

CHAPTER VI

SUMMARY AND CONCLUSIONS

1. Aim and Significance of this Study

The aim of this study was to explore the possibilities of instructional films as a medium to teach English-Russian vocabulary. As an experimental investigation it centered around the problem of the modes or methods of presenting verbal material. Three important variations were introduced in the procedure:

(i) A special kind of verbal material - two twenty-word lists of English-Russian nouns and English-Russian verbs (in transliterated form) - was used instead of nonsense syllables.

(ii) A special medium of presentation, i.e., 16 mm. instructional films was used.

(iii) The particular methods of presentation used in the instructional films, namely,

(a) "the titles method" or the "words-alone method",

(b) the "still picture" method,

(c) the "motion picture" method,

(d) the "sound motion picture" method, and

(e) the sound motion picture method with learner participation,

were selected. By this investigation it was hoped that a modest beginning towards answering the question of the use of motion picture methods for learning or teaching foreign languages could be made.

2. The Specific Problem and Hypotheses

Experimental Problem A: Is the efficiency of the learning process increased by each additional factor such as titles, still picture, motion picture, sound, and the S's participation?

Experimental Problem B: Is the "motion picture" method more effective than the "still picture" method for teaching the verbs-list? Or is the "still picture" method better than the "motion picture" method for teaching the nouns-list?

Experimental Problem C: Are these effects carried over from the learning to the retention test to be given a week later?

The hypotheses of this experiment were derived from certain theoretical formulations in psychology involving sign-similarity and perceptual reinforcement principles.

3. Historical

Some studies in psychology on the learning of pictured words and the use of emphasizing devices in learning attempt this procedure but few studies directly dealing with the problem of English-Russian vocabulary learning through pictorial methods have been done so far. Moreover, some studies have investigated isolated variables like motion, sound and picture combination, etc., but in none of them were integrated all the different modes or methods of presentation. The growth of interest in the problem of using mass media for foreign language teaching necessitated and justified this study.

4. The Experiment

(a) Test material: The combination of two word lists with five

methods of presenting the material required the production of ten experimental film versions. The eleventh film was a control version which was used as a pre-test of the S's facility with Russian vocabulary. The control version consisted of a scrambled list of 10 noun-pairs and 10 verb-pairs. Lastly, six additional films were made from one of the experimental film versions (nouns only). They were all alike except in the amount of time in seconds (varying from 5 seconds to 10 seconds in six steps) for which each word-pair was shown on the screen. These last six films were used in the pilot testing. On the basis of the tests given to 104 subjects it was decided that 10 seconds was the best exposure-time for each pair, and that every film should be shown six times in the final experiment. Other leads in each of the films were clear film, black film, and strips of films that gave a graph-like impression on the screen. These were used to reproduce all the features of the Paired Associate method.

(b) Apparatus: Two Bell and Howell "202" sound projectors were used in each experimental room. The projectors were used alternately to give six repetitions of the test film. The S's were given a specially designed calendar-type booklet on which they wrote the next anticipated Russian response word without reviewing it again. The booklet used certain simple devices against cheating, confusion, wrong scoring, etc.

(c) Score: The S's score for a given film repetition was the number of words answered right, the maximum being 20. As each film had six repetitions, there were six scores for each subject for an experimental session.

(d) Instructions: Special instructional manuals were made to help proctors in administering the tests properly. The S's were told that this

was an experiment on teaching foreign languages by film - but no film variables were explained to the S's. Each experiment room required a head-proctor who gave the instructions, a proctor who kept a check on the test-behavior of the subjects, and a projectionist.

(e) Experimental procedure: The final experiment passed through three stages over a four-week period - between November 17, 1952, and December 11, 1952. In the first stage, the S was tested on the control version. In the second, the S was tested on the experimental version. In the third stage, the S was tested for retention on both the control version and the experimental version.

(f) Subjects: The S's were 409 male and female undergraduates - mostly sophomores - registered for the Psychology-2 course at The Pennsylvania State College. Each subject got five extra credit-points for participating in the experiment, and each gave, in all, five hours of time for the experiment. These 409 subjects were divided into eleven random groups. One group saw only one experimental version. Film version #8 was, however, replicated on two groups as eleven groups were available.

