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The innovative practice of assistive technology empowers persons with disabilities fostering towards an independent learning in inclusive classroom settings

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Abstract

The modern study regulates the innovative practice of Assistive Technology (AT) empowers Persons with disabilities (PwDs) fostering towards independent learning in inclusive classroom settings. AT provides all innovative roles in the educational requirements for SwDs in inclusive classroom (IE) settings. The study further promotes the animated assistances and determinations regarding the innovative practice of AT for SwDs. AT practices are frequently secure and incorporate with many components that nurture, preserves, or enhances the empowerment of SwDs. In an inclusive classroom setting, AT practices are carry out to enhance the existing practices involved in teaching and learning in inclusive classroom settings. Inclusive classroom settings have always been displayed as the best environment for PwDs to involve in an independent learning practice. The inclusive classroom environments can be positive for several PwDs with provisions and continuous boom with AT. AT is

an expedient used to increase, compass, or enhance the independent learning for PwDs. In surplus of increasing persons' trust in others, AT can endorse the viewpoint of smart personality and, therefore, develop the panorama of an inclusive classroom setting. This study pondered on the idea of the IE framework as it grades PwDs and the several lawful measures, methods, and endures facilities essential for appropriate accomplishment in an inclusive framework for PwDs. The study confirms that AT and IE offer useful recommendations to teachers who mark the innovative practice of AT more outstandingly in IE. AT embraces products and interrelated facilities that enhance at work with PwDs. At this moment, the author remarks some methods to restrain the barriers by improving competences and means to revise the AT to be further beneficial to stream the necessities of PwDs to foster towards independent learning in an inclusive classroom setting.

Keywords: Assistive Technology, Inclusive Education, Empowerment, Independent Learning, Innovative Practice, and PwDs

Introduction

There are approximately one billion persons with disabilities throughout the world and more than a hundred million persons have severe disabilities and need support (WHO, 2012). Disability is not a problem and PwDs are a portion of our society and have equal rights with us. According to CRPD Act (2006), providing support to PwDs to make the most at work, endure independent learning and, take part in the society is the responsibility of governments. AT consists of products and interrelated services that enhance the innovative practice of learning of PwDs in inclusive classroom settings. The AT is an umbrella term that accommodates many technologies, strategies, or only approaches to sustain PwDs. The AT diverges from a low-tech pen hold to a high-tech multi-touch tablet pc. The common point of all is getting rid of the barriers in front of the PwDs (The Disability Act, 2004; CRPD, 2006; World Report on Disability, 2011; WHO, 2012). Many PwDs require aid and support to go on their day-to-day life and take part in social and economic life. But, they could not accomplish these aims, due to the absence of assistive facilities. Furthermore, PwDs undergo worse state of socioeconomic circumstances and poverty than persons without disabilities. "ATs should consent persons with disabilities to rise above their generally raised 'disabilities' and form unsolidified personalities that are focus on a mixture of their bodies and the AT they indicate to usage" (Chandra and Jones 2015) ^[11]. A surplus challenge confronted by persons with disabilities is the function of ATs. Approval of ATs by persons with disabilities themselves is contingent on many factors, together with real usefulness, essential, price, and comfort inaccessibility, upkeep and usage, and finally the contentment with the collaboration of the AT with the operator's backgrounds (Ahmad 2015, Carver *et al.* 2015, Hocking 1999) ^[2, 20]. Parental choice of ATs for their children is related to evidence open to parents, views from professionals and academic staff as well as the quality and accessibility of maintain services (Dettman *et al.* 2013) ^[14]. When it arises to the technical knowledge of product acceptance, there is a gap in the common concepts relating to disability.

