



VIDHYAYANA

An International Multidisciplinary Research e-Journal

ISSN 2454-8596

www.vidhyayanaejournal.org

Evolution of Animations Technology and Its Appeal as a Tool to Educate

Archana G. Pandya

Research Scholar, School of Education, DE & ET,
Dr. Babasaheb Ambedkar Open University, Ahmedabad
Email: arcmehta995@gmail.com

Abstract

It has been observed that the efficiency level of the students in primary schools of Gujarat is not up to the mark in the sense of their ability to understand spoken English, reading writing and speaking English as such. The achievement of students in English subject is not matching learning outcomes prescribed by the education system of Gujarat. The researcher has tried to make a **review**, as a platform of a larger scale experimental study, what are the stages of evolution of Animations and its appeal to people and the scope of its use as a tool to teach English subject in primary schools in particular and all other subjects at various grades in general. This paper presents a brief survey of the evolution of animation technology and the studies made on the use of animation in education and indication of the scope if further study.

Key Words: Evolution of Animation Technology, Motion films, Moving pictures



VIDHYAYANA

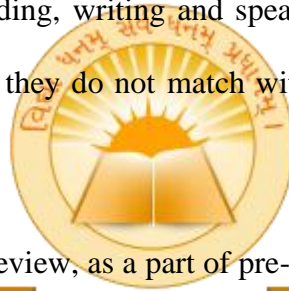
An International Multidisciplinary Research e-Journal

ISSN 2454-8596

www.vidhyayanaejournal.org

Introduction:

English language is being taught from first standard in many schools and officially offered from fifth standard in the schools affiliated to the state board in Gujarat. However, it is found that the teachers who teach English, are not necessarily those who have neither studied English in Graduation as a main subject nor have they obtained any specific certificate, diploma or degree especially to claim the efficiency to teach English language as such. Most of the teachers, having degrees in other subjects, have either accepted this situation as a challenge and tried to master required skills or have accepted the situation unwillingly, taking it as an extra burden thinking that there is no option but to accept it. The obvious result is this that the efficiency level of the students in primary schools of Gujarat is not up to the mark in the sense of their ability to understand spoken English, reading, writing and speaking English as such. The achievement of students in English subject is so low that they do not match with the learning outcomes prescribed by the education system of Gujarat.



VIDHYAYANA

So the researcher has tried to make a review, as a part of pre-task of a larger scale experimental study, to find out the stages of evolution of Animations, its appeal to people and the scope of its use as a tool to teach English subject in primary schools in particular and all other subjects at various grades in general. The

Concept of Animation:

Etymologically the meaning and root of the word 'Animation', we find, as per Wikipedia, (retrieved in 2017) Animation word has been taken from Latin word "*animatio*," which refers to "the act of bringing to life" and other Latin word "*animo*" which means "to animate" or "give life to". The researcher has developed deep understanding and awareness about animation through the inexhaustible sources available in the form of books and web publications. Summarised facts of what the researcher has referred to and reviewed are furnished below.

**Evolution of Animation:**

If we consider the animation as merely the act of creating the illusion of movement through still images, we may observe that the craft began hundreds of thousands of years ago. We're all familiar with the stereotypical cave painting imagery which usually depicted hunting in motion. The Victorians also figured out how to create moving stills to trick the eyes into thinking the image was animated. Certain devices that were invented in early nineteenth century laid foundation to the present form of animations. These devices are discussed in brief.

Devices that preceded Animations:

A cardboard circle was invented in 1824 named **Thaumatrope**. It has two holes on opposite sides and an image drawn on both the sides of the disc. Strings are threaded through the two holes on left and right ends. When you spin the cardboard circle with the help of strings, it shows a single image between the two sides (positive after-images). (Ryne, 2018). In 2012, it was reported that a prehistoric Thaumatrope had been discovered in the Chauvet Caves in France, (Wikipedia, retrieved 2018) but it is very uncertain whether this little disc was actually perceived as a Thaumatrope when it was made. Some believe that it was created by Astronomer Sir John Herschel, while some give credit of its invention to John Ayton Paris, British physician, in 1824 who talked about this invention in a book he published in 1827. **Faraday's Wheel** was invented during 1824 to 1830. It had 2 cogs/gears with gaps at regular intervals (similar to a bicycle tire) turn in opposing directions at the same speed. If you looked past the first spinning part to the farthest one, it appeared to not be moving. A static image was on the second gear, which was seen without any blur. Instead of having two gears, the same effect worked with just one gear placed in front of a mirror (look past the gear to the mirror). This would be a precursor to the Phenakistoscope. **The Phenakistoscope** was invented in 1832 by Belgian Physicist Joseph Plateau. It was a popular Victorian parlour toy, generally marketed for



