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Original Research Paper Education

ASSESSING ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) STUDENTS THROUGH ANIMATED VIDEO

Dr. J. SUJATHAMALINI Associate Professor & Head i/c, DSERS, Alagappa University, Karaikudi 630003.

S.GOVINDARAJ Research Scholar, Alagappa University, Karaikudi 630003.

ABSTRACT

Teacher in the classroom may have a chance to meet the disabled students and students with Attention Deficit Hyperactivity Disorder (ADHD). Students with Attention Deficit Hyperactivity Disorder (ADHD) are those who are affected by neurological disorder and it results to inattention, hyperactivity and impulsivity. It is the duty of teacher in classroom to make their students' attention to the teaching. But due to disorder, students with Attention Deficit Hyperactivity Disorder (ADHD) are unable to give attention in class while teaching in normal method. At this juncture, technology enhanced teaching will be helpful for the students with Attention Deficit Hyperactivity Disorder (ADHD) to pay attention to the teacher and helpful for them to follow the concept. The main and foremost objective of this study is to assess students with Attention Deficit Hyperactivity Disorder (ADHD) through animated video. This study was conducted with 15 students who showed inattention studying in IX standard at Government Higher Secondary School, Randham village in Tamilnadu. Investigators' observation cum closed ended questionnaire was used in the process of data collection. The investigator used animated video to identify the students with Attention Deficit Hyperactivity Disorder (ADHD). The data thus collected are analysed and tabulated. The results indicated that out of 15 students, only 3 samples scored low marks and they are categorized as students with Attention Deficit Hyperactivity Disorder (ADHD) because of their inattention. So, this study will be helpful for the teachers to assess ADHD students with the help of animated video along with other non animated assessment tools.

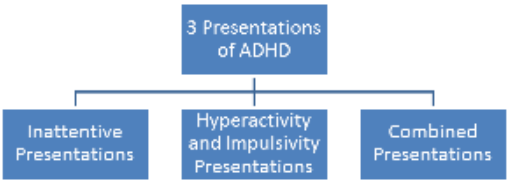
KEYWORDS ADHD, Animation, Video, attention

Introduction

In the modern era, technology plays a vital role in teaching learning process. A teacher should have the knowledge of working with technology. Technology enhanced learning is needed for the present type of students from primary to higher education. Students are expecting innovative teaching methods which will be helpful for better learning.

According to Lewis (1996) Vyas (1999) Channabasavanna (1996) Diagnostic and Statistical Manual (1995) Carson (1985) Craig (1979), Attention Deficit Hyperactive Syndrome is defined as the presence of developmentally inappropriate degrees of inattention, impulsivity and hyperactivity. Hyperactivity refers to an increase in motor activity to a level that interferes with the child's functioning at school, home on socially.

Students with Attention Deficit Hyperactivity Disorder (ADHD) are those who are affected by neurological disorder and it results to inattention, hyperactivity and impulsivity. According to DSM- V, Attention Deficit Hyperactivity Disorder (ADHD) can be categorized into 3 presentations.



Attention Deficit Hyperactivity Disorder (ADHD) is a neuro behavioural developmental disorder. It is the most commonly studied and diagnosed psychiatric disorder in children, affecting about 3 to 5 percent of children globally and diagnosed in about 2 to 16 percent of school aged children. Attention Deficit Hyperactivity Disorder (ADHD) is diagnosed two to four times as frequently in boys as in girls, though studies suggest this discrepancy may be partially due to subjective bias of refining teachers.

In the Inclusive setup, students with Attention Deficit Hyperactivity Disorder (ADHD) are sitting along with normal students in the classroom. It is the duty of teacher to make their students attention to the teaching. But due to disorder, students with Attention Deficit Hyperactivity Disorder (ADHD) are unable to give attention in class while teaching in normal method. At this juncture, technology enhanced teaching will be helpful for the students with Attention Deficit Hyperactivity Disorder (ADHD) to give attention.

Educational intervention is one of the type or method which may be given to students with Attention Deficit Hyperactivity Disorder (ADHD) to reduce their disorder through educational activities like watching video, concentrating on education, attention towards content etc. Examinations were conducted to assess the individual differences among students in the classroom. Such exams result helps to categorize Gifted, Slow learner and Average in the classroom. But it is too difficult to assess students with disabled with the help of normal exams. So, some special type of assessment is needed for the students with disabled like students with Attention Deficit Hyperactivity Disorder (ADHD) etc. So, this study will be an attempt to assess students with Attention Deficit Hyperactivity Disorder (ADHD) through animated video. If it is successful, then this method can be followed by teachers, psychiatrists and educationists to assess students with Attention Deficit Hyperactivity Disorder (ADHD) level of inattention.

Need for the study

Kleiman, et.al (1981) compared 18 children's performance on arithmetic problems administered by computer with problems given in a standard paper and pencil format using a program that was specially modified for use with students with Attention Deficit Hyperactivity Disorder (ADHD). Modifications included individualized level of problem difficulty, a more readable display, self-paced problem-solving, familiar answer format, and motivational features (such as graphic displays and praise statements). Dependent measures included accuracy, number of problems attempted, and rate of problem-solving in the computer format and the paper and pencil format. On average, children did almost twice as many problems on the computer as they did with

paper and pencil. In addition, the students with Attention Deficit Hyperactivity Disorder (ADHD) group on average also spent more time working on problems on the computer, without any significant loss of accuracy or speed. Informal interviews with the children indicated their strong preference for the computer. Two factors limit the usefulness of this study. First, the specific nature of the problems of these children was not provided in detail, thus there is no way to evaluate how many subjects actually met the criteria for students with Attention Deficit Hyperactivity Disorder (ADHD) diagnosis. Second, and most critically, no statistical tests were conducted to determine whether there were real differences across treatments.

