PSYCHOLOGY

XXVIII. AN EXPERIMENT IN CURRICULUM CONSTRUCTION*

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Scientific procedure should dominate all phases of education; the teacher should employ it in classroom teachings; the superintendent should employ it in determining school policies ;the curriculum maker should employ it in constructing the curriculum. It is the one fundamental need of education today. It is the only procedure that will solve educational problems effectively.

The following is a brief outline of the procedure and results of an experiment which I conducted in order to chose a curriculum for the elementary school scientifically. I selected three country schools as subjects for this experiment because this type of school lends itself better for experimentation purposes. Of course, I could have conducted the experiment in some university experimental school, but the situation would not have been normal because of certain selected conditions already present. In one school, known as the "experimental school," the experiment was conducted. The other two schools were known as "control schools" and were used to check the experimental school.

I. Steps in the Experiment

1. I first set up an assumption based upon several years of study of known facts in this field. Briefly it was: the curriculum can be selected directly from the purposes of boys and girls.

2. I used the controlled method in testing this assumption. In one school the curriculum was in terms of the purposes of children, and in the control schools it was in terms of the conventional school subjects. These schools were identical in I. Q. of the children, teachers, wealth, social conditions, and so on. In fact the only variable was the curriculum. The experiment continued over a period of four years.

3. I decided at the beginning of the experiment that I should test the validity of my assumption in terms of: (1) Common facts and skills, (2) Attitude of children toward the school and educa-

*For a detailed account of the experiment see the Author's Experiment with a Project Curriculum. (Macmillan Book Company, Chicago, Ill.)

tion, (3) Changes in children's conduct in their homes and community.

These outcomes were carefully measured for the children in both experimental and control schools at the beginning and at the end of the experiment. A careful study was then made of the improvements of the children over the experimental period.

II. The Experimental School Curriculum

The curriculum of this school consisted of four lines of projects:

1. Excursion projects—children's purposeful study of problems connected with the world in which they live.
2. Play projects—childrens' purposes to engage in group activities, such as games, folk dancing, and the like.
3. Story projects—children's purposes to express their stories in various forms; telling, reading, illustrating (with crayola), dramatization, piano, victrola, and the like.
4. Hand projects—childrens' purposes to express their ideas in concrete forms, as in making a rabbit trap, a doll dress, writing a letter and the like.

III. The Controlled School Curriculum

The curriculum of these schools consisted of the conventional subjects:

1. Arithmetic	5. Civics	9. Grammar
2. Reading	6. History	10. Language
3. Spelling	7. Writing	11. Science
4. Geography	8. Physiology	12. Manual training
		13. Cooking, sewing

IV. Results of the Experiment

1. Common Facts and Skills

At the end of the experiment the median scores of the children in both the Experimental and Control Schools were as follows in the common facts and skills:

	Median Scores
Penmanship	
Experimental School	10.3
Control Schools	8.5
Spelling	
Experimental School	56.2
Control Schools	53.8
Reading	
Experimental School	38.3
Control Schools	32.7
Addition	
Experimental School	21.0

Control Schools	17.6
Subtraction	
Experimental School	20.2
Control Schools	12.9
Multiplication	
Experimental School	13.3
Control Schools	11.1
Division	
Experimental School	14.1
Control Schools	13.1
Geography	
Experimental School	85.8
Control Schools	37.0
American History	
Experimental School	11.8
Control Schools	6.0
Composition	
Experimental School	10.8
Control Schools	7.4

2. Attitudes toward School and Education

The following figures indicate the improvements of the children in both the Experimental and Control Schools over the four year period.

School Enrollment	Improvement
Experimental School	25%
Control Schools	4%
Pupils Attending School Every Day	
Experimental School	93%
Control Schools	5%
Decrease in Truancy	
Experimental School	25%
Control Schools	7%
Decrease in Corporal Punishment	
Experimental School	56%
Control Schools	15%
Pupils Attend School Every Day	
Experimental School	76%
Control Schools	2%
Pupils Graduating	
Experimental School	85%
Control Schools	10%
Pupils Entering High School	
Exprimental School	88%

Control Schools 8%

3. Changes in Children's Conduct in the Home and Community

The following figures indicate the changes in the conduct of the children in both the Experimental and Control Schools over the experimental period:

	Improvement
Home Leisure Reading	
Experimental School	85%
Control Schools	5%
Study of Music in Home	
Experimental School	39%
Control Schools	3%
Participation in County Activities	
Experimental School	100%
Control Schools	0%
Participation in School Parties in the Home	
Exprimental School	66%
Control Schools	13%
Practising Common Health Habits in Home	
Experimental School	81%
Control Schools	3%
Decrease in Number Pupils Attacked by Common Diseases	
Experimental School	35%
Control Schools	25%
Participation in Games at Home	
Experimental School	84%
Control Schools	30%

V. Tentative Conclusions

A curriculum selected from the purposes of boys and girls is much more desirable than a curriculum of the conventional school subjects because:

1. Children acquire the common facts and skills more effectively.

2. It builds within children an attitude favorable to the school and education. It leads them to want more education.

3. And finally it changes the conduct of children outside of the school for the better. Such a curriculum functions in the lives of the children whether within or without school.

VI. Suggestions

Probably the greatest contribution of this experiment is the method employed in constructing the curriculum. It attempts to employ scientific procedure instead of the familiar "armchair" procedure.

What we need is a duplication of the experiment's method

times in order to test the validity of the findings. When this happens we will know what to teach, when to teach it, and how to teach it.