

A STIMULUS-RESPONSE METHOD FOR
PRACTISING FACTS

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At the Northwest Mathematics Conference in Vancouver in October, 1967, Dr. Eric MacPherson suggested a method of drilling facts of the stimulus-response type. He indicated that this method appears to be one of the most efficient ways to drill on this type of material. Dr. MacPherson illustrated his talk by giving his audience a set of nonsense facts, three minutes to memorize them, followed by three tests. There was no time between tests for relearning. Most of the audience had a low mark on the first test, an improved mark on the second test and nearly a perfect paper on the third test. This method, I felt, had some merit. Therefore, I would like to pass it on to you.

I shall use the multiplication facts in my example. The student is provided with a sheet of paper marked as shown.

1. _____
2. _____
3. _____
- .
- .
- .
10. _____

The teacher states the problem, pauses (while the student places his answer in the first space), gives the correct answer, pauses, then repeats the question and answer. If the student had the correct response, he places a check mark in the second space. If the student had an incorrect response, he listens while the teacher repeats the question and the answer; then he places the correct response in the second space.

Example:

Teacher: 5 x 6 (pauses) Student writes in 1. 30 _____
the first blank

Teacher: 30 Student places check 1. 30 ✓
mark in second space

Teacher: 5 x 6 is 30 (pause) Student listens

Teacher: 7 x 8 (pause) Student records 2. 48
response

Teacher: 56 Student listens since
he is incorrect

Teacher: 7 x 8 is 56 (pause) Student records cor- 2. 48 56
rect answer in second
space.

This procedure continues for 10 questions. If further drill is required on these facts, the same procedure is repeated the next day; otherwise the teacher goes on to new drill facts. Two essential items should be mentioned: (1) The pauses must be of proper length. Experience will assist the teacher in this. (2) Use frequent drills rather than long drills spaced weeks apart.

THIRTY-ONE ARTICLES OFFER IDEAS FOR TEACHING LOW ACHIEVERS

Aware of the increasing demand for information about how to teach low achievers, the editors of the NCTM journals have published numerous articles on the subject. In the past five years the *Mathematics Teacher* has averaged two articles a year from such notable authors as Sarah Greenholz, Florence Elder, Amelia Proctor, and Thomas Nagel. The *Arithmetic Teacher*, whose teacher-audience is so intimately responsible for giving low achievers a head start into academic life, has steadily enlarged its coverage from two articles in 1964 to seven lengthy reports in 1968. Authors Myron Roskopf and Jerome Kaplan, Wilbur Dutton, John Cawley, and John Goodman are some who have dealt with all phases: the training of mathematics specialists for the disadvantaged; development of materials; evaluation of the slow learner; how to teach geometry, fractions, time concepts, and other topics.

Single copies of a cumulative index for these 31 journal articles are available upon request from the Washington office of the NCTM.

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