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ABSTRACT

A comprehensive evaluation of the characteristics of students attending a public alternative school revealed marked differences between the experimental group (the alternative school) and a control group (students attending a regular public school). Alternative school students showed significantly lower achievement and ability on all measures, while manifesting notably greater approval of their teachers than did the control group. Sex differences in achievement, performance, and attitude were found among the free school sample; and these are contrasted with the pattern of regular sex differences in regular schools. The significance of these findings for the establishment and running of alternative schools is discussed. (Author)

Patterns of Achievement, Attitude, and Behavior in a Tax-Supported Alternative School

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The Problem

Alternative and/or free schools are now to be found in many communities in the USA. Research into the effectiveness of these schools and the worth of their programs is in most instances hampered by the fact that the great majority of these institutions are private fee paying schools. Thus, it is that the students who attend these alternative schools tend to be drawn from the more affluent sections of the community that can afford and are prepared to pay for their children's education over and above school taxes. This study is involved with the assessment of learner characteristics of students who attend a public tax-supported alternative school and thus it provides an opportunity to examine the characteristics of students who have chosen to attend an alternative school and have not been constrained by problems of cost to their parents. The main objective of the study was to look at the achievement, attitude, and behavioral characteristics of students who were attracted to and chose to attend this kind of highly individualized, unstructured, and relatively free educational environment. The study was specifically concerned with the extent to which students in the free school differed from those who attended the regular schools in the district.

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Recent articles (3,4) in the Harvard Educational Review and in the Review of Educational Research (6) have touched upon the fact that there are a growing number of tax-supported alternative/free schools in the United States. Further, these articles note the general paucity of research and data on and about such schools. The present study is an attempt to add to the information we have about what kind of student attends an alternative school when such a school is part of the public school system.

The major theoretical framework for this study is the assumption that special treatment in the form of differential programs will have definite and measurable effect upon students in the program. In a sense the theory is one of individual differences, for it emphasizes the different needs of students and implies that only in an alternative school setting can the diversity of student needs be met. All too frequently this framework remains as a set of assumptions throughout the life of the program, the assumptions are not tested and it is assumed that the special program of the free/alternative school is in fact benefiting the students. A second theoretical underpinning of this study is the idea that a different kind of student is attracted to different kinds of programs, i.e., students who choose to attend an alternative/free school rather than a regular public school are identifiably different from other students. Different in the sense that they have different behaviors, attitudes, achievement and ability patterns, came from different backgrounds, etc. Using the methods of random and matched/selected control groups this study provides some data relevant to parts of this theoretical assumption.

Methods and Procedures

The subjects forming the experimental group in this study were the students currently attending a publicly controlled and tax-supported alternative/free school. The school which at the time of the data gathering (1973) had been in existence for two years is part of the school system of an urban area of 125,000 people, it has its own buildings and is open to students in grades 8, 9, and 10 who request permission to attend. When established the school was meant as an alternative for students who were disaffected with the regular public schools, finding their organization and structure not to their liking. Students in the experimental group (total of 50 Ss, 28 males and 22 females) were compared with a sample of students of similar age drawn from regular schools in the district.

The study involved a post-pre design which allowed for comparisons between students newly arrived at the alternative school (in early September of the school year) and students who in the previous June had been attending the school for a year. Thus, in the Tables I, II, III, IV, and V, "Entering Class" refers to students in the experimental group who were newly arrived at the school, and "Finishing Class" identifies the sub-group of the experimental group who had (the previous June) been attending the school for a year. This design with the addition of a control group from a regular public school permits comparisons between alternative school students and the control group and it also provides data relative to the influence that actual attendance at this type of school has upon students.

All data were gathered by the principal investigators (authors) and consisted for the most part of testing, interviewing, and observations

carried out by them. A lesser amount of data were obtained from the student files of Ss in both control and experimental groups. No deception of any kind was employed in this study; all Ss were appraised from the beginning of the investigators' aims and purposes. The investigators spent many hours in the free school observing and informally talking with students before any data gathering per se was undertaken.

Data Source

Data on Ss were obtained using the following methods and procedures:

(1) Intelligence test scores: all Ss in the experimental group were tested with the Short Form of Academic Aptitude; control group Ss data from file, scores from the California Mental Maturity Test.

