

# Multimedia Instructional Strategies in Children with Moderate Intellectual Disability

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**Abstract – Instruction is a basic for the advancement of a person. It enhances individual's discerning of new line themselves and the world around. It improves the nature of being and prompts expansive social advantages to the new line individuals and society. Long stretches of customary instructing and gaining from books have offered path to the utilization of new line sight and sound in training. Today sight and sound has become a significant piece of training everywhere on the world. New line Teaching and learning for youngsters with scholarly incapacity is a remarkable interaction just as a test for the new line educators and the methodology utilized should be differed independently. Despite the fact that there are some explorations considers newline directed on the connected issues of learning of science ideas among different handicaps. Newline the information on youngsters with moderate scholarly incapacity when mediation contrasted newline fundamentally as the standard for dependability increments with the use of Multimedia Instructional Strategy.**

**Keywords: Intellectual Disability**

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## INTRODUCTION

Instruction is a basic for the advancement of a person. It advances individuals' insightful of themselves and the world around. It improves the nature of being and prompts wide social advantages to individuals and society. Schooling raises innovative advances. No nation can achieve manageable monetary advancement without putting resources into instruction. The inevitable objective of schooling is to assist an individual with turning out to be capable, free and a contributing individual from the local area to the mankind. For Children with Special Needs (CWSN), schooling expects to benefit from their latent capacity and encourage them to turn out to be composed and respectful people. Training is a very much evolved science, which is very unpredictable. Its substance and methodology should be proposed and actualized deliberately.

Taking all things together beneficial way of thinking about present day instruction, the focal reality charges that training has become a public undertaking. The spread of government funded schools is the conspicuous outward indication of a maturing conviction concerning every single instructive undertaking. The conviction was declared quite a while in the past and has now become a manual for activity, the conviction that the local area has an essential stake in the schooling of each youngster. Instruction is a typical concern not only on the grounds that there are numerous youngsters to

be taught, but since there can be no huge result in the training of any kid which isn't of significance, not exclusively to him, yet additionally to other people, quickly to numerous and all the more distantly to all. To arrive at the unreached segment of individuals innovation will assume a significant part in the securing of information. Kids with exceptional necessities, particularly those with scholarly incapacity, securing of information can be encouraged through action based realizing which is suitable through the methods for innovation.

Instruction is universally acknowledged as the bedrock of individual and public turn of events. This is explicitly evident when thinking about individuals with inabilities. The articulation 'handicap', primarily alludes to people with impedance which incorporate mentally debilitated, dazzle or outwardly hindered, hard of hearing or almost deaf, learning inabilities, engine working issue and neurological disabilities. Custom curriculum manages the instruction of these incapacitated kids. Advances in innovation have given an overflow of chances, apparatuses and assets that can address the longings of people with the different types of handicaps, so they can be instructed.

## OBJECTIVE OF THE STUDY

1. To identify kids with Moderate Intellectual Disability having a place with the age gathering of 7 to 12 years selected exceptional schools.
2. To explore the current information on science ideas in kids with moderate scholarly inability.

## ROLE OF MULTIMEDIA IN EDUCATION

Media mixes are by and large alluded to as sight and sound framework. Sight and sound signifies 'numerous media'. The articulation 'Media Instructional Strategy' alludes to the employments of proper and deliberately chose assortments of learning encounters which are introduced to the student through chose instructing systems that fortify and reinforce each other so the student will accomplish foreordained and wanted social destinations. Interactive media approach is a very much acknowledged methodology in educating innovation. This was anticipated by Dale (1969) through his 'Cone of Experience', which uncovers that if more multisensory approaches are applied in learning, maintenance will be better.

In instruction, mixed media is utilized to deliver PC based preparing. Learning hypothesis in the previous decade has extended drastically on account of the presentation of interactive media. The opportunities for learning and guidance are almost unending. The possibility of media combination is likewise turning into a main consideration in instruction. Mixed media instructing is more natural than conventional showing rehearses; since educators can relate circumstances from reality. As a rule educators don't need to be there in the study hall, and understudies will learn without anyone else in the class. All the more critically, instructors may get more freedoms to inspire understudies' enthusiasm for learning. Innovation, particularly in coordinated study halls, can be a basic apparatus in teaching understudies with unique necessities. Through implicit apparatuses instructors can roll out fitting improvements in instructing to meet understudies' individual training plans. Specialized curriculum innovation has the ability to offer the ideal help to understudies with unique necessities to take an interest and learn alongside their standard companions. Multimedia allows understudies to work as fashioners, utilizing devices for investigating the world, getting to and deciphering data, arranging their own insight, and addressing what they know to other people.

