Effect of Structured Teaching on Learning, Reading and Writing Skills Among Students with Intellectual Disability at Primary-I Level

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Abstract— The present research investigates the effect of structured teaching in reading and writing skills among the student with intellectual disability. Structure teaching is a set of teaching techniques developed by Division of TEACCH (Training and Education of Autistic and Related Communication-Handicapped Children), a state- wide program serving individuals with autism spectrum disorders in North Carolina, USA. Structure teaching strategies can be implemented across different settings and variable curriculum areas, as they serve as a vehicle to teach skills, and/or as a framework for classroom setting. It reinforces and ready to learn abilities in students. It promotes independent and fluent learning skills. They have a limitation in writing skills like free hand scribbling, hand stroke and writing levels. In reading skills of lexical categories like reading and naming of fruits, vegetables, types of clothes, vehicles, wild and pet animals etc.). It all helps to motivate students to read, language skills, letter knowledge, and identify the naming of objects. Reading and writing skills are mandatory requisite in traditional academics. Reading skill are necessary for writing readiness and help in the development of language abilities of student. The main objective of this research was to compare the post test mean score of students who get the intervention through structured teaching (experimental group) and the students who get the intervention through the conventional method (control group). This research was conducted on 5 students in experimental group and 5 students in control group. The finding shows the mean score of control group is 37.00 and SD is 6.51 and the mean score of experimental group is 61.60 and SD is 10.83. The result clearly shows the difference between the score of experimental group is higher than the score of control group. Hence structured teaching is recommended to be implemented in educational setups for all students with intellectual disabilities.

Index Terms— Structured teaching, reading skill, writing skill, writing readiness, lexical categories.

I. INTRODUCTION (HEADING 1)

Intellectual disability is a disability which is characterised by the significant limitation in both intellectual and adaptive functioning which covers the everyday practical skills and social skills (AAIDD). They have a limitation in writing skill like free hand scribbling, hand stroke, writing level. In Reading skills of lexical categories like reading and naming of fruits vegetables, types of clothes, vehicles, wild animals, pet animals). It all helps in motivation to students to read, language skill, letter knowledge, and identify the naming of objects. Reading skill and writing skills are mandatory requisite in traditional academics. Reading skills are necessary for writing readiness and development of language. so far many strategies have been developed, and many research have been conducted to improve the reading and writing skills among children with intellectual disabilities. There are no strong evidences the use of structured teaching for teaching children with intellectual disabilities. In India Still there is a strong need for development of assessment tools for assessing academic skills among children with intellectual disabilities.

Structure teaching is a set of teaching developed by Division TEACHC (Training and Education of Autistic and related Communication-handicapped Children), a state- wide program serving individuals with autism spectrum disorders in North Carolina, USA. Structure Teaching strategies can be implemented across setting and across curriculum area, as they serve as a vehicle to teach skills, and/ or as a framework for classroom setting. It Reinforce and ready to learn. It Promote the learning Independent and fluency.

TEACCH develop the visual to illustrate the structured Teaching components-

- Visual Structure of Materials
- Routine and Visual Strategies
- Work System
- Schedules

Physical Structure

- **Physical Structure** physical structure is the foundation of structured teaching in the classroom. It is helpful in the enhance the learning occurring in the classroom.
- **Visual Schedule** Visual Schedule is helpful in the communication of upcoming sequence activities or events through the use of different types of objects, like icons, words, or different photographs or combination of different tangible supports.
- Work System- Work system is the component of structure teaching which help in the organisational system that gives the information about the ASD.

Visual Structure- Visual Structure helps to assist the students understanding in physical and visual components. Helps in understand how to activity should be completed.

