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AN INDEPENDENT STUDY

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Determining the Role of Audio-Visual Equipment in the Improvement of Reading Comprehension among Pupils Enrolled in Grade Five at Florance Street Elementary School in Savannah, Georgia

Statement of the Problem — The emphasis of this study is upon determining the effectiveness of audio-visual equipment usages in fostering the improvement of reading comprehension among pupils enrolled in grade five at Florance Street Elementary School in Savannah, Georgia.

Definition of the Problem — Florance Street Elementary School was reorganized in September, 1971 to serve only those pupils enrolled in grades five and six. This reorganization was an effort to conform to a legal directive to desegregate the public schools by pairing specific schools.

The school for which this study was designed has had much audio-visual equipment made available for its utilization. Much of this equipment was not being used advantageously. This situation promoted a practical study of the feasibility of using this equipment to improve the skill of reading comprehension.

Review of Related Literature — Related literature was surveyed to this study to determine the views of acknowledged experts in the field and to better understand the problem.

An exploration of some of the readings relative to the use of audio-visual equipment in the teaching of reading revealed that at least two studies of significance to this investigation have been made. In 1971 Harold R. Strang published "An Automated Audio-Visual Approach to Remediate Reading Problems, Final Report." This publication disclosed the conclusions reached after conducting experiments over a period of three years.

Experiment 1 divulged that the group which received specific audio-visual training showed substantial gains in reading accuracy over the groups receiving trial-and-error training in reading and in mathematics. The total population consisted of twenty-one students of equal reading proficiency. These students were divided into three groups. Audio-visual tutored students, also, displayed the highest gains on successive comprehension and untimed standardized tests.

Experiment 2 included nineteen students who were administered audio-visual tutoring. Their gains, too, were significantly greater than those of students who did not receive any machine instruction.

Students who participated in experiment 2 were the same ones who took part in experiment 3. Intermittently, these students received automated instruction on several everyday life reading skills. Again, the audio-visually tutored students showed improvement that was notably greater than those who had received no tutoring of this nature.

A second study was a paper presented at the meeting of the international Reading Association in April of 1971 in Atlantic City, New Jersey. In his paper, "Machines in the Reading Program — What Are Their Roles?", Robert A. Palmatier concluded that much good is found in the motivational and instructional aspects of machine instruction. However, too much reliance on machine may (1) reduce creativity, (2) limit the amount of information and growth potential to a learner, and (3) result in danger of dehumanizing learning and students.

Moreover, Palmatier suggested the following:

1. Schools carefully assess their needs and purchase the most useful machines. There should be enough of these machines that can be used in all classrooms.
2. Schools should utilize teacher training to emphasize the application of technology in the classroom. This utilization should encourage teachers to make wise use of the audio-visual machines.

Purposes of the Study — The general purposes of this study are the following:

1. The teacher will be able to avail himself of the audio-visual equipment in the school.
2. The teacher will be able to use audio-visual equipment to develop skills in reading comprehension.
3. The teacher will be able to identify the growth in reading comprehension as a result of the use of audio-visual equipment.

Hypothesis — Consistent, well-planned, creative use of audio-visual equipment will significantly improve reading comprehension.

Procedure — Initially, an in-depth survey of all available audio-visual instructional equipment was made. A compilation of all types of equipment and the location of the equipment was distributed to each teacher.

Then, the fifth grade teachers were requested to participate in either the experimental group or the control group. A coordinator was selected for each group. The group met periodically to make progress reports and to discuss any necessary modifications of the plans made. Participating teachers also visited the reading institute to supplement their knowledge of the teaching of reading.

The experimental group originally consisted of **fifty-seven** pupils and three teachers; the control group consisted of forty pupils and two teachers. Pupils who were members of the experimental group were consistently exposed to the equipment

chosen by their teachers at the beginning of the study. Control group pupils were instructed by the usual methods and techniques of the teachers concerned.

Each group was administered the Gates MacGinitie Reading Survey D, Form I at the beginning of this study. A posttest, the Gates MacGinitie Reading Survey D - Form 2, was administered at the end of the study. The test results were compared to determine some of the statistical significances relative to reading comprehension that exist among the groups.

