Since the time of Ebbinghaus innumerable research studies have been conducted to determine the superiority of a particular method of practice over another. The results are, however, discouraging because the studies failed to prove the effectiveness of a particular method. One thing which emerged out from these studies was that all methods of learning are equally effective at least when the task requirements do not exceed simple rehearsal. It was also observed that in learning, method used is not so important, but it is the total effective learning period which influence the amount of learning in a decisive manner. In other words a fixed amount of materials would be learned in a fixed amount of time regardless of the method of practice. A number of investigations have proved this concept experimentally (Murdock, 1960; Peters, 1936; Bousfield et al. 1954; Pardeep and Yadava 1985).

When the tenability of the Total-Time hypothesis was tested with varying degrees of meaningful material, it yielded contradictory results (Braun and Heyman, 1958; Muhar and Shrivastava, 1971; Bhaskar and Muhar, 1972; Pardeep and Yadava, 1985).
SUMMARY
In view of these contradictory findings, the present study was planned to test the tenability of Total-Time Hypothesis among adults and children for meaningful and non-meaningful materials. It was hypothesised that:

1. Adults/Children would learn a fixed amount of meaningful material in a fixed amount of time regardless of the method of learning used.

2. Since the Total-Time Hypothesis does not hold true for low meaningless material, adults/children would learn more nonsense syllables by the part and spaced method of practice than by massed or whole method.

3. Level of age would be a significant determinant of learning provided all other variables are controlled.

In order to test these hypotheses an experiment based on factorial designing was conducted.

A sample of 80 students (40 adults + 40 children) were used as subjects. Forty adult subjects randomly selected from the students population Previous M.A. and M.A.(Final) classes of M.D. University Rohtak. Where forty children subjects were taken on random basis from the students population 6th and 7th classes of Government
schools of Rohtak city. Age of adults ranged between 21 years to 24 years and children ranged between 11 years to 14 years. The whole sample was further classified into eight groups (four groups of adults and four groups of children) in such a way that each group consisted of ten subjects.

As there were four learning methods and two age levels, a 4 x 2 factorial design was used. However, the subjects of each group learned the lists of meaningful and non-sense (60 % association value) syllables by either massed, spaced, whole or part method of practice, on two consecutive days. The two lists consisting 20 syllables each were presented with the help of memory drum. For each practice group, the total learning period was kept constant at 400 seconds.

The mean correct recall scores of each group were calculated and the obtained data was treated statistically. Two-way analysis of variance and Duncan’s Range test were applied for testing the significance of difference between and amongst the recall scores of various groups.

The first hypothesis which predicted that adults/children would learn a fixed amount of meaningful material in a fixed amount of time regardless of method
of learning used was supported by the results of present investigation.

The second hypothesis which stated that since the total time hypothesis does not hold true, adults/children would learn more nonsense syllables by part and spaced method of practice than by massed or whole method, was proved partly. Children learned more N.S.S by part and spaced method. However, adult subjects learned almost equal number of non-sense syllables with all four methods of learning. It could be because of the fact that for adult subjects the meaningfulness of learning material used in present study was not very low.

The last Hypothesis was proved correct. It was observed that the amount learned by adult subjects was greater than that of children subjects. Thus age proved a significant determiner of learning.