Many replicas have been established to foresee product acceptance such as the customer theory, innovation dispersal model, and others (Wolbring *et al.* 2013) ^[47]. Technology of the 21st century is a significant tool in the enhancement of the prestige of life of PwDs and the fabulous of their life happenings. In the range of disability and special education, technology is concerned with the creative and complex submission of suitable tools and approaches to endorse arrangement and inclusion, and enable understanding and communication with understanding and persons (Papatheodorou and M. Blamires, 2000) ^[7]. The challenge of inclusion is to make available equal chances to all students through taking part, teamwork and communication. Henceforth, as portion of the technical advances in academic and societal inclusion, AT proposes potential tools to encounter this challenge, and deliver children with access to the magic and power of learning and communication (J. Light and K. Drager, 2007) ^[28]. PwDs are amongst the most unprivileged and untrained groups of persons around the world. For PwDs and elder persons, technology can change the most normal of day-to-day events from the impossible to the possible. AT can endure persons to live to their whole, to take part in learning and work, and to live independently and as part of their societies. Shifting demographics and technical developments incentivize a more comprehensible policy method to the supply of AT. PwDs and elder persons are the professionals of their own lives and they need to be resourced. ATs are aimed to enhance the independent learning abilities of PwDs. ATs currently accessible and future ATs at numerous phases of development, and also a study of persons from each disability group, concentrating upon their viewpoints and provisions concerning ATs in inclusive classroom settings.

Assistive Technology for PwDs

The key role of ATs for the inclusion of PwDs and, more exactly, expressions at how PwDs themselves recognize ATs and what balancing processes from the social area are desirable to more expand the extent and usage of ATs for PwDs. Assistive devices serve a significant resolution for PwDs today, however at the same time, many tasks with favor to ATs still endure. This choice from economic inquiries concerning the prices of ATs, their availability for the persons that need them and the technical proposes and progress procedure. Even the word “assistive technology” is not as vibrant and unchanging as seems at first glimpse. It should be viewed as “living terminology” with the types of technologies that can be categorized as ATs focus to social discussion, and the arena of disability being very diverse, so that these technical clarifications also need to discourse a comprehensive range of diverse needs. Therefore, the progress and usage of AT varies very much when it arises to particular kinds of disabilities. AT denotes to practical equipment that improve independence for PwDs. It is “any item, piece of equipment or produce structure whether attained commercially, adapted or tailored that is used to increase, preserve or enhance practical abilities of PwDs” (WHO & WB, 2011) ^[46]. Besides, ATs as such are very diverse and encompass many diverse kinds of equipment. On the one hand, ATs can be very detailed and costly, mainly if fashioned particularly for PwDs. On the other hand, at present-day, “normal” buyer equipment such as computers, cell phone and smartphones are in some cases also enormously appropriate to sustain PwDs and are normally

also dignified as ATs (Kylberg *et al.* 2015) ^[25]. The right description of ATs is still very much challenged, e.g. in relative to the arena of human improvement where there is a discussion about whether a device which exceeds a human beyond the ‘normal’ can be still measured as an AT (Wolbring 2011) ^[46]. The AT designated should be suitable to the needs of the circumstances, to be accessible to the operator. Also, the student’s specific trouble areas need to be firm (Praisner, 2003), and their strengths be recognized by comprising them in the variety procedure, and then the selections be pointed down consequently in the course of the selection. Though, the decision on the explanation of an AT as medical or normal device, or even as improvement technology can have significant concerns for the PwDs. If an AT arises with a “therapeutic label”, its user might be compensated through the social system however when an AT is distinct in terms of common needs the user may well have to pay the cost confidentially (Kylberg *et al.* 2015) ^[25]. AT is emerging fast and its future perspective is unknown. PwDs need to be resourced to coherent their needs and impact future propose and advance of technology. AT operators must also have the occasion to train and peer guide each other. Competency between service suppliers also needs asset. Starting with these first instances of challenges nearby ATs and their applied significances, we will in the succeeding division highpoint in more detail some of the issues applicable to understanding the chances, needs and opinions of ATs concerning PwDs in inclusive classroom settings.

Usage of Assistive Technology in Inclusive Education

Technology has a great perspective in providing access for all students, and the capability to access the IE program. AT is a generic term that comprises assistive, adaptive, and rehabilitative devices for PwDs and comprises ‘virtually whatever that might be used to recompense for the absence of assured capabilities’ (Reed and Bowser, 2005), extending from low-tech devices like supports or a special hold for a pen, to more progressive items like hearing aids and spectacles, to high-tech devices such as computers with focused software for facilitating dyslexics to read (WHO, 2009) ^[46]. “AT can support inclusion of PwDs by making earlier difficult or difficult tasks achievable” (Merbler *et al.*, 1999). AT acts to support students’ educational development and delivers students with means to overawed obstacles (Messinger-Willman & Marino, 2010) ^[33]. Using AT, students can accomplish school tasks more speedily and precisely, thereby more actively involvement in the class (Messinger-Willman & Marino, 2010) ^[33]. To make sure that the AT is not a burden to inclusion, after preliminary execution, staff should repeatedly ponder whether the device/services are being consumed, whether they are effective as estimated, and whether the PwDs is being sustained by the AT as projected (Copenhaver, 2004) ^[12]. The usage of AT can support governments in developing countries to attain IE by empowering PwDs in schools. Despite the significance and advanced effect on AT, earlier study on the usage of AT in IE frequently in developing countries is restricted. The perspective of IE is fixated on the section that all children and young people, in spite of several cultural, social and education settings, should have equal learning undertakings in all types of schools (UNESCO, 2008). Amid the long list of challenges to effective execution of IE such as the inadequate contribution of the education ministry, partial government funding, ineffectual policies and

