

## CHAPTER V

### SUMMARY AND RECOMMENDATION

The purpose of this study was to examine the development of central and incidental memory of rural children in the northeast part of Thailand for different age groups and to explore the effects of serial positioning (primacy, recency and middle positions) in central memory development. Also differences between males and females in central and incidental memory development were compared to find out if sex influenced performance on central and incidental memory. The subjects in this study were one hundred rural Thais ranging in age from four to twenty - one years. The subjects ages 4 - 5 had not yet attended school, while children ages 7 - 8 and 10 - 11 were in school. The subjects ages 14 - 15 and 20 - 21 had left school. All of the two oldest subjects had finished at least pratom four and almost all of them were farmers.

Test materials adapted from Hagen's consisted of fourteen sets of seven cards containing animal and object pairs. Central memory was tested by having to recall the location of certain pictures of only animals which were presented as an animal - object pair. Then the subject was tested for incidental memory by being asked to recall which animals were paired with which objects. The procedure was reversed for half the subjects. For them objects were central stimuli and animals were incidental stimuli.

Arithmetic means, standard deviation and proportion correct were computed on the central memory scores for each age group and by serial positions, and on the incidental memory scores for each age group. For central memory comparisons were made of the performance among age groups, between males and females and on performance for stimuli presented first, in the middle or at the end of the test (serial positions). For incidental memory comparisons were made among age groups and between males and females. Finally, central and incidental memory scores were correlated for all age groups to examine the relationship between the two types of memory.

The followings were the results of this study.

#### Central memory task and serial positions

1. The performance on central memory of rural Thais increased from ages 4 - 5 to 14 - 15 and then declined at ages 20 - 21. For all age groups central memory performance was highest at recency position. The lowest performance on central memory was at primacy position.
2. There were significant differences by age levels and by serial positions, but there was no interaction between age and serial positions.
3. Comparisons on central memory scores showed that the performance on central memory at ages 4 - 5 was significantly different from the performance at ages 14 - 15 and ages 20 - 21. The performance on central memory at ages 7 - 8 was significantly

different from the performance at ages 14 - 15. There were no significant differences between males and females at any age group.

4. Comparisons of serial position performance for each age group separately revealed that there were significant differences on the performance at different serial positions at ages 4 - 5, 7 - 8, 10 - 11, 14 - 15 and 20 - 21. A comparison of the performance on central memory at different serial positions among age groups showed that there were no significant differences among age groups on the performance for primacy, recency and middle - positions recall. When comparisons were made of the combined scores of all age groups among serial positions, the results showed that there were significant differences between the performance on primacy and recency, and between the performance on primacy and middle - position. There were also significant differences between the performance on recency and middle positions.

Incidental memory task



5. Incidental memory scores of rural Thais increased from ages 4 - 5 to ages 7 - 8, then slightly decreased at ages 10 - 11, then increased to ages 14 - 15, finally declined at ages 20 - 21. There were significant differences on the performance on incidental memory among age groups. Comparisons on incidental memory scores showed that there were significant differences between the performance on incidental memory at ages 4 - 5 and ages 7 - 8, between the performance at ages 4 - 5 and ages 14 - 15.

There were no significant differences on the performance on incidental memory between males and females at any age group.

#### Relationship between central and incidental memory scores

6. There was no relationship between central and incidental memory scores.

#### Limitations of the present research and Recommendations

One of the major problems of this research is a methodological weakness which is common to several researches. Firstly the present study was conducted only in one village. Therefore one should be cautious of generalizing the results to all rural areas. Then the author would like to suggest that more studies should be done in other rural areas to test central and incidental memory to find out if the results hold for all rural areas.

Secondly, the present study included subjects from age four to twenty - one years. It was recommended the future study should include older subjects to examine if there is a curvilinear relation between age and incidental memory.

Thirdly, the present study included only subjects from rural area who worked in farm. Future study should include urban subjects to compare the differences between rural and urban environment.

Fourthly, in the present study reinforcement was given. The author would like to suggest that the future study should

not provided reinforcement to find out the effect of reinforcement in central and incidental memory.

Lastly, the present study used only one method of testing and one set of materials in testing central and incidental memory. Other methods should be employed using different test materials and different ways of testing central and incidental memory to find out if the results are still similar when different methods and different material are used.



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