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Computer-Based Programmes to Improve Communication with Children with Special Needs: Cerebral Palsy

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Abstract

This research paper focus children with special needs their problems and current status and how we use of computer-based programmes better communication with children with special needs special reference to cerebral Palsy.

Introduction

The words cerebral and Palsy are the two distinct words that make up the term cerebral Palsy. The term "cerebral" in this context refers to a brain-related concept. In the second instance, the word "palsy" denotes weakness or issues with a person's gait or posture. A brain defect that results in the loss or incapacity to govern motor behaviour or body motions is referred to as cerebral Palsy. In 1802, English orthopaedic surgeon Dr. William John Little published a paper that marked the beginning of the research of cerebral Palsy as a separate medical illness and disorder. However, in the late 1800s, British physician Sir William Osler coined and popularised the term cerebral palsy. In the early years of cerebral Palsy's history, a number of false notions were prevalent, including the idea that the disorder was only caused by birth problems. These children were frequently placed in residential facilities for the intellectually

challenged due to their physical and mental disabilities. In 1897, the eminent psychiatrist Sigmund Freud presented the hypothesis in his work "Infantile Cerebral Paralysis", which stated that the condition might occasionally have roots earlier in life, during brain development in the womb (Freud, 1897/1968).

On the other hand, more recent studies and advancements have provided a more comprehensive understanding of the nature, causes, and management of cerebral Palsy. Numerous neurological investigations and ongoing brain research have been carried out in the 20th and 21st centuries. A large body of research has been done on ways to help children with cerebral Palsy live better lives and think more clearly. A complete platform has been made available in the era of information and communication technology via the Internet, social networking sites, e-journals, video conferences, interactive media, and games created especially for kids with special needs. Children may learn and comprehend while having fun with a variety of game styles. Games and applications for computers are now widely available. A large number of NGO Self-help organisations are also taking positive actions in this regard.

Internet access has increased awareness and facilitated the sharing of knowledge. Experts, scientists, and educators will be able to exchange ideas in order to enhance education and health. Technological tools are not a substitute for other types of therapy. Some patients find that learning and communication skills improve when Applied Behaviour Analysis is augmented with virtual applications that allow synthesis and creativity to enter the mix. In fact, many of these applications have more significant benefits when used in conjunction with other treatments, such as when a touchscreen application is presented to an autistic child as a form of "reward." Equipment is valuable when it comes to communication. Children who have cerebral Palsy

typically struggle with language, speech, and other communication issues. The employment of specific tools and equipment may be beneficial in assisting them in this direction. Children with cerebral Palsy may benefit significantly from the use of mechanical devices and assistive technologies in order to overcome their limits and, to some extent, improve their posture and motions. It is common for a youngster with cerebral Palsy to also struggle with communication. Speech problems make it difficult to communicate by affecting one's capacity to talk. These are primarily categorised as sound articulation. Because they are unable to speak and convey their message both verbally and nonverbally, the youngster is unable to share with others properly. These children require support to communicate. They overcome physical obstacles and meet their demands by using a variety of devices.

According to Anderson (1998), it is as follows:

1. Apparatus for positioning,
2. Equipment that facilitates movement.
3. Apparatus for communication,
4. Feeding apparatus.
5. additional modified eating utensils

These specially made tools assist people in overcoming obstacles in their daily lives. They can study while having fun with a number of tools, like Virtual Dolphin, Webinar, and i-prompt. When tapped firmly, a new digital gadget called CLASR notifies friends and family via emails about panic episodes that autistic youngsters experience. They can talk and get assistance as a result, taking control of the situation.

Among the practical uses are

1. i-prompt — provides photo prompts and visual support schedules for kids with special needs and autism. For a little charge, you can download this mobile application to your Apple iPhone. The youngster can communicate their selections using virtual graphics, songs, videos, and more thanks to this application, which offers a wide range of learning alternatives.

2. Mark Mautone's Webinar: The Webinar approach was invented by Mark Mautone. This will improve the lives of persons with autistic spectrum disorder. Developing customised technology, modifying the curriculum, and making apps for smartphones and other devices are all examples of assistive technology.

Many games are accessible for particular childlike

3. The digital games — The games were played on a Personal Digital Assistant, or PDA, running an open-source, free version of Linux. The ARM 9 processor that powers this PDA has less processing capability than today's tablets and smartphones. While some high-tech games are designed in Flash, others are developed in C++.

