ABSTRACT

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Title: Working Memory and Educational achievement among Intellectual disabled and Normal children.

Research Question:

Objectives of the study were

1. To measure working memory among Intellectual disabled and normal children.
2. To measure educational achievement among Intellectual disabled and normal children.
3. To measure working memory and educational achievement among intellectual disabled and normal children.
4. To know correlation between working memory and educational achievement among intellectual disabled and normal children.
5. To know correlation between working memory and educational achievement in Intellectual disabled and normal in urban and rural areas.
6. To fit a suitable regression between working memory and educational achievement in urban and rural areas.

INTRODUCTION:

Memory is essential for human beings and an animal, without its life is very difficult. It is use in everyday life and every aspect of life. Today Working Memory is very “Hottest” topics in the field of cognitive psychology & cognitive neuron Science. Working Memory is play important role in our day to day complex cognitive task, such as school cognitive task, reading news paper, rearranging furniture in bedroom to settle for other new furniture, calculating amount to pay in restraint. We ever felt embarrassed because we could not remember the name of known person when we try to recall or anxious and helpless because everything we memorized well on the previous day before taking our examination have suddenly become unavailable. Memory is needed human faculty very fascinating, yet intriguing.
It’s functions are it preserve our sense of who we are, it maintains our interpersonal relationship and help us taking decisions, problem solving. Since memory plays central role in almost all cognitive process, such as thinking, perception, planning. Every aspect of our life depends on memory, those who cannot encode, Store or retrieve in formatter must rely on others for their survival. Mild impairment’s in memory can make day to day activities challenging because learning depend on memory any deficiencies in any aspects of memory children and adolescents can’t acquiring the skills and knowledge necessary for success in life. Many research result shows that memory problems are frequently the cause of learning problems and on other hand individuals with normal memory capacity utilize their memory resources efficiently they learn effectively. Working memory is the limited capacity of storage system which maintain and manipulates the information for brief period of time. We all are aware that memory plays on us throughout our lives. Working memory and educational achievement are inter related both are depend on one another. Working memory is important academic performance, educational achievement and students with educational problems often have working memory problems, for example when we using working memory for mathematic calculation, we trying memorizing something try to recall, listening and taking note and expressing ideas in verbally and in writing, reading and recalling, expressing ideas. In the day of ancient Greeks time crucial role in the life was the reorganization of memory & learning can be tracked, in the nineteenth century advantage of the public Education. American education began to identify different types of memories to support memory and designed informational method to support memory

SAMPLE OF THE STUDY

In present study sample were selected randomly from Special School & Normal School of Surat and Dadra Nagar Haveli’s Urban and Rural areas, the proposed study were covered sample of 152 Intellectual disabled children out of them 76 boys(38 urban & 38 Rural) + 76 girls (38 Urban & 38 Rural) chosen on random bases and their IQ, MA, CA based and 152 normal children out of them 76 boys(38 urban & 38 Rural) + 76 girls (38 Urban & 38 Rural) chosen on random based. In the present study sample were selected the age of 8 to 15 years children.
VARIABLES OF THE STUDY

In the proposed study two levels of gender (Boys and Girls), levels of age group (8 to 15 years) and area will be taken as control variable, working memory and Educational achievement an dependent variable and. Intellectual disabled and none disabled as Independent variables.

TOOLS

Automated Working Memory Assessment – (AWAM)

Automated working memory assessment is a computer based assess of working memory skills. This test developed in UK (United Kingdom) Main purpose of AWMA is to identify significant working memory problems in individuals between 4 to 22 years of age. This test includes several subtests. The test is fully automated in administration scoring and interpretation. In AWMA two-subtest screener and there is short-term with 4 sub test and long term with 12 subtests.

All subtests start with auditory directions on computer. In verbal tests the computer presents Stimulus auditorily and then examinee speaks out the response and tester use arrow keys to record the response was true or false. Details of subtests are as below

The Koufman Test of educational achievement, Third edition (KTEA-3 comprehensive form)

The KTEA-3 is an important tool for assessing academic achievement. It is an individually administered measures academic achievement for grades pre – kindergarten through 12 or ages 4 through 25 years. It measures academic achievement in reading, Mathematics, written language and oral language. It allows the examiner to administer a single subtest or any combination of subtests to assess achievement in one or more domains. The KTEA-3 is use for examinees age from 4 to 25, whether or not they are in school, however not all 19 subtests are administered every age or grade level. Table 1.3indicates the age and grade range at which each subtests may administered. All subtests given to a wide range of grade levels, various start points and in some cases item sets or level, help to ensure that subject is administered those item appropriate for his/her grade or skill level.
**Seguin Form Board Test: (Age 3 to 15)**

The Seguin Form Board test is based on single factor theory of intelligence, measures speed and accuracy. It is useful in evaluating a child’s eye-hand coordination, shape concept, visual perception and cognitive ability. The primarily used to assess visual-motor skills, it includes Gesell figures where in the child is asked to copy 10 geometrical figures to evaluate visuo-motor ability. Test materials consist of ten differently shaped wooden blocks and a large form board with recessed corresponding shapes.

