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#### CONTRIBUTIONS TO BOOKS

Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

#### JOURNAL AND OTHER ARTICLES

• Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

#### CONFERENCE PAPERS

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#### EMPOWERING CHILDREN WITH SPECIAL NEEDS THROUGH ASSISTIVE TECHNOLOGY IN THE CLASSROOM

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#### **ABSTRACT**

A person with disabilities is viewed as the "weaker, helpless and inferior part" of the society but one forgets that they are still a "vital part" of our existing society. Most people have predispositions about disabled person or a child with special needs and highlight the incapabilities rather than thinking about their strengths. These individuals with disability have foregone the misery and dependency centuries ago, with new technology and assistive devices they have regained their status in the society. Assistive Technology (AT) device is used just as normal as a non-disabled person use new machines and technology for his convenience. Once the thought of attaining education seemed impossible for the special needs child, but today Assistive Technology has broken all the barriers and has provided equal opportunity for each individual. The present study tries to understand how the Assistive Technology devices have empowered the child with special needs and analyse the impact over their need for academic skills. It also evaluates the performance of the Child with Special Needs who is learning in the inclusive schools or special schools with the help of assistive devices. The present study has shown that the Children with special needs in both the schools (Inclusive and Special) realized the positive effect of Assistive Technology device in their academic functioning and other activities as well. The result suggests that children with special needs, teachers and parents are aware and has accepted the use of Assistive Technology devices and modified curriculum integrated with Assistive Technology devices to experience the overall positive development of the child with special needs.

#### **KEYWORDS**

Disability, Assistive Technology, Children with special needs.

#### **INTRODUCTION**

isability is a term referred to a condition of a person who is undergoing restriction in his physical, social, psychological, cognitive, emotional and developmental process of his life. The hindrance in these processes is the result of some impairment in the body function and structure. According to Disability World Health Organization "A disability is an umbrella term, covering impairments, activity limitations, and participation restrictions. An Impairment is a problem in body function or structure; an Activity Limitation is a difficulty encountered by an individual in executing a task or action; while a Participation Restriction is a problem experienced by an individual in involvement in life situations. Thus disability is a complex phenomenon, reflecting an interaction between features of a person's body and features of the society in which he or she lives." There are various types of disability and range of disability, some are visible and some are hidden disability, According to the person with disabilities (equal opportunities, protection of rights and full participation) Act, 1995, "person with disability" means a person suffering from not less than forty per cent of any disability as certified by a medical authority and there are seven types of disabilities: Blindness, Low vision, Leprosy-cured, Hearing impairment, Locomotor disability, Mental retardation and Mental illness. The national trust for welfare of persons with autism, cerebral palsy, mental retardation and multiple disabilities Act, 1999 covers the following disabilities: Autism, Cerebral palsy, Mental retardation and Multiple disabilities.

A person without any disability is able to perform any activity of daily living satisfactorily and has opportunity to obtain food, shelter, social needs, education and employment independently without the physical support of others but a person with disability is declined from the prospects of accomplished life due to his condition which do not meets the required ability of a non-disabled person. These functional deficits inhibit the person with disability and he may go through social and psychological trauma, distress and depression. In such circumstances Child with Special Needs requires more attention and support to perform activities ranging from daily life activities to fulfilling educational needs. The person with disabilities (equal opportunity, protection of rights and full participation) Act, 1995 has given the responsibility to the members of the society to give equal opportunity to persons with disabilities for their full participation in everyday life. General teachers and special educators have also initiated to provide modified teaching aids and study materials for the children who face learning problems. The impact of technology on education has been commendable. Assistive Technology devices are now an integral part of Special schools as well as Inclusive schools; it has been adapted well into the classroom. This advancement has helped the students to work upon their deficit and gain interest on improving their academic skills. With the easy access of Assistive Technology it has become easier for the children with special needs to attain higher education and get vocational training as well to earn their livelihood. The Assistive Technology for the disabled has contributed immensely and made education accessible by bridging the gaps between the schools and the Children with special needs. With the use of Assistive Technology the Modification of the environment is possible by converting it into a barrier free environment for the person with disability. A student with special needs who uses assistive device now performs task quickly, easily and most important independently. Such benefits of the Assistive Technology also brings along adaptation and modification to their curriculum which will enhance the calibre work. The need of Assistive Technology for the child with disability is understood by the special educators, teachers, parents and professionals; thereby it increases the opportunities for better education, social interactions, and also potential for meaningful employment. It also supports the child with special needs to regain knowledge in the least restrictive environment. A combination of special education along with support of assistive devices gives quality education to these children and encourages them to not to confine themselves to their inabilities.