4. The food game: In this game, the youngster is given three plates of nutritious food that are full of all the necessary nutrients, including vitamins, protein, and carbs. The kid has been allocated a spot in the background colour that matches to store the nutritious food. This will support pupils in forming healthy eating habits, etc. In order to make the study beneficial for learning, a variety of computer-based applications and interactive techniques are employed. An Act of Parliament in 1992 created the Rehabilitation Council of India (RCI) as a statutory authority in India with the aim of standardising, regulating, and overseeing training programmes for people with disabilities. To meet the needs of kids with special needs, special education is still a developing profession in India that requires a large number of studies and specialists.

Research conducted by the Institute of Applied Manpower Research (IAMR) indicates that the disability sector is now lacking 1,58,598 professionals. This shortage would amount to 1,04,531 by 2016 (2013, RCI Booklet, P. 2). The Delhi High Court has rendered a decision mandating the appointment of two special educators in each of the NCT's schools. This will enable students with special needs to receive expert assistance while studying in a regular classroom environment.

Review of Literature

Numerous research studies have been carried out in the area of curriculum-based instruction for several disciplines. However, all we are offering here is a compilation of the countless studies that are required to understand cerebral Palsy and other interactive games and multimedia for kids with special needs.

1. Ferreira, M., Lynnolves, Rendson, S. The significance of digital games and their effects on kids with cerebral Palsy are discussed by Guizzo, C. (2013). The goal of the study is to show how games and assistive technologies can improve the communication skills of children with cerebral Palsy. For this demographic, the SENAI/CIMATEC Research Group of Computational Modelling created three digital games: Sustainable City, Public Safety, and Food Safety. It required children ages 8, 10, and 12 to demonstrate the beneficial effects on them. Digital games that use various types of communication, like body and facial movements, vocalisations, and gestures, have been helpful for non-speaking children with Cerebral Palsy. Because smiling and nodding of the head are also signs of engagement, this study shows that the interactive approaches are practical and positively affect the gestures expressed by non-speaking

children with Cerebral Palsy.

2. Smith, K. (2011) explains in his paper how iPad apps affect kids with autism and cerebral Palsy. He discovers that young kids enjoy playing iPad apps and are interested in learning through them. He finds that students benefit from participatory learning.

3. Kuyini, A.B., Desai, I.P., and Das, A.K. (2013) report that a two-part questionnaire was used to interview 223 primary school teachers and 130 secondary school teachers. The initial section of the survey gathered background data on the participants. In the second section, instructors were asked to rate their perceived degree of proficiency on a list of competencies necessary to implement inclusion using a Likert scale. T-tests and descriptive statistics were used to analyse the data. Nearly 70% of ordinary school teachers had no prior experience teaching pupils with impairments and had yet to undergo any special education training, according to the critical findings. Moreover, 87% of the educators required access to support services inside their teaching environments. These findings indicate that more special education instruction needs to be provided in regular classes.

4. Pennington, L., Goldbart, J., and Marshall, J. (2012) find that speech and learning therapy improves persons with disability. For instance, dancing therapy facilitates their effective self-expression.

5. Brown, M.R. According to the (2003) paper "Mathematics, Secondary Students with Disabilities and Web 2.0," using web resources and mathematical tools in maths classes will enhance performance. Secondary students with disabilities can benefit from two additional resources that can help them perform better in mathematics: (1) Web 2.0 tools that they can access and use at home and in their maths classes, and (2) e-platforms and Weblinks that are

available for use in secondary mathematics classrooms. It enhances secondary pupils' exam performance.

6. Johnson and others In their study, Simmons and Karen (2013) discovered that iPod video prompts used by teachers can assist in teaching preparation skills and foster mental development in autistic individuals. They found that watching videos enables people with autism to comprehend and make connections to the content in their lives.

7. Both Noelkok and M. Fudin (2012) discovered that children with autism perform better when receiving virtual dolphin assistance. With this method, kids may relate to virtual dolphins and enjoy watching videos and using virtual inputs to learn.

Need and Purpose for the Study

1. It's essential to comprehend how children with cerebral Palsy behave.
2. To determine the needs of children with cerebral Palsy.
3. To understand the impact of different computer-based programs and mobile applications on the performance of children with Cerebral Palsy.
4. The study concludes that there aren't enough inexpensive interactive audio-visual aids made in India to meet specific needs.

Explaining Essential Terms

Is the government pushing special initiatives and educational multimedia packages?

Self-help groups and NGOs fulfil this purpose.

To uncover several forms of computer-based programs and games available for children

with Cerebral Palsy.

Purpose

1. To research how children with cerebral Palsy behave.
2. To research the viewpoint of specialists on the development of Cerebral Palsy.
3. To research special educators' perspectives.
4. To explore parents' expectations of improved communication among children with Cerebral Palsy.
5. Create initiatives to enhance communication between kids who have cerebral Palsy.
6. Assess the programme's success in fostering better communication among kids who have cerebral Palsy.

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