

## Discussion

This experiment was conducted to test the validity of previous statements which say that mode of retrieval and language used help in accuracy of retrieval in short-term memory. Furthermore, the presence of interaction effects between

the two was also tested.

Our results show varying degrees of success in rejecting the null hypothesis.

With regards to mode of retrieval, the F-value gathered from the data was 6.80. This is significantly higher than the F-critical value of 4.26 at  $p < .05$ . Therefore, mode of retrieval had an effect on accuracy of recall. The main effect of mode of retrieval is so large that it is probably not due to chance. Whether subjects used free or serial recall made a significant difference in the subject's ability to recall these words. Thus, the null hypothesis is rejected.

Furthermore, if we compare the mean values of those subjects using free recall using both English and Tagalog words ( $x = 8.64$ ) with those who used serial recall ( $x = 5.71$ ), we would find that the former is significantly greater than the latter. It seems to point that serial recall enhances memory better than free recall. This finding is in perfect consonance with the findings of Deteman and Brown (1957) which was discussed in the introduction.

With regards to the effect of language used, the F-ratio gathered from the data is 0.49. Again, using the same F-critical value of 4.26, we find that the computed value is smaller. This indicates that the type of language used does not have that great an effect on enhancement of memory. Any discrepancies between findings can probably be attributed to chance. The null hypothesis cannot be rejected.

This is further shown by the means of subjects who memorized

English and those who memorized Tagalog words. The difference is not that great and thus, there is a large probability that English or Tagalog doesn't really make that much of a difference. This finding contradicts the conclusions of the experiment by Gogin and Wickens (1960) which was also discussed in the introduction.

Finally, with regards to the interaction effect between the two factors, our data don't show any support for it. The F-value computed is 0.23, much, much lower than the critical value of 4.26. In effect this tells us that the variability between the treatment groups can be explained by the effect of either mode of retrieval or type of language used. There can be no interaction between the two factors.

Discrepancies of our results and the findings of other experimenters are probably due to certain extraneous variables which crept up during the course of the experiment. These EV's also tend to limit the generalizability of our findings.

The first type of EV's which may have confounded the experiment are subject variables. The nationality of the subjects plus their proficiency in the language were not taken into account. In our experiment, there were two foreigners who, presumably, may not be that familiar with Tagalog. Certainly they are put at a disadvantage if they are put in the treatment groups using Tagalog words. Other members of the class, at least, have been exposed to this language for almost all their lives.

Another type of EV which affected the study can be found in certain aspects of the experiment. For one thing, the words chosen were not all that perfect. The experimenters wanted to

use words with no homonyms. Still, they overlooked and included two words (rose and veil) which have homonyms. Secondly, many subjects who participated in the treatment groups using Tagalog words were taken by surprise when after reciting the instructions in English, the experimenter then started to say Tagalog words. This "surprise reaction" may have affected their response to the test.

The last type of EV which may have confounded the experiment is the attitude of the participants to the whole experiment itself. Many of the subjects obviously were in a hurry to go home as seen in their badgering of the experimenters to put them in the first treatment condition. Thus, they may have not taken the test seriously and proceeded with only finishing in the least possible time as their objective.

With the presence of these EV's, improvement of the experiment is a must to get better and more accurate results. First, the experimenters should be given more time to prepare. It was a very complicated experiment but they were only given a short time to prepare. They should write the instructions so that all participants will get the same set of instructions (differing only in their treatment condition). Also, they should inform the participants whether they would get Tagalog or English words so that the subject will not be surprised.

With regards to the words used, the experimenters should see to it that there really are no words with homonyms in their list. With regards to scoring, a better method may be devised so that one can really gauge what has been memorized.

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