VIDHYAYANA

ISSN 2454-8596

www.vidhyayanaejournal.org

An International Multidisciplinary Research e-Journal

children — is widely considered to be among the earliest forms of animation and the precursor to modern cinema. The device was operated by spinning the cardboard disc, and viewing the reflection of the image in a mirror through a series of moving slits. Through the distortion and flicker, the disc created the illusion that the image was moving. Women danced, men bowed, and animals leapt in short, repeating animations. A **Zoetrope**, invented in 1834 is one of the pre-film animation devices that produce the illusion of motion by displaying a sequence of drawings or photographs showing progressive phases of that motion. William George Horner (1786-1837) decided to put the phenakistoscope in a hollow drum and called it as Zoetrope. In this, a cylinder with pictures serially linked on the inner surface when spun, makes a moving picture. Viewers watched the picture from the slots created within the drum. The principle followed was that the human retina retains an image for about a tenth- of-a-second. So, arrangement of the images inside the drum is such that a new image appears in that time. This made the sequence uninterrupted and continuous. It was basically a cylindrical variation of the phénakisticope, suggested almost immediately after the stroboscopic discs were introduced in 1833. The definitive version, with easily replaceable picture strips, was introduced as a toy by Milton Bradley in 1866 and became very successful. **Praxinoscope** was invented in **1877**. Charles Emile Reynaud, a French science teacher invented improvised version of Zoetrope known as Praxinoscope. It was used by him for projecting first animated movie *Pantomimes Lumineuses* by his *Theater Optique* Film system patented in 1888. It uses a strip of images placed around the inner surface of a spinning cylinder as similar to Zoetrope. In addition to it, narrow slits were replaced with inner circle of mirrors and the reflection of pictures appeared through the mirrors give an illusion of motion. **Flip Book** was appeared in Sep 1868, and was patented by John Barnes Linnett under the name *Kineograph* ("moving picture"). A **flip book** or **flick book** is a book with a series of pictures that vary gradually from one page to the next, so that when the pages are turned rapidly, the pictures appear to animate by simulating motion or some other change. Flip books are often illustrated books for children, but may also be geared towards adults and employ a series of photographs rather than drawings. Flip books are not always separate books



VIDHYAYANA

An International Multidisciplinary Research e-Journal

ISSN 2454-8596

www.vidhyayanaejournal.org

but may appear as an added feature in ordinary books or magazines, often in the page corners. **Cinematographe** was first invented and patented as the "Cinématographe Léon Bouly" by French inventor Léon Bouly on February 12, 1892. Bouly coined the term "cinematograph," from the Greek for "writing in movement." Due to lack of money, Bouly was unable to develop his ideas properly and maintain his patent fees, so he sold his rights to the device and its name to the Lumière brothers. In 1895, they applied the name to a device that was largely their own creation. Lumiere Brothers improvised the Edison's Kinetograph in 1895 with better facilities such as projector for mass screening, hand operated and easy to transport. A light from a lamp mounted behind the semitransparent film projects a series of sequentially changing images onto the screen. If this goes quickly enough, a picture replaces another too quickly for the eye to perceive the change, thereby forming a moving image. **Zoopraxiscope** (1879-80) was formerly known as Zoographiscope and Zoogyroscope. It is an early device for displaying moving images. One of the most resembling and important predecessor of the movie projector is Zoopraxiscope. It was conceived by photographic pioneer Edward Muybridge in 1879 (and built for him by January 1880 to project his famous chronophotographic pictures in motion and thus prove that these were authentic). Muybridge used the projector in his public lectures from 1880 to 1895. The projector used 16" glass disks onto which Muybridge had an unidentified artist paint the sequences as silhouettes.

Thus, we find a series of devices that preceded the present day animations. In the sequence of these devices, animation films started being featured in twentieth century and the progress in discussed herewith.