II. REVIEW OF LITERATURE

Allor. H. J, Partricia. G. M, et.al, (2009) was conducted the study based on Research Based Technique for teaching early reading skill to student with intellectual disabilities. The purpose of this study was to know the outlook for a student

with ID is improving or how much more about how to teach reading to struggle with ID. This study Describe the key technique used in research examining effective method for teaching student with ID to read. This study found the severe difficulties in memory and language that make it very difficult for them to learn to read. Although there are many examples of student with ID who successfully learn to read. Only 1 in 5 students with ID achieve even minimal literacy skill.

Ingvar. L and Monica. R University of Gothenburg (2011). This study was conducted on Developing reading comprehension Among student with mild Intellectual Disabilities. This study demonstration the student with Intellectual disability at mild level. Researcher takes the total 40 mild level intellectual disability adolescent student in special school in which 26 boys and 14 girls which was devided into 2 intervention Condition for the intervention that is reciprocal teaching (RT) and inference teaching (IT) . RT student were practice on four active strategies where as (IT) involved to giving answer inference question. This research is Quantitative and qualitative both analysis. The Pre and post test was used for various Reading skills. The interaction is small instructional group was video- recording. This study analyse the children with Intellectual Disability can be cognitively active, creative, show commitment and they enjoy the reading provided. The result of the study was the sociocultural paradigm for instruction and remediation.

Ratz. C, and Lenhard. W, (2013), conducted the study on Reading skill among student with intellectual disability. The purpose of study to describe the how many students with ID learn to read and write is essential for planning the education process and how it become more interesting when these skills correlate with the other variable of learning. Research used to qualitative strategy as well as survey method. They use the heterogeneity of a student with ID and they found how gender age intensity of the ID and family influence the development of literacy. The study was conducted in Bavaria (German Federal state) and They have taken 11074 from all the category of ID students. They found that younger child influence with specialized setting and at high school age they improve with the Inclusive and Environment.

L.R Shapiro 19 Nov-(2015) was conduct the study on differing effect of two synthetic phonics programmes on early reading development. The researcher want to compare the impact of two synthetic phonics programmes on early reading. The researcher takes the 7 school children who receive the letter and sound which teacher multiple letter sound and take the 10 school children who teaches only the consistence mapping plus frequent word by sight research measure the phonological awareness and reading from school entry to third year. He find the both programme was equally effective. The children with poor PA at school entry achieved higher reading attainment under ERR.

Yetunde. C and Olayinka (2016). O was conducted the study on Effect of a classroom based intervention on the social skill of pupil with Intellectual disability in Southwest Nigeria. In this study only mild to moderate Intellectual Disability participated. Teacher use to explore the social skill curriculum and give the lesson to participant 3-4 times a week for 8 week. The age rang 12 to 19 year. There were 16 male (53.3%) and 14 female (46.7%) The intellectual disability pupil with social skill in this study improve significantly by the explore social skill curriculum during 8 week.

Sarah. N.H Murray (2017) state university was conducted the study on Addressing Reading Fluency of student with ID using a Multiple probe design. The purpose of this study was to investigate was functional relation between repeated reading and choral reading and work correction per minutes the sample was 6 high school students with significant intellectual disabilities the finding of this study was five of the six participant increase their mean WCPM from baseline treatment and four of six improve their reading comprehension accuracy.

C.P Mosito, A.M Warnick and E.E Esambe 2017 july 24 was conduct the study on Enhancing reading abilities of learner with intellectual impairment through computer technology. Research want to assess the influence of text- to-speech of stories on the reading ability of intellectual disable learner. This research was a quantitative research. This study involve S. P school of Cape Town South Africa. Research use the pre and post test analysis. This finding was the first learner group are who read managed between 4 % 35 words compared with other second group who had very low to zero reading pre- test score and in the post score time spend on reading (speed) of group one was between 27s to 60s and group second was spend full 60s.