#### **ASSISTIVE TECHNOLOGY DEVICES AS A BOON**

According to Individuals with Disabilities Education Act (IDEA), 1997 Assistive technology is defined as any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified or customized, that is used to increase, maintain or improve functional incapabilities of children with disabilities. There are various assistive devices which have been launched up till now to perform broad spectrum of activity and execution of task. Government and Private Manufacturing companies have launched different ranges and types of disabilities which are individualistic and suitable for all kinds of disabilities. In the classroom with the help of special educator and the resource person the Children with special need can easily get adapted to the assistive devices to fulfil their

educational requirement. An assistive device helps and improves the functioning and performance of the Children with special need in the classroom. The devices used can be complex or simple depending upon the need of Children with special need. The main aim of providing assistive devices to Children with special need in the classroom is to support them and encourage them to perform efficiently. The range of devices available for Children with special need is broad and they are always assessed for their readiness to accept the devices in their lives. Assistive Technologies are the tools and strategies that act to liberate the use of technology for all students as well as to provide new ways to "assist" interactions and learning. They act to "augment abilities and bypass or compensate for a disability" (Lewis, R.B, 1994). The National Dissemination Centre for Children with Disabilities suggest that Assistive Technology enables children with disabilities to participate more fully in all aspects of life (home, school, and community) and helps them access their right to a —free appropriate, public education|| in the —least restrictive environment. The benefits of Assistive Technology are that it encourages the Children with special needs to participate in social interaction, has equal opportunity to attain education, and gain vocational training for employment. It enhances their performances not only in the class but also outside the classroom. Depending upon individual Children with special needs an Individualised Education Programme (IEP) is prepared and sees for the need of assistive devices for them. The need of Children with special needs varies and to follow the efficiency of the assistive devices one must see if it is helpful in improving Reading, writing spelling, Mathematical computation, Written expression, organization, Communication, Mobility, Recreational activities, Seating/positioning, Seeing, hearing, Self-care, Levels of independence, Cognitive processing.

#### LITERATURE REVIEW

The present study was conducted to evaluate effectiveness and acceptance of Assistive Technology among the children with special needs in the Inclusive schools and Special Schools. Many researchers on disability has been done which has emerged with an idea and based their research on the relation between Assistive technology and its effect on Children with special needs. Such thinking was conceived by Terence W. Cavanaugh Author of Assistive Technology and Inclusion, in his study he explained "Assistive Technology devices can decrease student's isolation and allow them to become part of regular subject area classrooms." The intervention in the special and inclusive school has empowered the children with disability; it has helped the parents to regain their hope in their special needs child. Today special schools and inclusive schools have started including Assistive Technology devices to improve teaching level and student's performance level. Due to the massive development of Assistive Technology devices in education sector, in American states it is required to give specific instruction for all teachers in Assistive Technology. Further, the council for exceptional children has assembled a panel of experts and generated a list of assistive technology competencies that every teacher of students with learning disabilities should master (Lahm & Nickels, 1999). The use of Assistive Technology in classroom does not limit itself to reading writing but also helps in other developmental domains such as daily organization, communication, co-curricular activities, mobility, seating and positing, seeing, hearing, participating in group discussion, level of independence etc. Apart from these inside the classroom activities Assistive Technology which are used for mobility and positioning helps Children with special needs to atleast step out of their house and reach schools and further it is the responsibility of the schools to guide them and provide them with technology which will be used for learning in the classroom. With the increasing emphasis on assistive technology in the schools, teachers must ensure that all students-including those from ethnically diverse background or poorer students-have ready access to assistive technologies that will enhance their learning (Brown, Higgins, & Hartley, 2001). To make education accessible and easy, many Assistive Technologies has been identified and launched by the researchers. Several theorists have discussed the utilization of speech recognition systems to enhance (or in some cases facilitate) a student's written language (Raskind & Higgins, 1998; William, 2000). Assistive Technology is meant for replacing inability and difficulties caused due to impairment in the person and lead their lives to less complexities and restrictions in participation; therefore Assistive Technology must be part of early intervention programme for the Children with special needs. Assistive Technology affords many young children with disabilities with the necessary learning supports to learn and achieve, especially with regard to developing emergent literacy skills that provide the foundation for later success when entering public schools (Parette, Stoner, watts, & Wojcik, 2006).

