RULES *VERSUS* DRILL IN TEACHING SPELLING.

The following results were obtained in a parallel-group test of rules *versus* drill in teaching spelling to eighth-grade pupils. The groups were divided upon the basis of grades secured in a common test. There were 16 pupils in each group. Group I was then given three 25-minute exercises, exclusively devoted to drill; Group II was given three 25-minute exercises, in two of which rules were taught and associated with type words and a minimum of drill required; a third period was devoted largely to drill. The results follow:

	Average in grouping test	Average and A. D. in "B" test.	Average and A. D. in "C" test.	Average and A. D. in "D" test.	Average and A. D. in "E" test.
Group I (drill).	69.85	99.37	99.	61.56	76.
		0.62	1.75	11.87	7.43
Group II (rules).	70.44	96.	93.75	67.5	74.
		5.	6.62	10.09	10.56

The "B" test was given at the close of the third 25-minute period to both groups. The "C" test consisted of the same words as the "B" test, but was given five days later; both groups show a slight falling off in efficiency, but the drill group has lost relatively less than the rules group. The "D" test was made up of new words similar, however, to those of the "B" test, and, like the "B" test, was given at the close of the third 25-minute period; the rules group has a distinct advantage here. The "E" test consisted of the same words as the "D" test, given five days later; the drill group seems to have recovered the ground lost in the "D" test; the rules group gains a better average than in the "D" test, but the influence of the latter test is not so strongly marked as with the drill group.

It should be said that no time was given to the words being taught except during the 25-minute exercises. It should also be noted that each group was taught by a separate teacher, who did his best to "get results" under the conditions set by the experiment. The results in the "B," "C" and "D" tests are what might be expected on *a priori* grounds. The approximation of the two groups in the "E" test and the slightly poorer record of the drill group after its good

showing in the "D" test suggests an influence of intellectualizing drill processes that will be further investigated.

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SOME RESULTS IN MANUAL TRAINING.

At the end of the school year 1912 it was found that boys who had been working double periods in manual training did not come up to the requirement of doing twice as much work as those who worked single periods. Throughout the year 14 boys worked single periods and 9 boys worked double periods.

A hasty inspection of the time and grade cards (form shown on page 451 of the *Manual Training Magazine* for June, 1912) seemed to indicate that in general boys who worked double periods needed more time to complete a given exercise than those who worked single periods, and a careful comparison was made of the time and grades on seven drawings and four bench exercises which were done by all of the pupils. The results are shown in the accompanying table of averages.

Every record used for comparison was made during the same semester, in regular time and sequence, and under practically the same conditions. Records of boys who were irregular in attendance or who did not complete the year's work were not used:

TABLE OF AVERAGES.

Drawings and Exercises.	Time in periods required by boys working		Grade of boys working	
	One period.	Two periods.	One period.	Two periods.
Plate No. 1.....	9.75	6.00	78	71
Plate No. 2.....	6.72	6.80	80	78
Plate No. 3.....	7.63	8.75	80	77
Plate No. 4.....	7.84	10.60	75	71
Plate No. 5.....	5.57	12.00	73	75
Plate No. 6.....	3.25	3.40	85	81
Plate No. 7.....	3.25	3.00	85	86
Halved Splice.....	6.60	11.00	77	71
Splayed Splice.....	6.00	8.57	81	72
M-and-T Joint.....	5.60	7.14	78	78
K, M-and-T Joint.....	5.60	10.50	76	72
Grand Averages.....	6.16	7.98	79.8	72.9

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