Ford, Poe et.al (1993) examined the effects of different types of Computer Assisted Instruction (CAI) on the attending behavior of 21 elementary school children identified as Attention Deficit Hyperactivity Disorder (ADHD). The subjects were divided into three groups based on methods of identification: teacher identified only, teacher and Revised Conners' Questionnaire identified, and identified by private practitioners and receiving medication. Using a within-subjects group design, participants were instructed with four software packages: (a) math drill and practice, (b) math instructional game, (c) reading drill and practice, and (d) reading tutorial, drill, and practice. Each package included two formats for comparison: game and nongame format, playing against computer and playing with a partner, animated or non animated graphics, and unlimited time to respond or beat the clock competition. The non-attending behaviors on each software package were rated every two minutes during two ten-minute periods by two raters using a prepared checklist. Those behaviors included fidgeting, responding impulsively, out of seat, talking to neighbour, and making inappropriate noises. The authors reported that the attention of the identified children increased significantly on software with a game format, without animated graphics, and with unlimited time to respond. More non-attending behaviors occurred on the reading tutorial and drill and practice software program than on the two math packages.

From these studies, Computer plays an important role for assessing students with Attention Deficit Hyperactivity Disorder (ADHD). Students with Attention Deficit Hyperactivity Disorder (ADHD) spent more time on computer assisted teaching than normal teaching. It is concluded that students with Attention Deficit Hyperactivity Disorder (ADHD) may be assessed through computer enabled animated video. So, this study is a need of the hour.

Statement of the Problem:

"ASSESSING ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD) STUDENTS THROUGH ANIMATED VIDEO"

Objective of the study:
The main and foremost objective of the study is to assess the students with Attention Deficit Hyperactivity Disorder (ADHD) through Animated Video.

Hypothesis of the study:
There exists a significant difference in assessing students with Attention Deficit Hyperactivity Disorder (ADHD) through animated video due to variation in demographic variables.

Methodology:
In this study, Observation cum closed ended questionnaire is used for data collection. In the present study, educational intervention is followed to assess students with Attention Deficit Hyperactivity Disorder (ADHD) in the classroom. 15 students studying 9th standard at Government Higher Secondary School were selected as sample for the present study. All 15 students were accommodated in a technology enhanced classroom. Specially designed animated package of mathematical concepts were shown to samples for 10 minutes. After finishing video, a closed ended questionnaire is given to all students.

Table I: Questionnaire to assess students with Attention Deficit Hyperactivity Disorder (ADHD) using animated video.

Q. No	Questions	Answer
1	The colour of shirt worn by the teacher is	
2	The cost of 1 ticket is	
3	The number of buses came in the slide is	
4	The number of passengers travel in the bus is	
5	The cost of 1 kg of brinjal is	
6	The cost of 5 kg of brinjal is	
7	$(a+b)^2 = a^2 + b^2 +$…….	
8	(a+b)(a-b) =	
9	What is the mistake in $(a+b)^2 = a^2 + b^2 - 2ab$	
10	Which Mathematician has lived during Fermat?	
11	An identity is an equality that remains true regardless of the values of any ……. that appear within it.	
12	$(2a+3b)^2$ = ……. + $9b^2$+ ….ab	
13	$(4x+5y)(4x-5y) = 16x^2$ - …….y^2	
14	$(x+y+z)^2 = x^2 + y^2 + z^2$ + ……. + 2 …… + 2 …..	
15	$6a^5 - 18a^3 + 42a^2 = 6a^2(a^3 - 3…. + ….)$	

Table II: Marks scored by the samples after watching video.

S.No	Name	Marks
1	S.Ameerunisha	13
2	K. Surendiran	4
3	K. Sujith kumar	4
4	P. Brahadeesh	9
5	K. Bharathkumar	14
6	M. Dhandayuthabani	4
7	G.M. Ragavi	14
8	R. Abinav	14
9	R. Esha	8
10	K. Velavan	8
11	V. Gomathi	13
12	S. Deepika	14
13	M. Bharathi	9
14	R. Saranya	8
15	S. Subashini	13

Table III: Categorization of Students according to the marks scored.

Low	Percentage	Medium	Percentage	High	Percentage
3	20%	5	33.33%	7	46.67%

Discussion and Conclusion:
This study shows that students with Attention Deficit Hyperactivity Disorder (ADHD) were assessed through animated video. Table III indicated that 46.67% of sample are scored high which indicated that the inattentive behaviour is very much low. 5 samples i.e. 33.33% are coming under moderate category in assessing students with Attention Deficit Hyperactivity Disorder (ADHD). 3 samples (20%) have scored low which indicated that the samples are having inattentive behaviour and they are categorized as Attention Deficit Hyperactivity Disorder (ADHD). 3 students were identified as Attention Deficit Hyperactivity Disorder (ADHD) among 15. Thus this study will be helpful for the teachers to assess students with Attention Deficit Hyperactivity Disorder (ADHD) in the classroom. This study will also enhance the attention when used as an interventional strategy along with assessment of students with Attention Deficit Hyperactivity Disorder (ADHD).

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