(2) Achievement scores: all Ss in both experimental and control groups were tested with the Stanford Achievement Tests. (7)

(3) Achievement scores: a measure of experimental Ss achievement was taken from teachers' reports on Ss (having same similarity to a grade).

(4) Brown and Holtzman survey of study habits and attitudes; measure given to all Ss. (1)

(5) Controlled and systematic observations of experimental Ss were carried out.

(6) Data on experimental and control subjects was obtained from students' files. This procedure allowed for the building of achievement profiles, thus permitting comparisons between actual performance and achievement and hypothetical future performance of selected individual students derived from extrapolating past achievement scores and grades.

Results and Discussion

The data in the Tables is largely self-explanatory. Perhaps one of the best ways to summarize the findings is to present descriptive profiles, derived from the data, of typical male and female students attending this alternative school.

INSERT TABLE I ABOUT HERE

A typical male experimental S (attending the free school) would be below average in intelligence (I.Q. 91) with poor ability levels. (Tables I, II, III, and IV) His achievement test data reveals that he is approximately two years behind grade in reading, three years behind in math computation and two years behind in his ability to apply mathematical knowledge. His study habits will be poor (28th percentile), his attitude toward school and overall study orientation will be at similar levels (41st percentile and 32nd percentile). He approves of his teacher (at national norm). In terms of "grades" assigned by his teachers on a 0-3 scale he never gets a 3 point and the mean is 1.90. His current achievement may be fairly accurately predicted by his early I.Q. and achievement data.

A somewhat different set of learner characteristics are found if one looks at the typical female experimental S. She is closer to the national average in intelligence (97) (Table I). Her achievement data in reading, math computation, and math application are respectively one year, three years,

and two years behind the national norms (Tables II, III, and IV). Her study habits, attitudes, and study orientation are significantly higher than for male Ss (51st, 74th and 64th percentiles respectively). In terms of "grades" assigned by teachers 26 per cent female Ss attending the free school achieve perfect grades while the mean is 2.30 on a 3 point scale.

INSERT TABLE II ABOUT HERE

When achievement is evaluated in terms of ability generating expected achievement, the reading achievement for experimental Ss (free school) is exactly as would be predicted from I.Q. as in math applications but math computations is six months behind.

INSERT TABLES III AND IV ABOUT HERE

A comparison of experimental Ss with a matched control sample of 9th grade students reveals that the control Ss are one year advanced in reading, one and one-half years in math computation and one year in math application.

INSERT TABLE V ABOUT HERE

A consideration of Table V makes it plain the students attending the alternative school arrive at the school having very low/poor attitudes toward school, but that the experience of being in the school would seem to have the effect of improving markedly and dramatically their attitudes toward study and teachers. This would seem to be an important point and one worthy of emphasis for there is no doubt that if a school can effect this kind of change, then poor achievement scores, etc., notwithstanding it could be said to be accomplishing something worthwhile.

Summary

It is important (and perhaps, too, rather depressing) to note that when a genuine free (i.e., non fee paying) free/alternative school is established, it would appear in this instance to attract students of generally low ability and very low achievement. Thus, if free schools are for those who are disaffected with the regular public schools then most of the time this is synonymous with their having low achievement in school. This in itself is perhaps not surprising since one would predict that those disaffected with regular school would not achieve well in the school. What is more surprising is that these students do poorly in achievement even in non-threatening testing situations--we acknowledge that in a sense any testing situation may be threatening.

Systematic observation of students in the free school when combined with the testing data collected in this study leads the authors to seriously question whether this kind of school format or program benefits the type of student who seems most attracted to it. We conclude that the reason this issue has not been raised by educational researchers previously is because

heretofore research on these kinds of students has drawn from a very different kind of sample, i.e., those attending private fee paying free schools. This has obvious and serious implications for the establishment of alternative schools within the public school system.

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TABLE I

Comparison of Male and Female Students in the Alternative School and the Control Schools on the Short Form Test of Academic Aptitude Total I.Q.