(g) The basic learning task: The S learns one of the two English-Russian word lists by Paired Associate method, until the sixth repetition of the film which teaches this list to the S is complete. The English word is the stimulus word (S) and is accompanied by a picture, a motion picture, or sound according to the method of presentation. The S responds to the stimulus by writing down the Russian word (the response word - R) on the page of a specially designed test-booklet. The film, then, shows the S the correct pair of English-Russian words as knowledge of results.

(h) The method of analysis: The raw data consisted of the number

of correct words right for every S and every group on a particular film version. The data for females and males were treated separately. The analysis was by the covariance method. Three different forms of the covariance method were used in this study.

5. Results

(i) The F ratio for the adjusted learning scores of female groups was 2.3013 and significant at .02 level.

(ii) In the comparisons between adjusted learning scores for women:

a) The "t"-ratio between version 2 (which presents the list of nouns by the still picture method), and version 1 (which presents the list of nouns by the "titles" method) is significant at .01 level.

b) The "t"-ratio between version 4 (which presents the list of nouns by the sound picture method), and version 2 (which presents the list of nouns by the still picture method) is significant at .05 level.

c) The "t"-ratio between version 5 (which presents the list of nouns by the sound motion picture method with learner participation), and version 2 (which presents the list of nouns by the still picture method) is -2.9843 and significant at .01 level.

d) The "t"-ratio between version 9 (which presents the list of verbs with the sound motion picture method), and version 6 (which presents the list of verbs with the "titles" method) is significant at .05 level.

e) The "t"-ratio between version 9 (which presents the list of verbs by the sound motion picture method), and version 7 (which presents the list of verbs by the still picture method) is 1.9967 and is significant

at the .05 level.

(iii) The F-ratios for the deviations from the regressed learning scores for male groups was 2.31 and 1.94 and were significant at .06 level. The F-ratio of 2.31 was by the Method C, and the F-ratio of 1.94 was by Method B.

(iv) The F-ratio for the deviations from the regressed retention scores for male groups was 3.2827 and was significant at .02 level.

(v) In the comparisons between the adjusted retention scores for male groups:

a) The "t"-ratio for the "motion picture" method and the "titles" method, was 2.3091 and was significant at .05 level.

b) The "t"-ratio for the "still picture" method and the "titles" method was 3.4394 and was significant at .01 level.

c) The "t"-ratio for the sound motion picture method and the "titles" method was 4.3296 and was significant at .01 level.

d) The "t"-ratio for the sound motion picture method with participation and the "titles" method was 4.1290 and significant at .01 level.

The above "t"-ratios were obtained after the adjusted retention scores for nouns and verbs for a particular method were combined.

6. Conclusions

(a) Within the scope of this experiment the "still picture" method was consistently better than the "titles" method. The "sound motion picture" method was consistently better than the "still picture" method. The increase in learning by "sound motion picture" method was more than that by the "still picture" method both for nouns and verbs.

(b) The element of motion alone is not enough to make the motion

picture method superior to the still picture method. The integration of motion picture and sound made the motion picture method better. This conclusion is limited by the fact that it applies only to the kind of motion used in this study (the side-to-side movement of the object). It may or may not apply to a motion picture involving complex motion and action. In other words, in this experiment, learning or retention scores did not increase systematically with the introduction of the element of motion alone, although they did show a marked increase with a fusion of both motion and sound. If the effects of the different factors were additive, it would have been possible to arrange the different methods on a continuum ranging from "the least effective" to "the most effective". But this is not the case. In this sense, the effects of different elements were not found to be additive.

(d) The introduction of the learner participation did not make the sound motion picture method better.

(e) It is not possible to say, from this experiment, if differences among film-versions have a carry-over from learning to retention, because the groups did not maintain their homogeneity of variance from the learning test to the retention test, consequently making it difficult to assess this carry-over effect.