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## A Study of Student Reading

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showed a lower incidence of disturbed motor reactions. It appears that the greatest differentiation appears in a qualitative analysis of intensity and pattern of response.

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## VISUAL FACTORS IN SPACE PERCEPTION

EARL ALLGAIER

This study deals primarily with certain visual factors which enable one to detect the difference in distance between two points or objects in space. It is limited to the perception of color and movement and a comparison of binocular and monocular vision.

The apparatus used to measure the ability to judge distance consisted essentially of a flat surface upon which a series of pegs could be adjusted by the subject by means of attached cords. Subjects sighted through binoculars with the ends reversed. Uniform illumination was provided. Various sizes and colors of pegs were used for different tests. Among the results of the study are the following:

1. With the exception of white, all colors studied appear at nearly the same distance when actually placed at the same distance. The differences were not significant.
2. Pegs in motion appear to be nearer than pegs at rest, when both are at the same distance.
3. There appears to be a close relationship between binocular and monocular vision in the perception of depth but the occlusion of one eye greatly lowers distance judgment.

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## A STUDY OF STUDENT READING

ALVHH R. LAUER<sup>1</sup>

A method was devised to make a plan for self improvement in reading available to persons who are not conversant with the ex-

<sup>1</sup> The author is indebted to Mr. Finch I. Wagner, Superintendent of Schools at Center Point, Iowa, for assistance during the early part of this study.

perimental literature. This consists of a self-administered experiment in reading material ordinarily read, with suggestions on ways and means of improving the speed and comprehension. A progress graph was kept by each reader to keep up his comprehension.

The experiment was carried on over a period of more than two years during which 357 persons took part for 20 days each. Reading rates of from 73 to 1030 words a minute were recorded. The average was approximately 250 words a minute. The average improvement for 20 days was 35.3 per cent over the beginning rate.

Table I—Comparison of Classes in College

CLASSIFICATION	NUMBER	MEAN OF TEXTS A AND B	
		Initial Rate	Percentage Increase
In College	N = 346		
Non-Collegiate*	1	220.4	30.5
Freshman*	5	272.8	36.0
Sophomore	72	253.6	32.0
Junior	172	252.9	36.0
Senior	64	243.8	36.6
Graduate	31	263.3	42.6
Special*	1	234.5	33.0

\* Not enough cases to give a stable mean.

Table II—Comparison of Subject Matter

SUBJECT MATTER	NUMBER	MEAN OF TEXTS A AND B	
		Initial Rate	Percentage Increase
Course Material	N = 353		
History	13	245.3	35.6
Literature*	8	278.7	42.7
Science	288	248.6	35.6
Social Science	43	255.0	34.8
Miscellaneous*	1	282.3	14.0

\* See above.

Table III—Correlations

N = 320	
Reading rate with Improvement	= + .26
Reading rate with Intelligence	= + .21
Reading rate with Grades	= + .25
Reading rate with Cultural Knowledge	= + .50

Women improved about 38 per cent over the beginning rate. Men improved only about 30 per cent. It was found that college students do not read as rapidly in the senior year as others do during the freshman and sophomore years. Several plausible explanations may be offered for this fact.

The most important relation found was that rapid readers have a much greater knowledge of cultural subjects in general. While it is doubtful whether a causal relation between the two exists, the fact that marked improvement can be made in reading over a short

space of time indicates the need for special training in reading ability.

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## AN EXPERIMENTAL STUDY OF THE DEVELOPMENTAL PROCESSES IN ART APPRECIATION

MILDRED DOW VOSS

To determine by what processes art appreciation could be increased, two groups of fifty children each from the second, third, and fourth grades were matched for intelligence, mental age, chronological age, socio-economic status, grade, sex, and art appreciation scores. One group served as an experimental group, the other as a control group. Art appreciation was measured by a battery of tests including the following: (1) the McAdory Art Test revised to include only the best and worst choices of each test item; (2) Part I, Section I, on recognition of proportion, of the Lewerenz Tests in Fundamental Abilities of Visual Art; (3) twelve pairs of items from the Whorley Unity Scales.

The first experimental group was presented with a series of paired exercises, one member of each pair illustrating a principle of art, the other member violating the principle. The children were required to indicate the illustration they preferred but no indication was given by the experimenter as to the correctness of the choice nor the principles involved. Each child in the experimental group gained on an average .49 of a point over each child in the control group.

To test the effect of instruction accompanying the exercises the groups were reversed. To the new group the experimenter indicated which exercise was correct and explained in terms of the principles of art why it was correct. On retesting the groups, each child in the new experimental group had gained an average of 3.4 points over each child in the control group, a significant gain.

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