		Entering Class			Finishing Class			Control School		
		I.Q.	S.D.	N	I.Q.	S.D.	N	I.Q.	S.D.	N
Opportunity	Male	88.70	14.51	10	91.34	15.20	24	112.65	16.65	31
Center	Female	85.85	15.01	13	97.36	16.51	19	109.24	15.49	37
	Combined	87.09	14.52	23	91.86	16.25	43	110.79	16.08	68

TABLE II

Comparison of Male and Female Students in the Alternative School and the Control Schools on the Stanford Achievement Test (Form W) Paragraph Meaning

		Entering Class				Finishing Class			
		Grade	M	S.D.	N	Grade	M	S.D.	N
Opportunity Center	Male		6.2	3.2	9		6.4	3.8	25
	Female		6.6	4.8	10		8.0	4.8	14
	Combined		6.4	4.2	19		6.8	4.4	39
Control Schools	Male		--	--			10.2	4.4	13
	Female		--	--			10.5	3.8	19
	Combined		--	--			10.4	4.0	32

TABLE III

Comparison of Male and Female Students in the Alternative School and the Control Schools on the Stanford Achievement Test (Form W) Arithmetic Computation

		Entering Class				Finishing Class			
		Grade	M	S.D.	N	Grade	M	S.D.	N
Opportunity Center	Male		5.4	4.5	11		5.1	4.8	30
	Female		6.4	3.9	13		5.8	5.1	18
	Combined		6.0	4.2	24		5.4	4.8	48
Control Schools	Male		--	--			6.8	3.9	23
	Female		--	--			7.2	3.6	29
	Combined		--	--			7.0	3.9	52

TABLE IV

Comparison of Male and Female Students in the Alternative School and the Control Schools on the Stanford Achievement Test (Form W) Math Application

		Entering Class			Finishing Class		
		Grade	S.D.	N	Grade	S.D.	N
Opportunity	Male	6.6	4.0	10	6.6	3.1	6
Center	Female	6.6	3.6	12	7.2	4.0	19
	Combined	6.6	3.6	22	7.1	3.6	25
Control	Male	--	--		8.2	5.4	41
Schools	Female	--	--		8.8	5.7	35
	Combined	--	--		8.5	5.4	76

TABLE V

Comparisons of Male and Female Students in the Alternative School and the Control School on the Brown Holtzman Survey of Study Habits and Attitudes.

		Entering Class			Finishing Class			Control School		
		M	F	T	M	F	T	M	F	T
Delay Avoidance	$\bar{M}$	31.75	19.60	27.08	25.83	37.17	29.78	42.81	48.24	44.62
	S.D.	25.20	14.69	19.00	21.23	18.53	20.88	28.50	28.66	28.58
	N	8	5	13	28	15	43	42	21	63
Work Methods	$\bar{M}$	28.88	19.00	25.08	37.17	58.63	44.73	56.29	60.48	57.69
	S.D.	21.81	13.42	18.11	22.64	25.73	25.74	29.50	30.90	30.21
	N	8	5	13	28	15	43	42	21	63
Study Habits	$\bar{M}$	28.25	17.20	24.00	27.89	51.53	36.14	51.50	54.95	53.47
	S.D.	23.63	12.21	18.81	18.96	20.93	19.97	28.50	30.42	29.48
	N	8	5	13	28	15	43	43	21	63
Teacher Approval	$\bar{M}$	17.88	24.60	20.46	49.50	85.33	62.00	41.42	40.19	41.01
	S.D.	14.16	27.08	21.61	30.48	17.41	24.82	22.84	29.37	26.31
	N	8	5	13	28	15	43	42	21	63
Educational Acceptance	$\bar{M}$	26.25	18.00	20.46	30.37	56.33	39.02	43.09	43.29	43.16
	S.D.	27.48	18.23	23.32	21.58	26.82	26.24	24.50	30.38	27.60
	N	8	5	13	28	15	43	42	21	63
Study Aptitude	$\bar{M}$	19.13	18.00	18.70	41.11	71.40	51.68	43.30	43.29	43.31
	S.D.	21.66	23.87	22.79	25.11	22.69	23.93	23.04	30.38	26.96
	N	8	5	13	28	15	43	42	21	63
Study Orientation	$\bar{M}$	22.25	16.00	19.85	32.35	64.60	43.60	45.98	47.10	46.35
	S.D.	18.22	19.49	18.87	22.20	21.70	21.95	26.09	32.40	29.41
	N	8	5	13	28	15	43	42	21	63