics however will pronto convert them into instructional animations. During learning of animation and their use as a pc and graphics learning tool that square measure made by mistreatment animation code. the main target is on making a brief animation graphics and a flick and on making the character animation mistreatment animation code and different Softwares to make graphics and character and our main saying is to propose a theory that deals with understanding of things instructed in categories if instructed with facilitate of some quite illustration or through motion of objects or straightforward words through animation. However, primarily the project is additionally involved with researching the core principles and ideas of animation towards showing it's an honest learning tool and understanding a way to apply them to a drawn character so as to make the illusion of life.

I. BASIC PRINCIPLES

Twelve principles under the title "Basic Principles of Animation" have been identified. These principles, which were determined in the 1980s by the need to determine the rules of a two-dimensional (2D) animation world, are still

valid today and must be taken into account in order to obtain realistic motion in a three-dimensional (3D) animation platform .

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

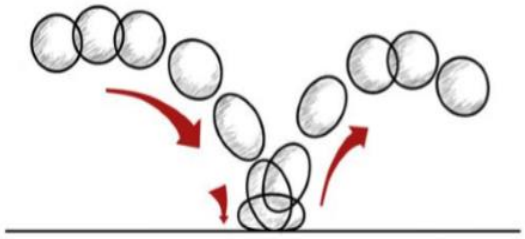

Fig. Example of Extreme Use of Squash And Stretch

There are various studies examining the role of animation in teaching and learning of individuals with special needs and providing evidence based on various researches . However, when the literature is examined, it is seen that the number of review studies examining the use of animation in special education as a main topic and providing a framework is limited. Therefore, this study aims to provide a comprehensive review on the use of animation in special education and its advantages for individuals with special needs. Since, using animation in special education gained attention recently, it is aimed to introduce the concept of animation as an instructional tool which can be used in special education and make the studies in this field more widely known. It is also aimed to collect and present studies on using animation to enhance learning of individuals with special needs carried out in different countries, settings and participants. Through providing a review on this issue, it is assumed that studies conducted in the past would light the way for studies which will be conducted in the future. Accordingly, it is expected that this study would provide a comprehensive perspective on using animations for enhancing teaching of individuals with special needs.

II. THE USE OF ANIMATION TECHNIQUES IN COMPUTER AIDED EDUCATION

The most effective learning aspect of computerassisted education is to locate the animation correctly within the educational process and to handle visual arrangements for communication. Accordingly, stated that the understanding and application of the interaction of movement, sound, time and visual communication within the animation in the education process will give the best results for educational communication. The conveniences of today's "multimedia" software have made significant structural changes in the field of education. The presentation of an image, voice and motion is transmitted to the viewer more easily. Animation is used in the visual expression of events within the produced education system programs. The message is more attractive when the colors, movements and texts used in the education system are presented in a good composition on the screen [39]. Educational animations contain motivating and entertaining features of computer and education and can be used as an alternative, complement and enrichment of other teaching methods for instructional or educational purposes. Animation-based learning aims at learning of students in educational computer aided animations. The characteristics of learning with animation are as follows .

- It is an educational course that students follow visually.
- There can be many kinds of educational animation games and video animation
- For each content, students can offer a wide range of animation by combining different types of animation with different learning methods.
- Educational animations provide hidden learning.
- The students play with or watch the animation with joy and when it finishes they realize that he /she has learnt something from it.
- Educational animations can be combined with other learning methods and provide complete learning.

III. USE OF ANIMATION IN SPECIAL EDUCATION

Special education can be defined as a specially designed form of education for students with different learning needs. Special education is the form of education in which individuals with special needs receive education based on their competencies, requirements, developmental characteristics and current performance level in order to meet their academic and social needs by professionals through using specially designed educational programs, materials and methods . It is

considered that the technologies that will support the independent life of individuals who need special education will be beneficial. These technologies can be used in all areas of life, as well as in the development, maintenance and enhancement of the functional skills of the learners in the classroom environment . For this reason, it is of utmost importance that assistive technologies and computer and animation technologies are included in the education process. According ly, computer and animation technologies are regarded to support individuals' independent lives and facilitate their lives by supporting individual learning when it is used effectively, providing opportunities for individuals to make their lives easier, improving communication skills and helping to acquire social skills. There is also a very important issue, such as the strengthening of the relationship between private education and technology and the right to equal access to technology for all individuals with the support of the legislation . When the materials are visualized through animation, they become more concrete and narrative and therefore individuals with special needs might easily learn. The ability of computer and animation technologies to create a learning environment according to individual differences and characteristics is seen as one of the most important reasons for using these technologies in education. Effective use of computer and animation technologies in the field of special education, where individual differences are very important, and the dissemination of this usage is a very important point in terms of our education system . Special education research has gained momentum in recent years and parallel to these studies, new approaches have been started to be combined with technology in the field of special education. Technological support and training paths are produced in the 21st century especially in the areas of integration, individualized education programs, special education entry and teaching methods. The use of computer and animation technology by an effective educator, which has an important potential for facilitating the teaching of specially educated individuals, should be one of the important targets. In addition, these technologies will be effective in solving the problems that will be met in the daily lives of individuals who have special needs . Visual and auditory (by doing - living) training should be considered as one of the most important methods of modern education in special education since individuals with special needs learn more easily when the materials are visualized. The skills gained in this process and the experience gained with these skills play an important role in bringing the existing capacity of the child to the highest level. The child will make sense of what he/she will do. Students with special needs can see themselves as part of an event they watch while watching the animation show. She/He thinks the person or hero who is being described is himself/herself. Through animation, confidence, harmony, ability to act together, trusting and sharing the environment can give them the ability to do a job and finish a job they started. In addition, hand movements, motor skills and hand-eye coordination may be weak for people with mental disabilities and animations can be used to overcome this situation. The preference for animation in special education will allow children to have fun by learning, allowing them to support their creativity and also allowing them to actively participate in their activities. Children can show everything they have with the help of their infinite imagination and active participation makes active and permanent learning. Active participation can be facilitated if the activities are prepared in accordance with the interests and desires of special needs individuals, attention span and developmental characteristics. In special education, the use of animation events might encourage children who are particularly shy. They learn to speak properly and accurately, to influence what they are saying and others, to be able to manage voice tone and movements while talking, to take initiative, and to manage themselves and others. Individuals with special needs participate in animation events and gain the ability to solve problems with their friends by themselves. These experiences bring children the necessary habits of tolerance, patience, perception, proper and necessary response, adherence to the rules, and prepare them to enjoy group work. Furthermore, examined the effect of animated software named as Team Up With Timo on receptive and expressive language skills of children with language and speech disorders and showed that animated software promoted children's language

