

# Multimedia Education System for Hear Impairment Children

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## **Abstract**

*The hear impairments students always facing problem of communicating with their teachers and colleagues which may affect negatively in their education and attitudes, there must be any kind of tool to facilitate and enhance the education components for them. Multimedia Education System for Hear Impairment Children is application system designed to help a learning media for that kind of children (3-5 Years) to understand the basics of language, math, etc...In schools they use traditional ways that is not attractive and don't improve child's Intelligence and there's no specialist teachers to teach this kind of children and our system project will provide modern ways to teach and improve child's intelligence by using computerized games and to be more attractive by using multimedia like images, videos, animations etc.*

**Keywords:** *Multimedia Education System, Education of Deaf and Hear Impairment children, sign language.*

## **Introduction**

There is no enough specialist staff to teach deaf and dumb children, that make it high cost: Deaf and dumb children need a special way to teach. They need special teacher who know their state of psychological, to know how to communicate with them, how to pronounce a words carefully to save and understand it, and there is no enough teacher know how to do that. And when the school what a teachers they need a high cost to nomination them. The deaf and dumb children found it difficult to understand the lessons because the inability to hearing and speaking

## **Multimedia Education System**

The use of multimedia in teaching and learning presents challenges for higher education institutions. Multimedia refers to any computer-mediated software or interactive application that integrates text, color, graphical images, animation, audio sound, and full motion video in a single application.

It is cautiously labelled by all the major combinations. Interactive multimedia decides to organize ‘what’ and ‘when’ and ‘how’ of the fundamentals which are to be conveyed and presented. No media fundamentals can be available individually. In this way, Multimedia should be understood by the users and they have to take the control over the matters that is presented, to be clear of interactive multimedia. To illustrate, a lecture may engross the student pressing ‘enter’ to go on to the subsequent screen in a step by step fashion process in the selected concept in the specified subject

### Important Characteristics of Multimedia

The above scrutiny states the definitions of multimedia, few important characteristics are discussed as follows.

1. Multimedia can store and have a reclamation system which stores more information than any human agents. Students can access a number of information through the terminals present in multimedia.
2. The progress of multimedia depends upon on the instructional and maintenance system which provide a means for initiating learning centers. In these learning centers a huge number of representations of learning can be realized over a high range of content which varies in complication.
3. Media technology plays a sustainable role to enhance students with many different things and also help them as a support system to learn in many ways.
4. Multimedia helps the students to comprehend the form and the range of instructional and informational supports.
5. Multimedia systems can be applied to any type of learning and the instructional mode which supports certain range.
6. Multimedia system encourages the students to listen cautiously and it plays a superior role than normal classroom learning. It helps the teachers to create a variety of learning models for the students.

7. Multimedia endow with vast number of chances to learn multifaceted skills which can help the students to face an assorted and fixed hypothetical facts.
8. Multimedia helps the teachers to win over their classes and can establish many models of teaching and learning. Above all importance of multimedia characteristic considered as need based one for different types of learners.

### Essential Elements of Multimedia

Before going into multimedia packages it is obligatory to enhance our knowledge with various fundamental elements of multimedia. They are as follows.

#### Text

The text plays a vital role in multimedia and insertion of textual information is the common step for the development of multimedia software. A word, single line or a paragraph are some of the forms of textual data.

#### Graphics

One of the major basic elements of multimedia is graphics. The students in the class may not be able to understand the concepts and information brought out by text. But graphics helps the students to understand the concepts and ideas easily. By using images, videos and popular graphical images liked by the students, any concepts and methods can be exemplified easily. These types of learning make the students sturdy and successful in their studies. These methods can enhance the students to recall and maintain when it is add-on with pictures and graphical images.

#### Animation

Animation makes small changes in the screen pictures that can be displayed as moving images. Animations are basically formed by drawings. Animated pictures are used to

explore the teaching process and it highlights the impact of presentation. Animated pictures, videos or graphics motivates and increase the comprehensive capacity of the students. Animations make the students to listen the subjects to longer time and it results in better learning progress. Animated way of teaching the students reduces their learning time and increases their memory span.

### **Video**

The video is also a vital element of multimedia. The students may not understand the subjects taught through the formats like text, diagrams or graphs. But video format can attract the students immediately and it can make them to understand the intricate subject matter easily. Video is made up of a group of images converted to video frames that has minor changes gives the impression of movement.