legislature, insufficient resources, lack of specifically qualified educators, political insecurity, and financial crisis, unproductive and incompetent usage of ATs is a main hindrance (Ellsworth & Zhang, 2007; Singal, 2008). Therefore, with effective IE of AT into the general classroom, PwDs can have the facility of various means to complete their work, with better independence in acting tasks that they were previously incapable to complete or could achieve with great trouble; through appropriate improvements or altered methods of communication with the technology, required to achieve better usage of AT for PwDs in inclusive classroom settings.

AT Classifications by Techniques

AT endorses better independence by facilitating PwDs to accomplish responsibilities they were previously incapable to complete, or had great trouble undertaking, by providing improvements to shifting approaches of cooperating with, the technology required to achieve such duties. AT is comprehensive words that contain any device or piece of equipment that can be used to support a PwDs accomplish some kind of action or enhance their capability to function. An AT device is any equipment or other device that has been diverse in a specific technique that creates it at ease for a PwDs to practice. For each of the submissions of AT there are naturally numerous choices available. AT occurs on a field from no-tech—requiring no aids, to low tech or med-tech that need manageable adaptations that are usually available, to high-tech options which comprise computers and other electronic devices (Watson & Johnston, 2007) ^[45]. The most common instances of AT include no tech, low tech, mid-tech, and high tech devices support PwDs fostering towards independent learning in inclusive classroom settings.

No Tech

No-tech AT commonly denotes to simple, non-electronic resolutions that deliver access and enhance function for the students. Where no aids are essential and much of the assistance occurs through variations in the current service or movement. The practice of the AT for a PwDs can support the student senses a portion of the inclusive classroom settings because he or she can complete tasks with the students without disabilities; this also can narrate to tasks within the society or place of work. These AT solutions may be shaped or obtained commercially at comparatively low cost, and may contain devices such as modified spoon handles, customized pencil grips, or picture communication displays.

Low Tech

The low tech as a device that naturally does not comprise electronic mechanisms, does not need a power source, has restricted movable parts, is naturally low-cost, and can frequently be obtained at a normal store (J.R. Stachowiak, personal communication, August 11, 2011). Instances of low-tech devices contain less refined items such as modified spoon handles, Velcro fasteners, and elevated desks that can accommodate a wheelchair (Blackhurst, 2005a; Floyd, Canter, Jeffs, & Judge, 2008) ^[8, 22] and pencil grips and mouth sticks (Behrmann, 1998) ^[5]. On the other hand, several ATs are low cost or low-tech executions that can support PwDs and other students within the regular classroom settings. Educators should discover these selections often to see if any technologies could enhance the learning for all children

within the classroom (Watson & Johnston, 2007) ^[45]. This contains devices such as pencil grips, highpoint tape, walking sticks, and standard wheelchairs. Low-tech AT may be moderately modest or commercially accessible electrical devices such as single message communicators, suitable word processors, and talking calculators.

Mid Tech

Mid-tech devices are electric but are much less costly and need less training than high-tech devices which are frequently based on computer technology. Med-tech is considered as non-complex machine devices, which contain simple that includes electric and electronics proposes functioned by power like Talking aids, Light or vibrant alarms, Schedulers, Recorders, and Players. Other examples of mid-tech devices consist of manual not electronic functioned items (Behrmann, 1998) ^[5], resolutions containing the use of less complex electronic or mechanical devices such as video cassette players and wheelchairs (Blackhurst, 2005a) ^[8], and things that have some movable parts, need some training, use batteries or USB power if a power source is required, need simple AT to get, and are normally more costly than low-tech but naturally not as costly as high-tech (J.R. Stachowiak, personal communication, August 11, 2011).