Ponopoulos. N, and Drossinous. M, (2019) was conducted the study onteaching intervention to support reading skill in a student with intellectual disability. The purpose of this study is to know about the intellectual Disabilities student can response to a teaching takes with multiple reading skill. This research is mixed with quantitative and qualitative data. The qualitative data of research was extracted from the student case study with ID. There were total 67 were teacher of general education 22 teacher of special education 6 were parents. In this study According to CBS of learning readiness. In oral speech the student was evaluated clear and precise expression 71.8% student with ID strongly agree. It is useful 28.2% showed necessary and less than 5% answer that it hasn't any useful.

III. RESEARCH OBJECTIVES

- 1. To find out the mean score of pre-test score of control group and pre-test score of experimental group.
- 2. To find out the mean score of pre-test score and post test score of control group.
- 3. To find out the mean score of pre-test and post test score of experimental group.

- 4. To compare the mean score of post-test score of control group and post test score of experimental group.
- 5. To compare mean score of individual score obtained on evaluation by student of control group.
- 6. To compare the mean score of individual score obtained on the different evaluation by experimental group

IV. RESEARCH METHOD

The purpose of the study was to find the effect of structured teaching on learning, reading and writing skills among students with intellectual disability at primary-I level. In this research A quantitative approach and the experimental method was used. It is a empirical research. In experimental method the (pre-test, Intervention and post-test). In experimental research the hypothesis of the research were formulated before doing the experiment. The aim of the research was to verify the formulated hypothesis which refers to the present situation of the study. In this research the self-made tool was adopted for data gathering.

Population - In this research all the student with intellectual disability from the special school of Lucknow Uttar Pradesh.

Sample- The sample of this research was 10 students with intellectual disability at Primary- I level will be select. 5 students will be select for the Experimental Group and 5 students will be select for control group.

A sample of 10 students with mild Intellectual disability at primary Level were drawn by purposive sampling technique as per the need of the research.. Equal number of students were randomly divided into 5 in experimental group and 5 in Control Group.

Procedure: Based on the assessment, through the tool developed by the researcher goals were selected for all the students. Students of Control group were given treatment based on conventional method. A comprehensive intervention programme was developed based on structured teaching method for experimental group.

V. RESULTS

Data analysis is to organised, provide structure to and elicit meaning from the research data. The data analysis appropriate statistical measures. It compare the Mean score of subject, SD and independent t- test. We analyse data to extract meaning from it.

1.1 Table no. Pre -test score of Control group and Pre- test score of experimental

Pre-test score of control group & Experimental Group						
Case Control Group Experimental Group						
Case-1	32	38				
Case-2	28	41				

Case-3	36	26	
Case-4	20	31	
Case-5	24	23	
Mean Score	28.00	31.80	
SD	6.32	7.66	

Figure 1.1 : Pre -test score of Control group and Pretest score of experimental



a. Sample of a table footnote. (table footnote)

The above table and graph shows the difference between the score, mean score and SD of Pre test score of control group and pre test score of experimental group. The total score of pre-test of control group is 140 and total score of pre-test of experimental group is 159 and the difference between both the score is 19. The mean score of pre-test score of control group is 28.00 and mean score of experimental group is 31.80. The difference between both the mean score is 3.80. The above graph shows clearly the mean score of experimental group is quit higher or almost similar than the control group.

1.2 Table value of 8df comes out to be 1.86 at 0.05 level of significance.

Control	Ν	Mean	SD	T-	Level	of
group				ratio	significance	
Pre test	5	28	6.32	4.3	P<0.05	
Post test	5	31	7.66			

Table 1.2 shows that the mean of pre-test score of control Group is 28 and pre-test score of experimental group is 31.8 and SD of pre test score of Control group is 6.32 and post-test score of control group is 7.66. It shows that pre-test score of experimental group is higher than the pre-test

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score of Control group. In order to find out the significance critical ratio was calculated. The calculated critical ratio is 4.3 which is lesser than the table value at 0.05 level of significance. Thus there is significance between the pre-test score of Control group and post-test score of control group. Hence the Hypothesis is rejected.