#### **OBJECTIVES**

The main objectives of the study are following:

- 1. To know the types of the disabilities in the inclusive schools and special schools of Delhi.
- 2. To know the availability of Assistive Technology devices in both the schools of Delhi.
- 3. To know the use and acceptability of Assistive Technology devices among the children with special needs.
- 4. To know the awareness of various Assistive Technology devices among te children with special needs.

#### **RESEARCH METHODOLGY**

#### **SAMPLE**

The sample for the current study constitute of children with special needs, special educator, teachers, parents and principle. The study was conducted over two special schools namely National association for the blind and Tamana special school and only one Inclusive school namely Akshay Pratishthan which are all located in Delhi. The sample was randomly selected and brief information was given regarding the study. The research was managed through a comprehensive and elaborative visits and meetings to the three schools on different occasions.

#### TOOLS

A qualitative approach is utilized to gather information and understanding through Interview, Observation and Written materials (IEP and Case report). The responses will be coded under the same theme which includes responses from interview and observation; thorough intensive reading of case report and Individualized Education Program (IEP) will be done. Tools used in the present are Observation method (Participant and non-participant), Interview (Formal and Structured Interview of teachers, principle and special educator, parent and children with special need) and written materials (Individualized education programme and Childs case report).

#### **PROCEDURES**

Researcher was engaged in the Non-Participant method were adopted for observation and then gradually starts with participant observation method. The responses were recorded in writing. Both the methods of observation were recorded separately and for 30 minutes each. The method participant observation gives in personal first-hand information and experience which was needed the most to know the different disability and what teaching learning materials along with Assistive Technology has been implemented in the classroom. Then participants were engaged in the semi structured interview and it was entirely conducted within the school campus. Furthermore it was necessary to include information from the official documents such as each Child with Special Needs' case report and Individualized Education Program (IEP). After interviewing the participants the researcher asked for the case report and Individualized Education Program (IEP) of 10 children with special need from the academic coordinator to go through it and evaluate the past and current position of the children with and without Individualized Education Program (IEP) devices. All the records and data obtained from observation, interview method and the materials from the schools were evaluated and the responses were coded accordingly for the analysis

#### **ANALYSIS AND INTERPRETATON**

Content analysis was performed for this qualitative research study. Multiple levels of coding was done and grouped under common themes.

#### CODE 1. CHILD WITH HEARING IMPAIRMENT AND ASSISTIVE TECHNOLOGY DEVICE USED

Interpretation of combined result from interview, observation and official material: The three major classroom factors to be considered while teaching hearing impaired child are Vocal volume, listening distance, and background noise. Initial stage the non-participant observation reports that the children with hearing impairment in the inclusive school are trying to cope up with the general classroom environment. They are seated nearest to the teacher and while intervening through participant observation it was realised that teachers uses the total communication approach for teaching. With the help of hearing aids supplemented

with lip reading, signs, finger spelling, cues, mime it provides effective learning. Children with special need uses Assistive Technology devices such as pocket size hearing aids, ITC, CIC for hearing and it has been very beneficial for them. While taking interviews we came know that at the early stage of their lives many of the children with special need couldn't manage the hearing aids and refused to use it but now after regular support and training given by the special educator and audiologist the children with special need has accepted the devices and has improved their attention, retention, social interaction and grades in the class. The written materials such as Individualized Education Program (IEP) were prepared for them and the information from it suggested that the hearing aids for children with special need were recommended on the individual needs as it varies from child to child and those has hearing aids has been a positive impact on all the functional activities of the children with special need. Case report has given an idea about the status of the children with special need in the past and which has benefited in comparing it with current status of each child with special need. It shows that maximum number of children with special need has improved majorly and has been regular in school.

#### CODE 2. CHILD WITH VISUAL IMPAIRMENT AND ASSISTIVE TECHNOLOGY DEVICE USED

Interpretation of combined result from interview, observation and official material: The child with visual impairment included blindness and low vision. During the non- participant method it was observed that the special educator manages 3-4 students at a time to give them individual attention. Each child with visual impairment had their own assistive devices such as braille writing with stylus, Taylor frame, and abacus. In the participant observation researchers realise that to use the Assistive Technology device one must have readiness for it. A child with special need who scores well on writing readiness has better performance on braille learning. It seems very tough to handle the braille but after interviewing the children with special need and special educators it was known that learning to use assistive devices is just normal as when the non-disabled tries to learn something new. For the children with special need those assistive technologies are the primary requirements as it simplifies everything for them. Individualized Education Program (IEP) suggested to them has the regular curriculum and modified NCERT curriculum which means content has transformed into braille script for children with special need. Other Assistive Technology devices for child with visual impairment are magnifier, spectacles, enlarged text on computers, braille books and papers, talking books, computerized braille embosses and printers, Arithmetic and algebra frame, raised maps, charts and globes. With the proper usage of these Assistive Technology devices the children with special need of both inclusive schools and special schools has benefited and improved their academic skills. Case report of individual child with special need shows drastic improvement from the time of admission and the current position.