Mixed media applications connect with understudies and give important learning freedoms to them. It empowers understudies to make and plan as opposed to retain portrayals made by others. It is in excess of a high innovation trendy expression, an

amazing method to teach, engage, and educate. Media has taken the PC from imparting data as text to recounting stories utilizing pictures, sound and video. It has taken PC clients structure centralized server terminals to high-innovation work area frameworks that offer fun, experience, and intuitive learning.

Media has been seen by numerous individuals as introduction of material in various arrangements or such that advances to different faculties, for example, sight and sound (Seo, Templeton and Pellegrino 2008). By interfacing numerous plans of the one snippet of data understudies are permitted a more profound agreement (Clark and Mayer 2002). Instructing with PCs or e-learning gives elective settings and techniques to introduce material to understudies. Strategies incorporate paint programs, slide shows, film programs and so on E-learning doesn't just relate to online preparing, it likewise incorporates: virtual homerooms, computerized joint effort and learning through electronic media including the web, extranets, intranets, intuitive advanced TV, sound/video tape and CD ROM (Urdu and Weggen 2000 referred to in Jackson).

## Technologies in Special Education for Children with Intellectual Disability

Youth training administrations and schools have a focal influence in the existence of any youngster or youngster. People with scholarly incapacity have difficulties in learning, versatile conduct, self-care, useful scholastics and fundamental abilities. Cautious arranging and backing is basic to guarantee that the youngster has important learning openings and is completely remembered for the existence of the school or youth instruction administration. Kids and youngsters with scholarly incapacity can master social and relational abilities, deal with their pressure and conduct with successful educating and a properly organized climate.

Innovation can assist people with Intellectual Disability to conquer obstructions towards autonomy and consideration and give them free living. Innovation can make up for an individual's utilitarian constraints. The gadgets ought to be made accessible for use for the duration of the day and altogether settings, including home, school, work and amusement. There need to have consistency in the sort of innovation accessible, how it is utilized, and strategies for teaching the client on working the gadget. Advances starting with one gadget then onto the next ought to be made as smooth as conceivable by expanding on and coordinating recently acquired abilities.

Innovation arrangements ought to be adaptable and tweaked to oblige the exceptional capacities of every individual with scholarly incapacity. There is an expanding utilization of assistive innovation

with babies and small kids, especially the specialized gadgets acquainted with encourage early language improvement. Tweaked instructive programming is additionally utilized generally in a custom curriculum for conferring useful abilities among the understudies. Bunches of instructive materials, for example, recordings, tunes, rhymes, worksheets, instructive programming exercises, etc are accessible on the web, to pool and get the assets. Custom curriculum additionally praises the ordinary instructive material accessible on the web. The solitary extra necessity for understudies, who are diversely abled, is the should be educated with variations. Students and people with scholarly incapacity have more extensive decision in an instructive CD or programming which is interestingly intended for them. Instructive programming, recordings, CDs and DVDs has their own limits. Consequently interactive media innovation not just gives a more extensive decision for the students yet in addition all the methods of general media learning can be normally accessible in one spot.

### **Importance of Multimedia Instructional strategies in Special Education**

Mixed media are turning into a significant factor in school lessons. Sight and sound being an amazing asset for gaining information and data improves the nature of training by encouraging learning by doing. Media guidance can assume an essential part in observing the advancement of the understudies across time, place and shifted exercises. Innovation in the data transformation has given numerous exceptional advantages to instructional projects. Despite the fact that customary methods of guidance are generally acknowledged in educating and learning conditions, numerous instructive organizations have begun actualizing PC innovation as an instructional methodology Kinnarman (1990).

Media connects tutorials with an understudy, and one can experience the course material at a rate and in a succession dictated by the reactions to questions contained in the material. An individual encounters quick criticism to the info gave. While showing kids with scholarly handicap PC based preparing offers a few points of interest for fast and powerful learning. Sight and sound innovation has prime significance in our current day instructive situation. The part of media instructing technique in schooling has been a significant inquiry since the coming of PCs. In this globalized climate, it stays a significant issue even today. Sight and sound advancements, including data and correspondence give freedoms to educate and learn differently. Henceforth it is important to consolidate media showing system for the youngsters with scholarly handicap to make learning simpler.