Fig. 1. 1.3 Pre -test score and Post Test Score of Control Group

Pre -test score and Post Test Score of Control Group					
Case	Pre Test Score	Post Test Score			
Case-1	32	43 40 42 29			
Case-2	28				
Case-3	36				
Case-4	20				
Case-5	24	31			
Mean Score	28.00	37.00			
SD	6.32	6.51			

Figure 1.2 Pre -test score and Post Test Score of Control Group



The above table shows the pre-test score of Control group and post test score of control group. The mean score of pre-test is 28.00 and mean score of post-test is 37.00. The above graph shows the mean score of post test is quite higher than the mean score of pre-test because difference in both the mean score is 3.00. It is clearly showing not a big difference in achievement score of pre-test and posttest score of control group.

Table 1.4 : Pre-test score and Post Test Score ofExperimental Group

Pre-test score and Post Test Score of Experimental Group					
Case Pre Test Score Post Test Score					
Case-1 38 72					

Case-2	41	67
Case-3	26	52
Case-4	31	69
Case-5	23	48
Mean Score	31.80	61.60
SD	7.66	10.83

Figure: 1.4 Pre-test score and Post Test Score of Experimental Group



The above table shows the pre-test score of experimental group and post test score of experimental group. The mean score of pre-test score is 31.80 and the mean score of post test score is 61.60. The above graph is clearly shows the mean score of post test score. Because the difference between the both the mean score is 29.80. It is clearly shows the achievement score of pre test is higher than the achievement score of pre test.

1.5 Pre test and post-test critical of Experimental Group.

Exp.Group	Ν	Mean	SD	T-	Level of
				ratio	significance
Pre test	5	31.8	7.6	5.02	P<0.05
Post test	5	61.6	10.8		

Table 4.5 shows that the mean of pre test score of Experimental Group is 31.8 and post test score of experimental group is 61.6 and SD of pre test score of Experimental group 7.6 and post test score of Experimental group is 10.8. It shows that post test score of experimental group is higher than the Pre test score of Experimental group. In order to find out the significance critical ratio was calculated. The calculated critical ratio is 5.02 which is lesser than the table value at 0.05 level of significance. Thus there is

significance between the pre test score of Control group and Post test score of control group. Hence the Hypothesis is rejected.

Table 1.6: Post Test Score of Control and ExperimentalGroup

Post Test Score of Control and Experimental Group					
Case	Control Group	Experimental Group			
Case-1	43	72			
Case-2	40	67			
Case-3	42	52			
Case-4	29	69			
Case-5	31	48			
Mean Score	37.00	61.600			
SD	6.51	10.83			

Figure 1.6: Post Test Score of Control and Experimental Group



Figure 1.7: Post Test Score of Control and Experimental Group



The above table shows the post-test score of control group and post-test score of experimental group. The mean score of posttest score of control group is 37.00 and the mean score of post-test score of experimental group is 61.60. The SD of post score of control group is 6.51 and SD of post-test score of experimental group is 10.83. The above graph is shown clearly the level of mean score of experimental group is higher than the control group. Because their mean difference is 24.0. It is clearly showing the achievement level of experimental group is higher than the achievement level of Control group.

Table 1.7: Post-test	Critical	Ratio	of	Experimental	Group
and control group					

Group	Ν	Mean	SD	T-	Level of
				ratio	significance
Control	5	37	6.5	4.35	P<0.05
Experimental	5	61.6	10.8		

Table value of 8df comes out to be 1.86 at 0.05 level of significance.

Table 1.7 shows that the mean of post test score of control Group is 37 and post test score of experimental group is 61.6 and SD of post test score of Control group is 6.52 and post test score of Experimental group is 10.8. It shows that post test score of experimental group is higher than the Post test score of Control group. In order to find out the significance critical ratio was calculated. The calculated critical ratio is 4.35 which is lesser than the table value at 0.05 level of significance. Thus there is significance between the pre-test score of Control group and Post-test score of control group. Hence the Hypothesis is rejected.