#### CODE 3. CHILD WITH MENTAL RETARDATION AND ASSISTIVE TECHNOLOGY DEVICES USED

Interpretation of combined result from interview, observation and official material: In the inclusive school while engaging in the non-participant observation it was seen that children with mild mental retardation are a part of inclusive education through NIOS they can give 10<sup>th</sup> class board examination and children with profound and severe mental retardation they are given training of functional academics- literacy and numeracy which of functional utility. During the participant observation it was understood functional academics are referred to literacy and numeracy skills includes reading, writing and basic mathematical computation. One of the Assistive Technology devices used by the children with special need is computers which improve literacy, language development, mathematical, organizational, and social skill development, this technology benefits everyone. Through Interview it was known that an Assistive Technology device has helped children with mental retardation overcome barriers towards independence and inclusion. Individualized Education Program (IEP) was made for each child with special need and has planned separate assistive devices for reading purposes the special educator suggested books on tape, picture/print stories, line marker, and for writing purpose pencil grip, raised lined paper; adapted writing tool, tactile paper alternative keyboard, templates of letters and words, tape-recorder. While going through case report of children with mental retardation it came across that initially parents and children with special need were not eager to send them for attaining education but after looking at their improvement due to use of assistive technology, children with special need and their has shown positive feedback and are always ready to participate in every school activities.

#### CODE 4. CHILD WITH MULTIPLE DISABILITIES AND ASSISTIVE TECHNOLOGY DEVICES USED

Interpretation of combined result from interview, observation and official material: During non-participant observation in the inclusive schools and special schools the some children with special need tackles with more than one disability, it can be sensory associated with physical impairment. With the use of Assistive Technology it becomes easier for those children to handle both the impairment at a single time and also acquire academics skills. When in participant observation researcher set in the classroom with the child who has locomotor impairment and uses assistive device wheelchair for mobility and accompanied with low vision and device used was spectacles. It was observed that wheelchair user was given sufficient space for mobility, and to attain education the combination of two or more assistive device were used efficiently by the child with multiple disabilities. While taking interview the responses indicated that; to accomplish the goals of educational needs children with special need are satisfactorily coping with their disabilities with the help of Assistive Technology devices. Individualized Education Program (IEP) shows the individual requirement of assistive devices and has planned devices in a way which has brought improvement in almost all the academic skills. Case report has also enabled us to compare the children with special need performance before and after, which currently showed the children with special need has been continuously improving.

#### DISCUSSION

The Children with Special Need in both the schools (Inclusive and Special) realized the positive effect of Assistive Technology device in their academic functioning and other activities. They have understood the advantages of accepting the assistive devices because they now know it has given them equal opportunity to anticipate in the curriculum as well co-curriculum activities, initiated independent participation and increase the probability of higher education by declining the limitation and restriction caused by disability.

#### **SUGGESTIONS**

It is believed that any research based on any field of studies gives opportunity for further research. The researcher suggests the following guidelines which can undertake for further researches:

- The present study is not quantitative based research and does not give any numerical data for analysis. Hence, more comprehensive study can be conducted by the use of many tools and techniques for data collection.
- 2. Due to short span of time, it is not possible to administer the test on a large sample, so the present study was administered on one inclusive school and two special schools. Further studies can be conducted on the whole region of Delhi's special school and inclusive school.
- 3. The study showed the effect of Assistive Technology among the children with disability in the classroom so it can also be undertaken in the home setting and outside classroom. The test can be changed according to the age of the students.
- 4. The present study can also be undertaken in a comparative form for inclusive school and special school.
- 5. The present study can also be undertaken in a comparative form for boys and girls with special needs.

#### **EDUCATIONAL IMPLICATION**

- 1. By establishing a relationship between the parents of the Children with Special Need and Children with special need, the parents can train themselves to use Assistive Technology to give proper guidance to their Children with special need
- 2. Special educator can arrange and give suggestion to parents of Children with special need or care givers to modify the devices usable by a disabled child.
- 3. Special educator must also pay a special attention in developing the readiness among the Children with special need to work and play along Assistive Technology devices.
- 4. Parents of Children with special need are suggested to help and guide their Children with special need to accept and learn to handle the Assistive Technology devices without the support of others so that Children with special need can work independently even when they are not around like in classroom setting.