In addition, beginning on Tuesday, January 4, 1971, each teacher participating in this study kept a daily record which included the progress made, the materials used, and the procedure used. Initially, these daily records were to terminate on Wednesday, March 22, 1972. However, the date of termination was among the modifications necessitated by the following changes:

1. One teacher of an experimental group was transferred to another school.
2. The pupils enrolled in the experimental teacher's class were assigned to a control teacher.
3. The former pupils enrolled in the control teacher's class were dispensed among four other grade five classes.

All transferred teachers and pupils were eliminated from this study to effectuate a satisfactory degree of validity. The study was concluded on Tuesday, April 18, 1972.

To establish some uniformity in the length of time devoted mainly to the strengthening of reading comprehension, the scheduling of this time was identical for the participating groups. Moreover, a summary of the daily records was made to gain insight into the results of this study.

Results and Conclusions — A self-evaluation questionnaire was designed by the teachers concerned with this study to appraise their knowledgeability of the audio-visual equipments they chose to use. The succeeding were evaluated:

1. Systematic use of audio-visual equipment to augment reading comprehension.
2. Adequate planning prior to use of audio-visual equipment.
3. Familiarity with the operative techniques of the equipments used.
4. Resourcefulness and imagination in determining methods of utilizing audio-visual equipment.
5. Use of available audio-visual materials.

Responses to these items were selected from ratings of superior, good, average, and below average. A^1 and A^2 will refer to the classes systematically and periodically exposed to audio-visual equipment to effectuate improved reading comprehension in the learners. B will refer to the class that was not exposed to audio-visual equipment during the period of this study.

The teacher of class A^1, rated herself superior for item 3, and good for items 1, 2, 4, and 5. Superior was the response the teacher of A^2 gave for items 1, 2, 3, and 5; she evaluated herself as good for item 4.

Moreover, the summaries of the daily logs revealed the results shown on table 1. This table includes the types of equipment and materials to which the experimental classes were exposed.

Table 1. — SUMMARY OF DAILY LOGS

Classes	Types of Equipment	Materials Used	No. of Days per Week of Exposure
A^1	Overhead Projector	Teacher Prepared Transparencies	1
	Filmstrip Projector Accompanied by Record Player	Commercially Prepared Tapes and Records	2
	Cassette Tape Recorder and Listening Station	Commercially Prepared Tapes; Pupil and Teacher Prepared Tapes	2
A^2	Record Player and Listening Station	Commercially Prepared Records	1
	Filmstrip Projector	Commercially Prepared Filmstrips	3
	Cassette Tape Recorder and Listening Station	Commercially Prepared Tapes	1

Class B's teacher was not included in this part of the conclusions and results because she did not use audio-visual equipment when instructing her pupils who were a part of this study's population.

Table 2 contains the results of an analysis of the mean and standard deviation as computed from the standard comprehension scores of the Gates-MacGinitie Reading Tests, Survey D - Form 1 and 2. The population was administered Form 1 during pre-testing and Form 2 for post-testing.

Table 2. — RELATIONSHIP OF THE MEAN AND STANDARD DEVIATION

	Comprehension Sub-test of Gates MacGinitie Reading Test					
	Pre-Test		Post-Test		Gains	
CLASSES	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
A^1	35.6	16.9	39.8	19.7	4.2	2.8
B	41.3	6.36	42.4	7.61	1.1	1.25
A^2	35.3	15.8	37.5	10.6	2.2	5.2

As can be seen in Table 2, some gain in the mean were found in each class. However, greater gains were found in A^1 and A^2. This indicates that the reading comprehension of more children may have been met through the use of audio-visual equipment. Apparently, the children with weaker reading comprehension skills made more gains than those with stronger reading comprehension skills. These two conclusions suggest that the use of audio-visual equipment to augment reading lessons can significantly improve reading comprehension.

Further results included the experimental teachers' improved ability to operate and effectively use the available equipment. Moreover, all of the teachers in this school became more knowledgeable about the kinds, locations, and some of the uses of all of the equipment in the school.

Among the needs determined to assure a future, more valid study are the following:

(1) There is a need for more audio-visual materials designed for the average fifth and sixth grade pupils.

(2) There is a need for more experience among teachers in operating, maintaining, and effectively utilizing audio-visual equipment

To be sure, the meeting of these needs will measurably magnify the benefits received from classroom usage of audio-visual equipment.