Seguin Form Board Test can be supplemented by other comprehensive tests such as Stanford Binet Test, R.B. Cattell’s cultural fair intelligence test etc., to yield a complete picture of the child’s mental development.

**PROCEDURE OF DATA COLLECTION**

In the present research all the tests were administered individual testing session for each sample was administered after rapport development and adequate instruction. Difficult words are explained as and when occurred. It was assured to each subject that their response would be kept strictly confidential and privacy would be maintained at all levels. Also it was clearly informed that all part of data collection is for research purpose only. According to test manual response of each subject test was scored as per scoring key of each test and final scoring of each test was done as per manual. The score was analyzed with adequate statistical techniques in order to study the contribution of independent variable. Here in AWMA test only suggested deviation from the battery’s analysis is that the verbal working memory score should also be considered as representative of executive working memory. Despite the logical structure of the AWMA, confirmatory factor analysis (Alloway et al., 2006) resulted in more support for Baddeley’s traditional three-factor model, with separate verbal and visuospatial factors at the short-term level and a third factor representing the shared variance between the verbal and visuospatial working memory task.
Present study will focus on working memory and educational achievement among Intellectual disabled and normal children. In the present study following statistical methods were used for data analysis. Mainly three different statistical methods were used, which are ‘t’ test, correlation and ANOVA test. Statistical package for social science was used with the help of computer for derive outcome.

RESULT DISCUSSION
The result of the study reveals that there is no significant difference found in working memory of Intellectual disabled and normal children in both areas urban and rural. Significant difference found in educational achievement, particularly in intellectual disabled children. There is a negative co-relation found in the Working Memory and Educational Achievement in Visuospatial Short-term Memory and Written Expression components in both types of children.

LIMITATIONS OF THE STUDY
In the present study certain limitations were found. The limitations are mentioned below.

The study was conducted on those children who studying in Surat district and Dadra & Nagar haveli are urban and rural areas schools, therefore their outcomes may not be representative of other schools in these particular areas. It can be future research could also integrate for other areas school’s students.

The sample of the study was restricted to Surat and Dadra & Nagar Haveli only. It can be conducted in other areas. Also the study was conducted on 304 children only. Sample was taken from very small area, it could be wider. The sample size of each group was small so that finding of this study cannot be generalized on a larger population or group. Community Social economic status was not considered in this study.

However, these before mentioned limitations do not supposed to opposite effect the significance of the present result.
Suggestions for further studies

Suggestions made by the researcher spread his/her span of research. The suggestions which are mentioned by the researcher below are concerning for the other investigator who will do the future research study. These are few suggestions given by the researcher which are also helpful for the investigators working in this field.

Findings of the research will be useful in identifying the working memory and educational achievement of Intellectual disabled and normal children. This will provide as background knowledge to psychologists for further findings. It will further help in steps finding working memory and educational achievement in both Intellectual disabled and normal children. The present research work may also helpful for remedial intervention programme. Further a research can be done to study with specific students. The study covered the sample only from Surat district and Dadra & Nagar Haveli, further research could be conducted on other wider population may provide richer and more valuable information. The researcher suggests that any other statistical techniques can be also used on the same sample. In the present study include only working memory and educational achievement limited sub components, further research could be conducted on other sub components, different type of categories like ADHD, Autistics, And Learning disabilities etc. The present study provides evidence for working memory and educational achievement.

IMPLICATIONS OF THE STUDY

Implications and significance working memory and educational achievement. As per the review literature and other information gathered. It has been since that there are very few research studies done in Gujarat on Working memory & Educational Achievement. Through this study awareness can be created and early identification and intervention planning and assessed.

Practically it informs intervention and policy making. This research study will help the interventional specialist to construe about working memory and Educational achievement for children.
This research will help Psychologist, Educator, Teachers, Administrator and other health specialist in compelling copying strategies and training children.

Note:
We have three components to our research work:
(1) Verbal Working Memory
(2) Visuospatial Working Memory and
(3) Central Executive Working Memory.
We have excluded the Central Executive Working Memory in our research study due to version of AWMA Test. However, we have included 2 extra components:
(1) Verbal Short-term memory
(2) Visuospatial Short-term memory