#### CONCLUSION

This study unravels the before and after mind-set of the child with disability in the classroom using assistive technology. It can be concluded that the objectives of the study is met successfully. The current research has to say that students with or without disability deals with various challenges but with the help of Assistive Technology devices a child with disability can face the obstacles and can overpower it as easily as the non-disabled child. It will take time to get more advanced Assistive Technology but for now children with disability in inclusive or special schools have advantages due to assistive technology. The special schools and the inclusive schools has done a good job in providing Assistive Technology to these children and has motivated them to gain confidence, self-esteem and independent living. Special educator and the professionals (language and speech therapist, audiologist, counsellor, physiotherapist and occupational therapist) have given adequate training to Children with special need and their parents so that they can use the Assistive Technology efficiently.

#### **REFERENCES**

- 1. Berry BE, Ignash S., (2003). Assistive technology: providing independence for individuals with disabilities, NCBI, Rehabilitation Nursing, pp. 28(1):6-14
- 2. Beukelman, David R.; Mirenda, Pat (1999). Augmentative and Alternative Communication: Management of severe communication disorders in children and adults (2nd ed.). Baltimore: Paul H Brookes Publishing Co. pp. 246–249
- 3. Brown, M., Higgins, K., & Hartley, K. (2001). Teachers and technology equity. Teaching Exceptional Children, 33, 32–39.
- 4. Cavanaugh, T. (2004). Assistive technology and inclusion. Presented at the annual meeting of the Society for Information Technology and Teacher Education (SITE) conference Atlanta, GA.
- 5. Individuals with Disabilities Education Act of 1990, P.L. 101-476.
- 6. Lahm, E., & Nickels, B. (1999). What do you know? Assistive technology competencies for special educators. Teaching Exceptional Children, 32(1), 56–63.
- 7. Levy SE, Mandell DS, Schultz RT, (2009), Lancet, US National Library of Medicine National Institutes of Health
- 8. Lewis, R.B. (1994). Special Education Technology. Belmont, CA: Brooks/Cole Publishing.
- 9. Murchland S, Parkyn H., (2010), Using assistive technology for schoolwork: the experience of children with physical disabilities, Disability Rehabilitation Assistive Technology, Raskind, M. H. & Higgins, E. L. (1999). Speaking to read: The effects of speech recognition technology on the reading and spelling performance of children with learning disabilities. Annals of Dyslexia, 49, 251-281
- 10. Parette, P., Stoner, J., Watts, E., & Wojcik, B. W.(2006, January). Using AT toolkits to develop earlywriting skills with preschoolers. Paper presented to the Technology, Reading, and Learning Difficul-ties World Conference, San Francisco, CA
- 11. Stoner, Julia B.; Parette, Howard P.; Watts, Emily H.; Wojcik, Brian W.; Fogal, Tina, (2008). Preschool teachers perception of assistive technology and professional development responses, Education and training in developmental disabilities, ERIC, v43 n1 pp77-91
- 12. WHO International Consortium in Psychiatric Epidemiology (2000) Cross-national comparisons of the prevalence and correlates of mental disorders, Bulletin of the World Health Organization v.78 n.4

#### WEBSITES

- 13. www.nichcy.org/schoolage/iep/meetings/special-factors/considering-at
- 14. www.wikipedia.org/wiki/ Blindness International Council of Ophthalmology. "International Standards: Visual Standards Aspects and Ranges of Vision Loss with Emphasis on Population Surveys." April 2002
- 15. www.wikipedia.org/wiki/ disabilities Disability World Health Organization. Retrieved 11 August 2012
- 16. www.wikipedia.org/wiki/Cerebral\_palsy ^ "cerebral palsy" at Dorland's Medical Dictionary
- 17. www.wikipedia.org/wiki/Cerebral\_palsy ^ "Cerebral Palsy." (National Centre on Birth Defects and Developmental Disabilities, October 3, 2002)
- 18. www.wikipedia.org/wiki/Hearing\_impairment "Deafness" Encyclopaedia Britannica Online. Encyclopaedia Britannica Inc. 2011. Retrieved 22 Feb., 2012.
- 19. www.wikipedia.org/wiki/Mental\_retardation The relevance of IQ scores". 2h.com. Retrieved 2010-12-14.



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