High Tech

High-tech devices are dominant, flexible, and intend exclusive benefits which can be used for many various tasks (Dell *et al.*, 2008). High-tech systems denote to minicomputer mechanisms, together with hardware and software, and consent for storage and recovery of message information (Beck, 2002). Other explanations of high-tech devices contain the usage of refined devices, such as computers and cooperating multimedia systems (Blackhurst, 2005a) ^[8]; powered mobility equipment (Judge, 2000) ^[22]; resolutions normally involving the computer or having computer modules, such as specific software and progressive hardware devices (Floyd *et al.*, 2008) ^[22]; and resolutions that need a power source, or being run on a device that has a power source; require considerable training, usually measured expensive; have sophisticated electric/code elements; and usually are only establish by someone with significant AT understanding (J.R. Stachowiak, personal communication, August 11, 2011). This includes devices such as computer access, assistive software, and communication gadgets like mobile phones, tablets, play stations. High-tech AT devices is more compound electronic devices, such as computers and specified software. High-tech devices frequently integrate multiple structures and may be used to encounter a diversity of needs. The usage of high-tech AT is normally integrated with low-tech structures that can be used in specific conditions or to convey back-up in the event of breakdown.

AT Classifications by Practice

Technology has a prospective for PwDs in the inclusive classroom because it consents lively participation and supports in carrying out responsibilities. AT can be used in the inclusive classroom setting to aid support a diversity of students. The usage of technology in the inclusive classroom has completely pretentious the effort of IE because technologies accessible to PwDs consent them to be effective in tasks they otherwise would not be capable to accomplish. There are widespread selections of devices that can be

dignified AT. AT always is used in the inclusive classroom to support PwDs to turn out to be effective in learning otherwise not potential. The suitable execution of AT in the Inclusive classroom to support PwDs in tasks they otherwise might not capable to contest require training for the student and educators. If educators are not trained accurately then AT may not be executed appropriately or may not be executed at all. Technology has prospective for PwDs in the classroom because it “encourages lively student participation in the learning procedure and supports students in accessing and establishing evidence” (Maccini, Gagnon, & Hughes, 2002, p. 247). AT can be categorized by its practice for a PwDs as follows:

Positioning Aids for PwDs

Positioning denotes to discovery the best posture for a person for doing a specific operation. The operative may be poignant about from one dwelling to another, meeting during discussion, functional on devices like machines or computers, reading, and writing, listening, speaking, eating, and sleeping and so on. Positioning and seating display a severe role in a person's capability to process in the educational setting. If a person requires special positioning, seating a working or physical therapist on the team may be the best person to take the main in responsible the suitable choices. Positioning discusses the technique a person is located in his/her atmosphere using typical or special positioning instrument. A special instrument is measured to be AT because it facilitates involvement in home, school, or social environments. The positioning instrument is used to support a person who is not capable to sustain themselves in positions such as sitting; standing, lying down, etc. are involved in retaining the situations of PwDs in inclusive classroom settings.

The succeeding are some of the significant positioning aids used to improve the seating and position of PwDs in inclusive classroom settings.

Bolsters: These devices are great because they are typically established in the home and can be complete using towels, cushions, pillows, blankets, fabric, etc.

Bean Bag Chairs: These proposes care all around the person's body and can offer a sense of safety for the person. Cushions can also be positioned around the person for even more care.

Standing Frames: The consents of person to exchange to a straight position and partake in functional actions completed while standing.

Sidelyers: If cushions don't offer sufficient support these are great for person who aren't capable to freely place on their sides. Use a cushion to care for the person's head and straps to retain the person in the right position.

Wedges: It is designed like a triangle, wedges position person when lying down on their spines or bellies. If required, a band can be added so that the person will not slide or roll off the wedge. AT for positioning is not one of our points of proficiency. Yet, we do know the experts in the state who are! For more indication about who can support you with your aims for AT for positioning. Each time you sit, stand, twist, or turn to grow contented you are “positioning”. This is what your therapist means if they exchange to you about positioning. Good positioning can make your person's worth of life well. A bad position is when a person is using all their energy to embrace themselves in dwelling. If they are holding themselves up with their indicators, they can't do other things. It makes it hard to play, eat, or learn. It can also upset

and make them exhausted.