The first animated features:

The first animated feature in twentieth century was *El Apostol* by Quirino Cristiani, (Wikipedia, retrieved 2018). It was released on 9 November 1917 in Argentina. This successful 70 minute satire utilized a cardboard cutout technique, reportedly with 58,000 frames at 14 frames per second.



VIDHYAYANA

ISSN 2454-8596

www.vidhyayanaejournal.org

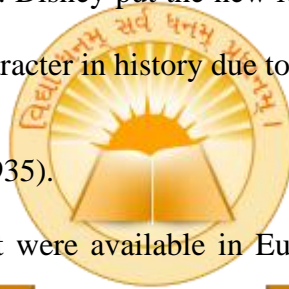
An International Multidisciplinary Research e-Journal

Introduction of synchronized sound (1924-1928):

From May 1924 to September 1926, Dave and Max Fleischer's Inkwell Studios produced 19 sound cartoons, part of the Song Car-Tunes series, using the Phonofilm "sound-on-film" process.

The Time of Walt Disney's Mickey Mouse (1923):

Walt Disney had a tough time economically and his Laugh-O-Gram Studio animations couldn't help him much. He then collaborated with Ub Iwerks and had some success with the Alice Comedies series from 1923 to 1927. Felix-inspired Julius the Cat are the initial success seriates. The fully animated series of Oswald the Lucky Rabbit followed in 1927 and became a hit, but in 1928 Universal Studios took direct control of production and Disney lost the rights to the character. Then Disney and Ub Iwerks developed Mickey Mouse in 1928 to replace Oswald. Disney put the new Mickey Mouse cartoon and Mickey Mouse soon become the most popular cartoon character in history due to animation combined with sound effects.



Introduction of Color in Films: (1930-1935).

The lithographed films for home use that were available in Europe in the first decades of the twentieth century were multi-coloured, but the technique does not seem to have been applied for theatrically released animated films. The original prints of *The adventures of Prince Ahmed* featured film tinting, but most theatrically released animated films before 1930 were black and white. Two-strip color were also used in a cartoon segment in the feature film *King of Jazz* (April 1930), made by Walter Lantz and Bill Nolan, was the first animation presented in two-strip Technicolor.

Conclusion:

To conclude, we can say that cartoons and animation technique has a long and romantic history. Many cartoon Superstars and Super Characters are all time favorite to children and even the aged people. We still remember Mickey Mouse (1932), Pluto (1930), Goofy (1932), Donald Duck (1934), Popeye (1933), Superman (1941), Pussycat & Tweety (1945), *Scooby-Doo* (1969), Tom and Jerry (1940), and the list will



VIDHYAYANA

ISSN 2454-8596

www.vidhyayanaejournal.org

An International Multidisciplinary Research e-Journal

go on and on. These days we can see our children fond of watching Richie Rich, Oswald, Oggy, Shinchan, Doraemon, Ninja Hattori, Slugtera, Dragonball, Beyblade, Chhota Bhim, Motu Patlu, and Ben10 and so on. However, these characters contributed to the world of entertainment- the film industry. Such an interesting thing, if used in education, can't be beneficiary? It is not that it isn't used in education, but we don't find any effective use of it in education. This research, thus has a clear rational to make inquiry in this direction.

References:

- Desai, Amjad (2015). Animation in Education. Retrieved from <http://www.cgpundit.com/animation-in-education/> retrieved on 5th July 2015
- <http://arjournals.annualreviews.org>
- <http://en.wikipedia.org/wiki/Animations>
- <http://unicef.in/Story/1145/-Meena----animated-spots-on-girls--education-go-on-Air>
- http://www.ncert.nic.in/departments/nie/del/publication/pdf/english_primary_level.pdf
- http://www.ncert.nic.in/new_ncert/ncert/rightside/links/pdf/focus_group/english.pdf
- <https://www.britannica.com/art/animation>
- Kothari, C.R., (1994). Research Methodology. New Delhi:Wiley Eastern Ltd. New Age International Ltd.
- Patel, R.S. (2017). Fundamental Concepts of Research: Research Handbook. Ahmedabad: Jay Publication
- Uchat, D. A. (2009). Research Methodology in Education and Social Sciences. Rajkot: Shant Publication



VIDHYAYANA