Mixed media movements, portrayals, and outlines have all been utilized to help the comprehension of complex topic by showing or featuring significant

ideas and relations, in this manner endeavoring to pass on a right mental model straightforwardly to the understudy. Sight and sound conveys more on self-coordinated and activitybased realizing which are gainful to understudies' better agreement. Sight and sound introduction considers data to be addressed multiply. With its visual or sound subordinates, interactive media is just more fascinating to perusers than plain content. The issue experienced in using the interactive media are inaccessibility of the PC units, helpless admittance to web association, absence of information on the understudies to utilize web, educators absence of preparing on essential investigating and support, and absence of planning of the instructors in utilizing LCD projectors and different extras. Along these lines, instructors ought to be prepared on the most proficient method to work or utilize media materials properly.

Understudies can be engaged with the utilization of media to differentiate and pass on information. The utilization of media includes the clarification or elucidation of ideas in complex areas. Seeing regularly necessitates that students build up a unique mental model of marvels or cycles. The significance of interactive media has been generally perceived as a way to improve productivity of learning. The pace of learning on PC is sensibly quicker than they are in homeroom setting and learning maintenance is probably going to be higher. This is valid for both scholastic and ability based subjects. It is another innovation for the field of instruction, which finds legitimate use as stylish educating machines. Likewise, it increments innovative complexity of our general public, which expects individuals to dominate an expanded arrangement of refined abilities, and to use these abilities at better expectations of execution in a cost-successful way. Ever extending skylines of information have required legitimate arranging of instructional methodologies and ideal utilization of showing strategies by the educators. The utilization of PC in schooling has brought about another measurement in instructing and learning measure. Intelligent learning bundle and captioning the general media learning have a student driven methodology exceptionally profiting kids with scholarly handicap.

### **Multimedia Instructional Strategy in Learning**

PC based direction that includes the utilization of customized getting the hang of comprising of sound, video, movement, intuitive highlights, and still pictures all together assistance the youngsters with moderate scholarly handicap to improve their learning of science ideas.

### **Science Concepts**

Science is an organized endeavor that develops and orchestrates learning as testable clarifications and expectations about the universe. It alludes to

a group of information that can be reasonably clarified and dependably applied. In this examination it implies the regular marvels and general truth with respect to parts of the body, water, creatures, plants, seasons, living and non-living things that empowers them to confirm the realities procured through utilization of Multimedia Instructional Strategies.

### Children with Moderate Intellectual Disability

Absence of limit ascribed by significant cut off points all in all intellectual ability, for example, picking up, thinking, critical thinking, etc and reasonable abilities ( language and proficiency; cash, time, and number ideas; and self-bearing), social skills(interpersonal abilities, social duty, confidence, social critical thinking, and the capacity to keep controls or submit to laws and to try not to be misled), viable abilities (exercises of day by day living, individual consideration, word related abilities, medical services, travel, transportation, plans, schedules, wellbeing, utilization of cash, utilization of the phone) in the age gathering of seven to twelve with an IQ 35to 49.

### REVIEW OF LITERATURE

Writing survey achieves a few purposes. It imparts to the per user the consequences of different investigations that are firmly identified with the one being attempted. It relates an examination to the bigger progressing exchange in writing, filling in holes and reaching out earlier investigations (Rossman and Marshall, 1991). Shields and Rangarajan (2013) recognize the way toward checking on the writing and a completed work or item known as a writing survey. The audit depicts, sums up, assesses and explains this writing. It gives a hypothetical base for the examination and assist the creator with deciding the idea of the exploration. It gives a system to contrasting and building up the significance of the investigation just as a benchmark for contrasting the outcomes and different discoveries (Creswell, 2009). Works which are immaterial ought to be disposed of and those which are fringe ought to be taken a gander at basically. As per Fraenkel and Wallen (1990) writing audits imparts to the peruser the aftereffects of different investigations that are firmly identified with the examination being accounted for.

### Studies Related to Multimedia Instructional Strategies

Interactive media is the introduction of data utilizing text, sound and designs. There are numerous instructive undertakings intended for handicap kids to help them for improving their abilities or acquire new materials. The utilization of media components and the ability of association have assumed a significant part in drawing in those youngsters (Silva, Gonçalves and Guerreiro 2012).