Mobility Equipment for PwDs

Mobility is a vital function to accomplish the several actions of everyday living, being a basic issue for the general wellbeing condition, independence, and worth of life. Everyone perceiving to enhance individual mobility can advantage from this classification of technology. Mobility equipment can promote to enhance the worth of life by enabling the person to interchange with better ease and safety at home, at school, at effort, and in the society. Spaces and positioning equipment delivers operators with firmness and may enable enhanced control of head, arms, and hands. The equipment also reduces the effects of abnormal muscle tone and may stop damage or skeletal deformity. The mobility device delivers the user with the equipment to grow from one place to another. Yet, the seating and positioning system consents the user to function at the utmost level possible. This equipment improves both a persons' wellbeing and security. Unintended, or therapeutic, technologies improve mobility by decreasing impairments at the body structure/operation level by aiding the body in restoring or equalizing the body structure impairment, or by associate rehabilitation of the impaired body function. The relation between deficiency and restricted mobility is noticeable for amputations and spinal cord damage. Yet, mobility is also affected by fewer obvious deficiencies. AT equipment or modifications that enable mobility and comfort persons move about in several life atmospheres. Mobility equipment also comprise children's scooter boards, vehicular adaptations, white canes, wheel chairs, electronic direction discovery / mobility aids, and other alterations and equipment for PwDs.

Mobility is well-defined as an “person's capability to move his or her body within an atmosphere or between settings and the capability to operate objects” (Jutai J, Day H. 2002) ^[23]. Such capabilities facilitate a person to follow the life actions of his or her selecting. Yet, impairments in body structures or operations can negotiate a person's capability to achieve tasks of everyday living and community socialization (Cowan R, Fregly B, Boninger M, *et al.* 2012) ^[13]. Mobility is the person's capability to move from one location to another by carrying out day-to-day actions such as bed-movement, transfer, walking, transferring objects, and wheelchair-walking (AMERICAN..., 2014). The mobility assistive equipment are one of the AT outlets, which contain wheelchairs, bathing chairs, walking canes and walkers, usually designated to subjects with restrictions in walking, as is the incident of stroke matters. Focuses with a stroke that use this equipment are frequently low in constancy and are at high risk for falls injuries (KIM; KIM, 2015). These impairments can happen to succeed in an unexpected traumatic mishap such as spinal cord damage or may outcome from the slow progression of an illness like multiple sclerosis. Persons with less visible mobility impairments, such as osteoarthritis of the knee or those with condensed stand-up patience, may also practice mobility impairment and necessitate the usage of AT. Well combined control structures lessening user problem, empowering more advanced control of greatly sophisticated prosthetics or facilitating persons with the most severe physical disabilities independent mobility in power wheelchairs. Irrespective of which body structure or function is weakened, technology can enhance mobility. Wheelchairs, walking aids, and prosthetic limbs are samples of technologies that have delivered extensive advantages. Contacts are also viewed

between poorer quality motor levels and the practice of assistive equipment for mobility (JUTAI *et al.*, 2007) ^[24]. This planned evaluation processes the indication for the effectiveness of any kind of mobility equipment involvements in terms of activity and involvement in actual conditions for PwDs in inclusive classroom settings.

Augmentative and Alternative Communication for PwDs

AAC involvements are methods and technology used to recompense for a PwDs reduced communicative capability (Light, 1989) and can be short-term or perpetual (American Speech-Language-Hearing Association, 1991). For people with compound communication needs, those with motor and speech impairment, daily repetitive as well as rehabilitation and academic programs frequently consist of the usage AAC supports (Beukelman & Mirenda, 2005). AAC is an umbrella word that covers the communication techniques used to increase or substitute speech or writing for those with impairments in the construction of understandable spoken or written language (Fossett & Mirenda, 2009) ^[19]. AAC is used in a widespread of speech and language deficiencies, together with inborn impairments such as cerebral palsy (McNaughton, Light, & Arnold, 2002) ^[31], intellectual impairment, and autism (Shook & Coker, 2006) (Mirenda, 2003) ^[35], and established conditions such as amyotrophic lateral sclerosis (Doyle & Phillips, 2001) and Parkinson's sickness (Beukelman & Garrett, 1988) ^[6]. AAC can be an unceasing buildup to a person's communication or temporary support. AAC offers people with restricted or no verbal capabilities a mode to communicate and incorporate a range of approaches and AT devices, comprising speech-generating devices, motions and signs, and image-supported communication systems (Sigafos, 2010) ^[42]. Operators who have grown-up with AAC, boom sustaining associations, and life actions; yet, they may have poor literacy and are improbable to be in engagement (McNaughton, Light, & Groszyk, 2001) ^[32]. AAC devices support people to communicate with each other, even if they have speech problems. These devices and software are currently being used as language progress tools and many other purposes also. Once it is strong-minded that AT and AAC are essential for academic achievement, the team must choose an AAC involvement that is right for the PwDs in inclusive classroom settings.

