

INCIDENTAL Vs INTENTIONAL VERBAL LEARNING IN AURALLY HANDICAPPED CHILDREN

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Introduction

Man is primarily a verbal learner, when an individual or subject enters the laboratory, he already possesses a rich repertory of verbal responses, which is well over-learned and highly organized. For this reason, it has been difficult to find standardized materials for the study of verbal learning faced with verbal materials. Each subject has his own complex of association meanings and preferences in relation to that material,

We learn many things without having a conscious intention to learn. Learning which occurs without specific instruction to learn has often been designated on 'Incidental Learning.' Incidental learning does take place although performance is never so good as under instruction to learn. However, the occurrence of so-called incidental learning does not prove that learning can ever take place in the absence of a set to learn. If, on the other hand, when individual makes a conscious effort to learn, then it is called 'Intentional Learning.'

In early days different materials like meaningful words, poems and passages of the prose have been used to assess the verbal learning. The use of such materials makes it difficult to compare because of the unequal difficulties of the learning tasks. To overcome such difficulties Hermann Ebbinghaus introduced nonsense syllables which has no dictionary meaning and different condition of learning could be directly compared.

Need for the study

Human beings learn many things through incidental and intentional events or situations. To learn verbal behaviour, the auditory and visual senses are very much essential. As the aurally handicapped children lack in auditory sense, it was interesting and needed to be studied experimentally and compare the performances for the same group for incidental and intentional learning, which may be helpful to teach speech and language to such children.

The Problem

To study the difference in verbal learning abilities of aurally handicapped children, through intentional and incidental methods in English language.

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Hypothesis

There will be no significant difference in learning abilities between the incidental and intentional learning for the aurally handicapped children.

Methodology

Subjects: One group of 30 male bilateral severe sensorineural hearing loss with delayed speech and language subjects were selected, age ranging from 14 years to 20 years from the School for the Deaf and Blind Boys, Mysore. The mother tongue was Kannada as their first language, and English as the second language.

Materials

Test Materials: A new type of test material is prepared. It consists of two sets of a familiar paired associate lists which consists of pairs of a familiar picture and a meaningful word in English language. These pairs are for both incidental and intentional learning. Like this there were ten cards for each set of learning. Another set of cards consists of the same picture as in previous paired associate set but without associate word. Each word on the card is indirectly or directly related with the picture on the same card. The second set is prepared to recall the associate word for a particular picture. The order of difficulties of each item for each set is kept almost same (as chosen by Clinical Psychologist). The picture on a card is called as stimulus and the word associated with that is a response for the second set. All the response word is written in capital thick letters to facilitate more perception.

List for incidental learning

<i>Word</i>	<i>Picture of</i>
1—Eye	Spectacle
2—Rain	Umbrella
3—Wall	Clock
4—Table	Chair
5—Foot	Slipper
6—Tree	Leaf
7—Key	Lock
8—Pen	Note Book
9—Bell	Temple
10—Ring	Fingers

List for intentional learning

<i>Word</i>	<i>Picture of</i>
Pond	Fish
Hear	Ear
Cap	Head
Cup	Saucer
Boy	Ball
Comb	Mirror
Thread	Needle
Egg	Hen
Leg	Shoe
Coat	Shirt

Other Materials: Stop watch, pencil, paper and eraser etc.

Test Procedure

The method in this experiment used is called paired associate learning method. In this method subjects anticipates the associated word with a parti-

cular picture and by few trials he learns the correct response word. Here the subject learns word as well as picture.

In first part of experiment the first set of list for incidental learning was presented to the subjects. Each card which consists of both picture and word were exposed approximately for 5 seconds and subjects were instructed by using gestures and sign language to read and remember the word presented with particular picture. Like this all ten cards for the incidental learning were presented each after 5 seconds exposure duration. Now the response eliciting cards were presented which consist only the picture, in same serial manner. Subjects were asked to remember or recall the word which was presented with the same picture in previous series of cards. Subjects were allowed to take their own time to come out with the correct (word) response and write down on a given paper. They were supplied with a eraser to correct their word if they think it was wrong. The response eliciting cards were exposed till that time until subject tell to present another card.

The same procedure is repeated for three trials, i.e., first presentation of the paired associate card and then response eliciting cards three times in same session.

The same above procedure was used for the intentional learning, with addition that subjects were reinforced each after one trial of presentation for correct responses to make them more motivated assuming that subjects had developed more intention to learn them correctly.

Recording of Responses

The responses were tabulated in the following proforma shown in Table A.