### **Audio**

Audio is another key element of multimedia. Audio format makes the students understand easily and the people who are weak in reading can make use of this audio element. Nugent (1982) in his research pointed out that audio has various advantages for presenting simple material for learning to young students. Sound makes the students to listen and it makes the visual even more interesting. It can stimulate and maintain interest which provides a perfect feedback.

### **Colour**

In multimedia, colour plays a vital role that selecting a colours cautiously make the information more attractive. Colours draw student's mind towards significant points or information. For improved effects of use of multimedia, a reliable colour format is used for entire presentation. Colours are used constantly to stress the main points in the subject. Screen Design: - Screen design takes a chief role in

delivering the information to the learners. Multimedia developers concentrate more on this element to enhance the learners' field of interest. Mukhedee and Edmonds (1993) broaden the traditional definition of screen design to include the co-ordination of textual and graphic elements to present sequenced content in order to facilitate learning. Well designed screen helps the learner to maximize their comprehension from the content by providing appropriate control of the learning process. Good screen design is the reason for learners to build up and retain interest in the subject matter

### **Advantages of Multimedia for Teachers and Students**

- Multimedia has various benefits for both teachers and students some of them are as follows, Multimedia grants a better or amplified learning experience at a low cost for every student. The power of multimedia can be unleashed to provide long term profit to all.
- Multimedia makes the teaching learning process stretch in time and space. Students can learn any time at any place. It is the process of education which makes the students to achieve their goals and make them to participate.
- Use of multimedia, improve the relationship between the teacher and the students. Multimedia facilitates learning to become amusing and sociable without panic of scantiness or breakdown.
- An instructional material has different ways to present in front of the learners. By using multimedia the students are able to choose the reasonable transmit which is meaningful to them. This makes the matter more pertinent and produces greater aspiration for learning which eventually helps in mounting the retention of information for longer time. The multimedia uses the

usual information, dealing out the abilities in the form of sensory organs in union with brain and this form a dreadful system of knowledge attainment.

- The multimedia enables the learner to organise the information in a manner that reflects his learning styles, thereby improving the retention and retrieval of knowledge. (Norman, Genter, Steva, 1976) Multimedia acclimatizes well to individual differences of each and every student. Multimedia help in gathering the desires of different kinds of learners due to advanced degree of learner control and the ability to plot too many learning styles. Visual learners gaze at online videos, while auditory learners pay attention to audio. Students who necessitate extra practice use these tools again and again.
- The students can get the chance to interact with the people of different countries and learn about their customs, cultures. These things helps the students broaden their outlook. Multimedia helps the teacher to teach their subject with flexibility and with lot of illustrations. Some topics or content cannot be taught with the help of textbooks or by classroom lectures. By using online and multimedia packages three dimensional working representations related to different topics can be shown. Multimedia helps in developing fundamental ability of a student by means of drill and training. It facilitates learning through exploration, detection and familiarity. Multimedia helps in extending higher cognitive abilities like analytical, creativity and imagination. This also helps in meeting the scarcity of teachers and other amenities. The well planned and well equipped multimedia programs can be easily contacted by teacher and students in isolated and unreachable areas. Multimedia helps in managing and administrating the classroom activities,

learning content and conjure up real life problem handling environment. Various multimedia educational courses have been intended, developed and executed as a result to various problems in numerous disciplines.

### **Sign Language**

Sign languages generally develop within deaf communities, which may include interpreters and friends and families of deaf people, as well as those who are deaf or hard of hearing themselves. A sign language is a language which, instead of acoustically conveyed sound patterns, words carefully to save and understand it. And there is no enough teacher know how to do that. And when the school what a teachers they need a high cost to nomination them

### **Deaf and Hear Impairment Education**

Teaching deaf children offers a wide range of work opportunities in a number of different types of educational setting. It is challenging and stimulating work that encourages initiative and allows teachers to develop innovative classroom practices.

### **The Importance of Multimedia Education System to Deaf Child**

In our society there is no enough specialist staff to teach deaf and dumb children, that make it high cost. But multimedia makes it easy to teacher to teach and save costing money. Use of traditional education tools for children is not attractive way, but when using games and multimedia tools it will be more attractive. The deaf children found it difficult to understand the lessons because the inability to hearing and speaking. Multimedia tools will make these children respond to the education and facilitate the delivery of information to them. In Schools. They don't use methods for development of child's intelligence, but our main idea is to

strengthen a child's intelligence and learn new skills .