Daily Living Aids for PwDs

Daily living aids and assistive devices are the supportive devices used by PwDs in enhancing their excellence of life in terms of flexibility, communication, and performing their daily actions. There is an extension of assistive devices available to meet the needs of PwDs. Over usage of these aids & assistive devices, PwDs turn out to be independent and their participation in the society augmentations. Aids for daily living denotes the usage of devices, software, tools, and methods that consent a PwDs to operate the atmosphere and work added for doing his daily living happenings, working, schooling, playing, and so forth. A well understanding of the efficacy of daily living aids participation is required to sanction an evidence-based practice. Thus, the pivotal objective of this study was to extent changes in operative independence in self-care events succeeding a pre-prosthetic involvement. This interference was measured effectively when the partaker attained the independent presentation of these actions. The secondary purposes were to recognize

features that subsidize autonomously to the achievement of this daily living aids interference, and to examine the properties of this interference on the occurrence of unmet needs for home alteration. Daily living and mobility aids support people to accomplish tasks they may find problematic, by growing comfort and security and endorsing independence learning for PwDs in inclusive classroom settings.

Computer and Information Access for PwDs

Information technology in the formula of computers, communications, digital information, and software has converted into a vital part of our everyday lives (Lin[b], 2000). Demands for people with understanding and capacity for current technology are high with the utmost rewards going to workers with understanding and skills relevant to the office (Judy & D'Amico, 1998, pp. 84-85). The place of work is not the only area affected by the occurrence of information technology as it is also used by government agencies and people in their families, at their schools, and in colleges (Lin[b], 2000; Minter Gilstrap, 1998). Outstanding signs of progress in information technology and its inculcation into almost all sphere of influence demand an innovative level of computing skills among PwDs. The computer delivers flexibility, quickness, and accurateness, and it improves usefulness and efficacy. In progressive societies, simple computing understanding is now measured vital for all populations. In certain developed nations, basic knowledge about computers has been encompassed in the definition of the term "learning". Computers have become so powerfully combined into the social structures of these societies that an individual without suitable computing skills would sense an unfamiliar in that society. Information from electric sources cannot be opened in the same way as published sources were referred to formerly. Suitable understanding about computers and recovery practices are needed to successfully search these electrical information bases. Technical progresses have thus shaped new occasions as well as postured new challenges for PwDs, imposing them to obtain the essential skills to advantage from these developments. Assistive devices, software, and tools that consent PwDs to access information in published setup, or using the computer, even if they are not capable to naturally access for input/output, procedure connections. Access to information and computer consents for all kinds of uses, like knowledge acquirement, communication, common word dispensation, data investigation, skill progress, sports, and leisure activities for PwDs in inclusive classroom settings.

Play and Learn Aids for PwDs

The play and learn aids can be successfully used in an inclusive classroom setting. It can supply PwDs which have special needs in fostering towards independent learning. Therefore this aid can be successfully used in inclusive classroom settings which will support in making attention of PwDs and they could be certainly linking it. The tools for improving and supporting PwDs learning are now available in our families, societies, and classrooms. The response is, in essence, as modest as play and learns. Learning and play is about continuity; bringing together children's scopes of life - home, school, and the wider world, and doing so over time. The devices, software, and tools as aids that permit Pod's to use their integration capabilities for conceptual learning, perceptive activity advance, human communications, and

language progress. Play and learn aids deliver PwDs with many chances to resolution conflict, challenge incomplete play, and embrace diversity.