Sight and sound permits educators to coordinate content, designs, movement, and other media into one bundle to introduce far reaching data for their understudies to accomplish determined course results. Mixed media licenses the show of muddled cycles in a profoundly intelligent, enlivened style and that instructional material can be interconnected with other related points in a more normal and instinctive manner (Crosby and Stelovsky, 1995)

**Saad, Dandashi, Aljaam and Saleh (2015)** concentrated on "The Multimedia-Based Learning System Improved Cognitive Skills and Motivation of Disabled Children with a Very High Rate "which surveyed the viability of mixed media based learning framework in the guidance of the fundamental living and science ideas to the youngsters with scholarly handicaps (ID). Mayer's Cognitive Theory of Multimedia Learning joined with Skinner's Operant Conditioning Model was utilized to develop this learning framework. Two kinds of instructional exercises are proposed. The substance are created in a static way for the primary sort, while for the second one the substance are created utilizing an area explicit metaphysics with text preparing apparatuses and Google internet searcher. A huge upgrade was achieved in the learning interaction of youngsters by both this strategy for guidelines, improving their psychological abilities and making them proactive in the study halls.

**Shah, and Khan (2015)** examined the "Viability on Multimedia Aided Teaching (MAT) on understudies' scholastic accomplishment and mentality of primary younger students in instructing science". A trial configuration was embraced for this investigation where 30 understudies each, were in both control and exploratory gathering. The span of mediation was 20 weeks. Scholarly accomplishment was estimated utilizing a survey and the mentality of the youngsters utilizing ATSS. Investigation was finished utilizing t' test. Tangle was end up being more compelling in showing science than conventional strategies.

**Raj Kumar (2014)** concentrated on the "Adequacy of Instructional Strategies on the Achievement of Secondary School Students". The Achievement of the ninth graders of auxiliary schools were surveyed after the organization of Modular Instructional Strategy and Multimedia Instructional Strategy in two gatherings and a third gathering was kept as control gathering. Trial configuration was utilized for the examination and 500 understudies were taken as tests. Instructional Strategies were taken as free factor and accomplishment as reliant one. The entomb relationship coefficient between the factors of Instructional methodology and accomplishment was positive and huge at .01 degree of certainty.

**Vaishnav (2013)** directed an examination on "Inventive Instructional Strategies, Interactive Multimedia Instruction and Computer Aided Instruction for Teaching Biology". The adequacy of Interactive Multimedia Instruction and Computer helped Instruction for training Biology was thought about regarding accomplishment of understudies utilizing C.A.I. The Interactive Multimedia Instruction (IMI) is discovered to be more successful than Computer Aided Instruction (CAI). This finding reveals that innovation prepared educators are more proficient than innovation based self-learning.

**Cheng, Tsu and Deng (2012)** led an examination on "The Effect of Multimedia Computer Assisted Instruction and Learning Style on Learning Achievement". Impact of mixed media PC helped Instruction on understudy learning accomplishment, was examined utilizing the secondary school educational program named "atoms that overwhelm mystery of life" from secondary school science. Understudies utilizing the media PC helped guidance model scored altogether better in learning accomplishment evaluations when contrasted with conventional models of guidance. The consolidated impact of guidance model and learning style, on understudy learning accomplishment was likewise talked about considering the four learning styles, for example, Diverger, Assimilator, Converger, and Accommodator. The outcomes show that understudies presented to a uniting learning style with conventional guidance perform essentially in a way that is better than those presented to three different styles. Be that as it may, the understudies presented to these equivalent three other learning styles performed better when presented to the sight and sound PC helped guidance model. Subsequently it is induced that affected by sight and sound guidance, understudies presented to the four learning styles don't have huge contrast in their exhibition.

## **MATERIAL & METHODOLOGY**

This part presents the material utilized and the proposed approach.

### **A. Data Collection**

Research in this journal was carried out using systematic review method. The search was conducted in July 2018 from the electronic database (Indonesia One Search by PERPUSNAS, PubMed) searched for by the keywords used: "video games" AND "intellectual disabilities", "computer games" AND "intellectual disabilities". In addition, the keyword "educational multimedia learning" and "intellectual disability" are used to expand the search. The search was limited to papers in English and Indonesian, in 2013-2018 and produced 10 journals.

### **B. Data Analysis**

The examination did in this deliberate audit study utilizes subjective strategies. The examination results acquired are introduced clearly dependent on the exploration addresses that have been resolved.

## **RESULTS AND DISCUSSION**

This part presents the outcomes got and following by conversation.

### **a) Characteristics of Educational Multimedia Games that can be Applied to Intellectual Disability**

As a mixed media that is utilized for intellectually hindered singular learning, it will positively be not the same as what is normally utilized by people by and large. From the consequences of the investigations of a few examinations above it was discovered that a portion of the qualities of instructive interactive media games applied were as per the following:

### **A. Result**

The after effects of the reference search acquired in the focus point of the conversation on the utilization of media instructive games for under studies with scholarly incapacities were then done to find solutions to the exploration addresses that were introduced in the past focuses.