Table 1.8:Individual score obtained on differentevaluation by student of control group

Individual score obtained on different evaluation by student of control group								
Case	Pre Test	E1	E2	E3	Post- Test			
Case-1	32	33	37	39	43			
Case-2	28	29	33	35	40			

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Case-3	36	25	37	38	42
Case-4	20	20	21	24	29
Case-5	24	26	24	37	31
Mean Score	28.00	28.60	30.40	34.60	37.00
SD	6.32	5.94	7.470	6.107	6.51

Figure 1.8: Individual score obtained on different evaluation by student of control group



The above table shows the continuous evaluation score of the control group. The mean score of pre test score is 28.00 and the mean score of E1 (Evaluation 1) is 28.60 which is .60 more than the mean score of pre-test. It is clearly shows the improvement in achievement score from pre test to E1. The mean score of E2 is 30.40 which is 1.80 more than the mean score of E1. It is clearly shows the improvement in achievement score from E1 to E2. The mean score of E3 is 34.60 which is 4.2 more than mean score of E2. It is clearly shows the improvement in achievement score from E1 to E2. The mean score of E3 is 34.60 which is 4.2 more than mean score of E2 to E3. The mean score of post test score is 37.00 which is 2.4 more than the mean score of E3. The above graph is also shown the improvement in perform5ance level from pre-test to post. But their is very significant difference.

Table1.9:IndividualScoreobtainedondifferentevaluation by experimental group

Individual	Score	obtained	on	different	evaluation	by
experimental group						

Case	Pre Test	E1	E2	E3	Post-
					Test
Case-1	38	46	52	64	72
Case-2	41	44	57	61	67
Case-3	26	29	34	42	52
Case-4	31	38	45	53	69
Case-5	23	27	31	39	48
Mean	31.80	36.80	43.88	53.80	61.60
SD	7.6	8.58	11.21	8.92	10.831

Figure 1.9: Individual Score obtained on different evaluation by experimental group



The above table shows the continuous evaluation score of the experimental group. The mean score of pre test score is 31.80 and the mean score of E1 (Evaluation 1) is 36.80 which is 5.0 more than the mean score of pre-test. It is clearly shows the improvement in achievement score from pre test to E1. The mean score of E2 is 43.88 which is 7.08 more than the mean score of E1. It is clearly shows the improvement in achievement score from E1 to E2. The mean score of E3 is 53.80 which is 9.92 more than mean score of E2. It is clearly shows the improvement in achievement score from E2 to E3. The mean score of post test score is 61.60 which is 7.8 more than the mean score of E3. The above graph is also shown the improvement in performance level from pre-test to post. The difference between both the curve of the graph is higher.

VI. CONCLUSION

The research discussed the "Effect of structured teaching on learning of reading and writing skill among the Intellectual disability at primary-I level". This research would not complete without drawing some important suggestion, conclusion and making few important findings.

This research on structured teaching has been effective method for student with intellectual disability. The research were find the significant difference between the score of control group of students and experimental group of students. It means Structured teaching method is a effective method. Structured teaching is well organised method to use the teach the children this method previously used for Autism spectrum disorder children. Researcher found this method is also effective for the children with intellectual disability. This method is useful for the improvement of academic skill as well as for reduce the behaviour problem. This method is useful for children with Intellectual disability because the children with intellectual disability have also shows problem in behaviour. The structured classroom are organised full with activity in sequence. And it help in the fully utilise of the time because when child entered in the classroom he/she start doing the activity. The child were take some to conditioned in structured teaching environment. Once child will conditioned in the structure teaching environment child start doing activity by themselves. It help to improve the focus and concentration of the child.

Suggestions for future Study.

- The structured should be used for development of children with intellectual disability of all the domain such as personal, social, academics, vocational and recreational etc.
- The structured teaching should be used at home also. It will help to organise the child daily routine.
- The school should organise the training programme to train the parent how to implement the structured teaching at home and how to organise the daily activity.

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