### **Challenges in the use of Multimedia Education System to Deaf Children**

There is no enough specialist staff to teach deaf and dumb children, that make it high cost

Deaf and dumb children need a special way to teach. They need special teacher who know their state of psychological, and to know how to communicate with them and how to pronounce a words carefully to save and understand it. And there is no enough teacher know how to do that. And when the school what a teachers they need a high cost to nomination them, Multimedia educational learning plays a vital role in education and in learning and teaching process which can provide an amicable environment for hearing disability students. Direct conventional method & interactive multimedia method was found that the acquired retention was better in case of interactive multimedia method .

### **Use of Traditional Education Tools for Children is not Attractive Way**

Most of the children in most parts of the world do not like going to school, because they always want to play and entertaining. When there is a way to teach them with some of the thrill, entertainment and games, children will be happy and always ready to go to school without boredom or complaint. And the method of teaching will be faster and better

### **The Deaf and Dumb Children Found it Difficult to Understand the Lessons Because the Inability to Hearing and Speaking**

That the child at the beginning of its growth and absorb around him, always depends on the sense of hearing and trying to emulate what he heard. There are a lot of things distinguishes it with its voice like the voice of his father or mother, or when he heard the sound of the bell he know that there is someone knocking

on the door, and so learn and explore around him. Either the child deaf and dumb, he needs to distinguish the things given to them and identify their various forms and learn how to use. It will be difficult to him without hearing its voice. The use of games and multimedia in teaching brings joy to all children... When we use multimedia many colors and animations has been used which is very attractive for those children's. Children always need to develop their intelligence and skills. The system can make games and tests related to their studies and at the same time they got benefit from them in strengthening their intelligence and speed of understanding. The system make these children respond to the education and facilitate the delivery of information to them

### **Conclusion**

The advantages of new system is that the teacher taught children, generally known how to deal with them and how to convey information to them. They can use many ways, Including. images, sounds and representation, etc. But they must teach child with special needs, he has to use other ways of dealing with them, such as sign language and trying to teach lip reading, and others. The system will facilitate communication between the teaching and children.

### **References**

1. Baladogh, S. M., Elgamal, A. F., & Abas, H. A. (2017). Virtual lab to develop achievement in electronic circuits for hearing-impaired students. *Education and Information Technologies*, 22(5), 2071-2085.
2. Bauman, Sheri And Pero, Heather (2011), Bullying And Cyber Bullying Among Deaf Students And Their Hearing Peers: An Exploratory Study, *Journal Of Deaf Studies And Deaf Education*, Vol-16, ISSN-1081-4159, Iss-2, Pp: 236-253.

3. Checker, Lisa J.; Remine, Maria D.; Brown, P. Margaret (2009), Deaf And Hearing Impaired Children In Regional And Rural Areas: Parent Views On Educational Services, Deafness And Education International, Vol- 11, Iss-1, ISSN-1464-3154, Pp: 21-38.
4. Coppens, Karien M.; Tellings, Agnes; Verhoeven, Ludo; Schreuder, Robert (2011), Depth Of Reading Vocabulary In Hearing And Hearing-Impaired Children, Reading And Writing: An Interdisciplinary Journal, Vol- 24, Iss- 4, ISSN-0922-4777, Pp: 463-477.
5. Dwyer, Claire H.(2009), The Influence Of Speaking Rate On Nasality In The Speech Of Hearing-Impaired Individuals, Journal Of Speech, Language, And Hearing Research, ISSN-1092-4388, Vol-52, Iss-5, Pp: 1321-1333.
6. Eskay, Ugwuanyi, L., Igbo, J. N. And Obiyo, N. O. (2012), Professional Attributes In Teacher Preparation For Teaching Students With Hearing Impairment: Implications For Inclusive Education In Nigeria, Online Submission, US-China Education Review, ISSN-1548-6613., Article-3, Pp.302-308.
7. Girgin, umit (2013), Teacher Strategies In Shared Reading For Children With Hearing Impairment, Eurasian Journal Of Educational Research, Iss- 53, ISSN-1302-597X , Pp: 249-267.
8. James J. Mahshie, Diane Vari-Alquist, Betty Waddy-Smith, And Lynne E. Bernstein (2002), Speech Training Aids For Hearing-Impaired Individuals: Preliminary Observations In The Clinic And Childrens” Homes, Journal Of Rehabilitation Research And Development, Vol. 25, Issue.4, Pp.69–82.