As a mixed media that is utilized for intellectually impeded individual learning, it will surely be not quite the same as what is ordinarily utilized by people as a rule. From the consequences of the investigations of a few examinations above it was discovered that a portion of the attributes of instructive media games applied were as per the following:

### **Purpose Aspect**

The arranged objectives should be as per the necessities of scholarly understudies with incapacities. The individuals who have a youthful age can be more centered around improving their scholastic and language abilities, while for grown-ups they can zero in on improving professional abilities as a way to enter the labor force and face difficulties in regular daily existence. That way the utilization of interactive media learning game training can be helpful true to form and ready to improve the capacity of scholarly understudies with incapacities.

### **Time Aspects**

The time utilized in the utilization of instructive learning mixed media games dependent on the

consequences of the openness in the table shows various occasions. The most brief time is 20 minutes while the longest is around 60 minutes, and the entirety of that is done in one full exercise. Thus, it can likewise be said that the utilization of mixed media instructive games can go from 20 to an hour acclimated to the capacity of understudies.

### Aspects of Game

Structures Judging from the consequences of the openness in the table it is discovered that the game utilized should be given genuine pictures that are regularly capable by understudies, so later understudies can keep up what they have realized and can apply it to reality. Moreover, the game introduced additionally more in testing games. During the game understudies are not delivered autonomously. The educator or buddy should consistently go with to see the improvement that is passed by the understudies and give the correct bearing to do during the game.

### Feature Aspects

The perspectives gave in the game should incorporate everything required in the learning interaction and have the option to encourage singular scholarly incapacities to utilize them. Along these lines, the highlights contained in instructive sight and sound learning games are as per the following dependent on the consequences of a few writing concentrates in the Table I above:

- Games or exercises are introduced dependent on an outline of reality or everyday life that is regularly capable;
- The game substance introduced is straightforwardly identified with the learning material that will be given;
- Adapted to the capacities of people with scholarly incapacities;
- There is a corrector to recognize mistakes that happen during the game;
- Contains text, sounds, pictures, energized characters or mixes;
- There is an element that can store each movement that has been completed, as material for later investigation;
- Displays the time that has been utilized;
- There are models in every movement that will be completed;
- The utilization of a straightforward however expanded text style, just as brilliant tones to make it simpler for players to comprehend;

- Giving prizes can be as focuses in each movement that is appropriately executed;
- There is a component of giving criticism dependent on the outcomes acquired during the action;
- Presented with exercises that have levels of light, medium, and substantial

### Benefits of Using Learning Multimedia Educational Games for Mentally Disabled

The outcomes acquired from a few examinations, the utilization of media game learning produces positive outcomes contrasted with conventional learning without utilizing sight and sound learning. Handicap scholarly people are additionally ready to include themselves in assignments that request psychologically, increment self-assurance and better inspiration during the learning interaction. It tends to be said that not exclusively can improve learning capacities, yet the utilization of sight and sound learning is additionally ready to improve different capacities. They are better ready to confront the difficulties that exist, in actuality, as per what they have realized, give a feeling of delight and satisfaction, don't cause dissatisfaction or negative conduct because of stress during the learning cycle, and have abilities in tackling issues confronted.

### B. Discussion

People with scholarly incapacities have a few troubles in agreement learning and taking care of exercises in their day by day lives. The present circumstance can cause challenges that bring about the freedom of life later on. The targets of the above examination are in accordance with the assessment of which expresses that suitable media guidance improves understudy learning execution in science, math, and proficiency. All outcomes show improvement contrasted with previously or when actually utilizing customary strategies without the utilization of interactive media instructive games and show contrasts with the benchmark group. Moreover, singular scholarly handicap psychological capacities are likewise creating, in accordance with what has been portrayed [18], [19]. Picking the objectives to be passed on additionally should perceive how individual conditions are, what is required, and what the advantages will be for their lives later. A few things that can be utilized are regarding expanding freedom, expanding self-assurance, more prominent confidence and expanding openings for preparing Davies in [20], ready to create critical thinking abilities and retain McFarlane et al., in [22], these things have been remembered for diaries that are utilized as a wellspring of efficient survey.

## CONCLUSION

Computerized Technology is a ground-breaking instrument in showing learning measure. Using innovation in training learning will create beneficial outcomes on both the understudy and instructor, identified with scholastic execution and important adapting particularly for those influenced with Intellectual Disability, to achieve higher request thinking abilities, for example, basic and autonomous reasoning, improved inspiration and demeanor. Henceforth innovation has incorporated into the regular educational plan in causing the kids with Intellectual Disability to learn essential science ideas.

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