Adaptive Toys and Games for PwDs

Assisting young teenagers with special needs by making use of toys with AT switches, devices, and tools can stimulate play collaborations. PwDs makeover objects, persons, atmospheres, and tools into play. This is because they own an exceptional, playful lens through which they look at the world about them. Anytime is the right time for them to play; any person can become a play associate, any object has the prospect of seemly a toy, and any toy can be used in masses of practices, diverse from the expected ones. When interrelating with teenagers, everybody observes their instant and constant availability to go outside the world of truth and to reach the world of resourcefulness; they too sense the desire to coming back to childhood... and play with them. PwDs may be refreshed and inspired to repeat a movement of his or her body portion by using alterations events. By getting used to small battery-operated toys; PwDs can delight in playing while they learn the notion of cause and effect. A diversity of cause and effect toys, modified toys, and devices can facilitate young persons with motor impairments to reply by motivating and re-energizing them again and again. Involving in these equipped ahead of period and available to propose more play chances and choices makes learning more operative and pleasant. Learning the idea of cause and effect is frequently the person's "first step" towards the achievement of independence which may improve his or her capability to take part, cooperate, communicate, and gain mobility in diverse environments (Glennan and Decoste, as cited by Ashton & Johnston, 2003). The right and suitable toys are those that challenge the person's curiosity and are strictly connected to their skill level and capability. It echoes simple, but choosing the "right" toy is everything but a person's play. (Boehm, H., 2003). Adaptive toys and games in several strategies, physical, through any modification method, as an app in computer, tablet, or mobile that offer PwDs chances to play with one another as well as others. This allows PwDs to grow personal skills, perceptive skills by relating themselves with these actions. Also, progresses social inclusion and communications. Adaptive toys and games contain a lot of creative thinking and are frequently easier when a squad of persons innovation concepts together in inclusive classroom settings.

Instructional Aids for PwDs

Instructional aids support in educating a PwDs in a school or college or during occupation training. It includes adaptations done in the teaching method utilizing tools or aids or software for an improved way of communicating and information access. And also, can be used for growing functional daily living skills training events. Many of these AT devices or adaptations frequently overlay for either improvements of prime use or support with another operative. For instance, positioning is firmly secured with mobility, and adaptive toys and sports with instructional aids. It makes clear that the instructional aids should be advanced to support the learners towards logical methods with an emphasis on learning. The proper usage of aids and approaches in instructional atmospheres may be associated with the success of the instructional procedure, that is, by appropriately choosing the instructional aids and techniques educators may expect to

accomplish the best academic outcomes. The instructional aids should be appealing in terms of presence, User-friendliness, and resilience. If any material owns these features then all the PwDs will willingly use the material wholeheartedly which will create the positive outcomes in the classroom. Instructional aids should be adaptable also by which we can use that resources in many domains like a picture can be used to describe parts of speech as well to improve the spoken skills, even that pictures can be used to improve writing skills by the modification of instructions. Instructional aids should be reliable also by which the attainment will be well and quicker and the PwDs feel effective over their accomplishment because the skills that they obtain make them feel that they can grip the circumstances in real-life too. The usage of instructional aids in teaching and learning procedure is very significant. This is because it will support effective learning for students, mostly for remedial students. Instructional aids also enable the students to understand the programs presented by educators (Razhiyah, 2006). Educators should be very careful while selecting the instructional aids because the PwDs can be discouraged if the resources are advanced than the level of the PwDs in inclusive classroom settings.

Conclusion

PwDs are a part of our society and they should not be left out. The ATs are the technique of their connection to society. They can walk, speak, hear or exchange via AT. Even though they need most of them they could not give it. Managements are in control for as long as AT for them. The undertaking of AT is facilitating PwDs to control and straight their own lives by providing them with evidence about, protests of, and access to AT tools. Planning new submissions that enhance user knowledge and self-confidence can increase the usage & awareness about current AT. Suitable AT is a powerful tool to increase PwDs independence and enhance their participation. It supports PwDs to grow into mobile, communicate more successfully, see and hear well, and partake more completely in learning and show activities. It supports PwDs to access and enjoy their rights and to take part in things they like and it bonds the gap between persons with and without disabilities. To make AT of a fitting quality available, accessible, affordable, adaptable and adequate to PwDs and their families. Technological help can release PwDs to communicate with others, to live independently, as well as live and work in their societies. Accessible normal technology and AT together with the new innovative practice of technologies in the 21st century an independent learning in inclusive classroom settings.

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