CHAPTER IV

DISCUSSION AND INTERPRETATION

As discussed in the previous chapters, this research was planned to study the development of central and incidental memory among Thais in rural areas. Thus the discussion will focus on rural background and the impact of living in rural areas in the following order. First a summary of the results is presented. Then a comparison is made with results from research studies in rural areas in other parts of the world, and sometimes urban areas. Lastly interpretation of the results is given.

Central memory

The results of this study partially support the hypothesis that central memory scores would increase with age. On a two - way analysis of variance, there were significant differences by age levels and serial positions. Central memory performance significantly increased from ages 4 - 5 to ages 14 - 15 and 20 - 21. There was also a significant increase in the performance on central memory from ages 7 - 8 to ages 14 - 15. Wagner[1] was the only other researcher who had reported the results of the performance on central memory for rural subjects. His study was conducted in

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[1] Wagner, loc.cit.

Mexico. Wagner did not have group of 4 - 5 years old, but his 7 - 9 years old group and 10 - 12 years old group came from subjects who were in school, which is comparable to the 7 - 8 and 10 - 11 years age groups in the present study which were also in school. When a comparison is made of the results of rural subjects from age 7 years up to 11 years in both Wagner's study and the present study, it shows that the results of the school subjects follow similar trends. The central memory performance slightly increase from ages 7 - 8 to 10 - 11. However it should be noted that for both Thai and Mexican rural children even though the trends were similar, in both cases there were not statistically significant differences in the increase on central memory performance from ages 7 - 8 to 10 - 11. Wagner also had a group of 13 - 16 and 20 - 21 and ages over 27 years. From his results there was a trend for central memory scores to decrease from ages 10 - 11 to 20 - 21, even though the decrease was not statistically significant. For the present study there were 14 - 15 age group and 20 - 21 age group, both not attending school and the trend was that the performance increased from ages 10 - 11 to 14 - 15 and then slightly decreased at ages 20 - 21 the increase from ages 10 - 11 to 14 - 15 was not statistical significant but the increase between ages 4 - 5 and 14 - 15 and between 7 - 8 and 14 - 15 were statistical significant. Comparing the education level of Wagner's 13 - 16 and 20 - 21 years old subjects with the educational level of the 14 - 15 and 20 - 21 years old subjects in the present study, it was noted that the subjects in the present study had higher education than Wagner's

subjects. The speculation of the author is that it is the level of education that plays an important role in the development of central memory. It seems that the schools train children to attend to the relevant informations.

The performance on central memory of males was not significantly different from the performance of females. The results were similar to the results of rural Mexicans in Wagner's study. It may be assumed that rural background of subjects in this study do not differentiate the development of central memory in males and females.

In the present research there were significant differences on the performance for different serial positions on central memory at ages 4 - 5, 7 - 8, 10 - 11, 14 - 15 and 20 - 21. There were significant differences on the performance for different serial - positions in Wagner's[2] investigation too. The results of both studies followed similar trends that the serial - position effect results mainly from the high performance of all age groups on the most recently presented items. However, the performance for different serial - positions of rural Mexicans was slightly lower than the performance of rural subjects in the present research. The findings of this study also had similar trends as Hagen and Kingsley's[3] study using urban American subjects. Therefore, it

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[2]Wagner, loc.cit.

[3]Hagen and Kingsley, loc.cit.

can be concluded that the pattern of central memory development in all human beings follow similar trends regardless of cultural setting and regardless of urban - rural environment.

Incidental memory

The findings of incidental memory scores showed significant differences among age group. Incidental memory performance significantly increased from ages 4 - 5 to 7 - 8, 10 - 11, and 14 - 15 and then decreased at ages 20 - 21. Thus the hypothesis in the previous chapter was supported. In Wagner's[4] study, the performance on incidental memory of rural Mexicans increased from ages 7 - 9 to 20 - 21 and then decreased at age over twenty - seven. Comparing the results of rural subjects from age seven up to fifteen years in Wagner's investigation and in this research, we observe similar trends in the performance on incidental memory. The differences between the results of rural subjects ages 20 - 21 in both studies may be due to the differences of educational level of the subjects because rural Thais had higher education than rural Mexicans. It seems that rural subjects in the present study were trained to ignore more irrelevant stimuli than Wagner's rural Mexican subjects. However, the results of incidental memory performance of rural subjects in this study had similar trends as

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[4]Wagner, loc.cit.

the results of Siegel and Stevenson's[5] study using urban Americans. They found that incidental memory scores increased from age seven to twelve and declined at age fourteen. In the present study, it is found that the performance on incidental memory is curvilinear. It may be concluded that the increase in the amount of incidental memory found between ages four and fifteen may be due to increasing capacity of children to learn and to attend to irrelevant stimuli. The decrease in the amount of incidental memory found at adults ages 20 - 21 may be owing to the tendency of older human beings to disregard the incidental stimuli.

The results also showed that there were no significant differences between the performance on incidental memory of males and females. These are similar to Wagner's[6] report in rural Mexico. Thus it can be said that sex differences do not seem to affect the development of incidental memory in rural Thais.

From the results of incidental memory performance, it may be concluded that generally rural Thais have similar pattern of incidental memory development as rural Mexicans and urban Americans.

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[5]Siegel and Stevenson, loc.cit.

[6]Wagner, loc.cit.

Relationship between central and incidental memory scores

There were no significant correlations between the performance on central and incidental memory at any age level. The results were similar to the results of Wagner's[7] study.

From the findings of the present study, it has been seen that rural Thai subjects develop their memory abilities as rural Mexicans and urban Americans. Therefore, it may be concluded that usually memory ability in human being develops maturationally. Formal education and cultural setting are factors that effect memory development.

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[7] Wagner, loc.cit.