TABLE A
Shows the proforma for tabulation of subjects' responses

Sl. No.	Age in Yrs.	Name of the subject	Incidental Learning				Intentional Learning			
			1st Trial	2nd Trial	3rd Trial	Lg. In-dex	1st Trial	2nd Trial	3rd Trial	Learning Index
1										
2										
3										
4										

Scoring: Learning index was found out for both the incidental and intentional learning experiment for each subject. The learning index was calculated for each subject by using following formula:

Last trial

Learning index = $X100$

First trial

Results and Discussions

Results were statistically analysed and tabulated. Looking on Table B, it is evident that the scores on two types of learning that is Incidental and Intentional learning are almost normally distributed. This can be further confined by looking at the polygon shown in Figure I.

TABLE B

Shows frequency distribution on the scores for Incidental and Intentional Learning

Scores	Frequency	
	Incidental	Intentional
300-350	1	0
250-300	1	4
200-250	2	3
150-200	9	11
100-150	11	7
50-100	6	4
0-50	0	1

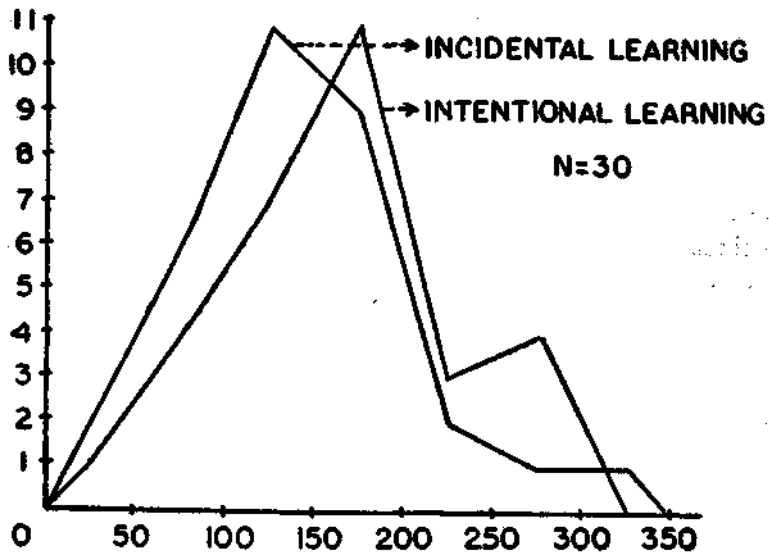


FIGURE 1 shows Polygon Graph

In typical normal probability curve the three measures of central tendencies viz., mean, median and mode should be equal or nearly equal. From Table C,

TABLE C

Shows measures of Central tendency and Variability for Incidental and Intentional Learning

Measures	Incidental Learning	Intentional Learning
Mean	145.5	187.0
Median	141.4	164.13
Mode	133.2	118.4
SD	114.5	127.0
SEM	20.89	23.17

Standard error of difference between Means : i.e., $SEDM=29.60$.

it is evident in case of incidental learning that they are almost equal and these are the mean, median and mode, viz., 145.5; 141.4 and 133.2 respectively. But in case of intentional learning it is not so, and these are mean-187; median-164.13 and mode-118.4. It can be concluded that the distribution of incidental learning approaches more towards the normal probability curve than the intentional learning. For this, one explanation might be true in case of intentional learning is that the amount of intention and motivation developed by reinforcement has varied between quite a large range so that it has affected the learning abilities of the subjects. It can be said in other way that reinforcement were not given enough to bring about the sufficient change in their motives. The SD for incidental learning is 114.5, whereas in case of intentional learning 127.0. The standard error of mean in case of incidental learning is 20.89 whereas in case of intentional learning is 23.17. The difference between the SD of mean is not very much significant since the difference is only about 2.28, which shows that there is not much difference in both types of learning.

TABLE D

Shows Critical Ratio and Significance level

Critical Ratio	Significance Level	
	0.05	0.01
1.40	2.04	2.76

Table D shows that the critical ratio is 1.40 which is not significant at 0.05 and 0.01 levels of significance. So, through the means in two types of learning, the differences when statistical completion is done to find out the significant difference between the means, the difference is not significant.

Thus, the hypothesis made previously is accepted; i.e., there is no significant difference in two types of learning—incidental and intentional learning.

Conclusion

From this study following main conclusions were drawn :

1. There is no difference in two types of learning methods in case of aurally handicapped group of subjects.
2. The learning abilities for both types of learning methods are normally distributed.

Limitations and further Scope of study

1. Similar study in matched normal group was not done. In normals the similar study should be done to find out the differences in two types of learning and compare the results with this study.
2. The subjects of age below 14 years were not included because of lack of availability of the subjects below 14 years who know English language. Further study should include age group below 14 years.
3. This study was done in second language. Similar study should be done in mother tongue and find out if any difference exists.

Acknowledgement

The author is grateful to Miss A. D. Bhavani, Lecturer in Psychology, AIISH, Mysore and Dr J. Bharathraj, Professor and Head, Dept. of Clinical Psychology, AIISH, for guidance.

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