skills. In addition, stated that expressing themselves with both verbal and body language is difficult for children with autism spectrum disorder and emphasized that using animated narratives for developing language skills of children with autism spectrum disorder would be beneficial. Besides, they also indicated that since the abilities of the children with autism spectrum disorder on focusing on visual details are at an advanced level, using moving objects such as animation would reduce their anxiety levels and promote explaining, transferring and creating abilities of students with reading and writing difficulties. In another study examining the effectiveness of graphic animation tools for learning verbs among students with autism spectrum disorder, it was found that using graphic animations is more effective on learning verbs when compared to static pictures . According to literature, there are research findings showing the role of animation for enhancing learning of individuals with intellectual disability. For example, examined the effect of

animation on learning action symbols among individuals with intellectual disabilities with a single-subject research and figured out that participants benefited from animated symbols in the experimental condition. Examined the role of using animated social narratives for teaching social skills to individuals with mild intellectual disability and found that it is effective. Besides, tested whether teaching with animations improve shopping skills of individuals with intellectual disability. They carried out a single subject research with multiple probe design across subjects and showed that animations promoted their shopping skills. In addition, investigated the effect of animation program presented with tablet computer on the effectiveness, permanence and generalization of learning addition skills of students with intellectual disability and showed that using animation program is effective on teaching addition skills to students with intellectual disability and promote permanence and generalization of learning.

IV. COGNITIVE BEHAVIOUR OF STUDENTS USING ANIMATION AS A LEARNING TOOL

Cognitive conduct of an individual uncommonly an understudy while learning lets us know about his fixation, his advantage towards the subject and the way he approaches towards the subject. This conduct lets us know that whether individual is taking interest or not while being a piece of the class. With exploration done in this cognitive conduct region we saw that understudies who are the piece of the classroom program, things are taught by an educator by simply clarifying the point orally or by specifying the critical focuses by composing it on the board. However in our hypothesis when understudies are taught the themes by clarifying them with the assistance of pictures, design shaded or not and by films or ought to say liveliness there are couple of things we recognized which demonstrate that somehow understudies are more focusing on subjects than before and they are creating the nature of imaging the things. Understudies are presently understanding things better and their learning effectiveness is additionally expanded yet it likewise fluctuate with the representation of movement, the quality educating with showing distinctive themes with things like liveliness and shading illustrations.

V. CONCLUSION

In the age that we are living in, it is recommended for teachers and other professionals of education to follow the trends in technology and use tools of information technologies in education in an effective way, for example in teaching process and presenting lectures. Use of animation as one of the effective tools of information technology in education has increased recently and it is highly recommended to use animation to enhance learning of individuals with special needs in addition to individuals with typical development. This study provided a review for studies showing the role of animation in special education. Results primarily showed that based on the increasing use of technology in special education, animations gained great attention recently and found to be an effective instructional tool for enhancing learning of individuals with special needs. Studies discussed in the current study showed that animations are mainly found as beneficial for individuals with dyslexia, autism spectrum disorder and intellectual disability. In addition, language and social skills were the most studied skills in the studies on using animations to enhance learning of individuals with special needs. It was observed that academic skills such as reading, writing and mathematical skills were not frequently studied yet. In conclusion, this study tried to provide a comprehensive review on the effectiveness of using animation in education and discussed the existing and possible benefits of using animation for individuals with special needs. Based on the results obtained from the present study, following recommendations for further research and practices are provided:

• Experimental researches might be carried out in order to show the effectiveness of animation in enhancing learning performances of individuals with special needs.

• Effectiveness of animations in teaching individuals from different disability groups such as attention deficit hyperactivity disorder, hearing impairment and giftedness might be examined.

• Inservice trainings might be organized in order to increase special education teachers' knowledge and skills on using and integrating animations in teaching.

• Teacher training programs in universities might include more courses on integrating technological tools into special education environments in order to create awareness among preservice special education teachers.

• Academic skills, especially reading, writing and mathematical skills, should be investigated as well whether animations are effective tools for teaching academic skills to individuals with special needs.

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