IS THERE AN UPPER LIMIT TO THE POSITIVE RELATIONSHIP BETWEEN INTELLIGENCE AND SOCIAL ACCEPTANCE?*

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In general, a positive relationship has been found to exist between intelligence and social acceptance among school children (1, 2, 4, 6, 7). In addition, intellectually superior students have shown a tendency to accord a greater degree of social acceptance to each other than to their less gifted classmates (1, 7).

With an ever-increasing emphasis being placed on the use of homogeneous grouping in the schools, it would be helpful to learn whether the relationship between intelligence and social acceptance existing in regular classes would be carried over into classes with narrow ranges of mental ability. Would intellectually superior children tend to be as selective on the basis of mental ability in a homogeneous group as they are in a normal group?

A possible answer to this question was attempted by Gallagher (3) who reported what seemed to be a trend in the direction of increased problems with social acceptance for children with very high IQ's. The results were not statistically significant, however, due in part to the small number of pupils examined.

Hypotheses

To determine whether the positive relationship between intelligence and social acceptance generally found in groups with broad ranges of ability also exists in narrow range groups, the following hypotheses were proposed:

1. The No. 1 friendship choices distributed by intellectually superior children in narrow range classes will be received in equal numbers by pupils of different levels of ability.

2. Intellectually superior children in narrow range classes will give equal numbers of rejections to pupils of different levels of ability.

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3. Intellectually superior children in narrow range classes will give equally favorable scale ratings to pupils of different levels of ability.

Procedures

This study is a part of the research conducted by the Talented Youth Project of the Horace Mann-Lincoln Institute of School Experimentation in cooperation with the New York City Board of Education. Part of this study, dealing with children in broad range classes, has already been reported by this author (7).

The subjects in the present study were 126 children in five classes who were given a modified form of the Ohio Social Acceptance Scale, Advanced Series, in February, 1957, after they had been in the fifth grade for half a school year. This test required ratings of every child in a class by every child on a five point friendship scale, a No. 1 rating being the most desirable and a No. 5 rating being a rejection.

Using IQ scores obtained with the Otis Quick-Scoring Mental Ability Tests, Beta, 27 children with IQ's 150 and above were classified as Group A_1 and 99 with IQ's below 150 as Group A_2.

Although the original intention had been to include in the narrow range group only those children with IQ 130 and above, it was found that to obtain a fair-sized sample of intellectually superior children it was necessary to include two classes which had four and five pupils respectively with IQ scores below 130. Since only two of these pupils had IQ scores below 128, it was felt that such inclusion would have no significant effect on the results.

Analysis of the Data

In all comparisons, the .05 level of confidence was the lowest limit at which differences were considered significant. Analysis of variance was used as a means of comparing mean social acceptance scale ratings. In analyzing the distribution of No. 1 choices and rejections, chi-square tests were used to compare the observed frequencies with the frequencies that might have been expected from a chance distribution. All figures given in the chi-square tables for the frequencies expected by chance distribution have been rounded off to the nearest whole numbers.

Distribution of No. 1 choices

The pattern of increased proportions of No. 1 choices accompanying the ascending order of IQ's generally found in the broad range classes (7) did not seem to hold in the narrow range classes. Group A_1 received pro-

portionately fewer No. 1 choices than did A_2 (see Table 1). This difference is significant beyond the .05 level of confidence as indicated by the chi-square of 5.95 with one degree of freedom (see Table 2).

Table 1

Per Cent of Scale Ratings Given and Received
as No. 1 Choices by Groups A_1 and A_2

Group Giving Ratings	Per Cent of Ratings Received as No. 1 Choices		
	A_1	A_2	Mean
A_1	16.9	20.5	19.8
A_2	14.4	19.0	18.0
Total	14.9	19.3	18.4

Table 2

Chi-Square Test of No. 1 Choices Received and Those
Expected by Chance by Groups A_1 and A_2

	Groups		
	A_1	A_2	Total
No. 1 Choices received	99	477	576
No. 1 Choices expected by chance	123	453	576
$f_o - f_e =$	-24	24	
$\dfrac{(f_o - f_e)^2}{f_e} =$	4.68	1.27	
Chi-square =	5.95*		

*Significant at .05 level ($P = .05$ when $X^2 = 3.84$ with 1 d.f.).

Separate chi-square tests of the distribution of No. 1 choices by each group showed that Group A_1 pupils did not significantly distinguish among the various children in their distribution of No. 1 choices. On the other hand, Group A_2 pupils gave to each other proportionately more No. 1 choices

than they gave to Group A_1, as indicated by a chi-square of 5.35, which with one degree of freedom is significant beyond the .05 level of confidence.

A comparison of the intragroup No. 1 choices given within each of the two groups disclosed no significant difference between them, indicating that the Group A_1 children were just as acceptable to one another as the Group A_2 children were to each other.

Distribution of rejections

The pattern set by Groups A_1 and A_2 in the distribution of No. 1 choices was much the same, but in reverse, for giving rejections to one another (see Table 3). Group A_1 received a greater proportion of rejections than could be attributed to chance (see Table 4). Again, this resulted from the fact that, while Group A_1 pupils gave the same proportionate number of rejections to all pupils, Group A_2 pupils rejected each other to a lesser degree than they did their more intellectually gifted classmates in Group A_1.

Separate chi-square tests which were made of the rejections given by each group respectively further substantiated the aforementioned results. The test of Group A_2's rejections resulted in a chi-square of 8.76 which, with one degree of freedom, is significant beyond the .01 level of confidence. The test of Group A_1's rejections, on the other hand, resulted in a non-significant .14.

Distribution of scale ratings

Despite the great differences between Groups A_1 and A_2 in the distribution of No. 1 choices and rejections, there were no significant differences among any of the scale ratings given or received by either group. It might

Table 3

Per Cent of Scale Ratings Given and Received
as Rejections by Groups A_1 and A_2

| Group Giving Ratings | Per Cent of Ratings Received as Rejections | | |
	A_1	A_2	Mean
A_1	7.0	5.9	6.2
A_2	11.3	7.0	7.9
Total	10.4	6.8	7.6

Table 4

Chi-Square Test of Rejections Received and Those Expected by Chance by Groups A_1 and A_2

	Groups A_1	A_2	Total
Rejections received	69	168	237
Rejections expected by chance	51	186	237
$f_o - f_e =$	18	-18	
$\dfrac{(f_o-f_e)^2}{f_e} =$	6.35	1.74	
Chi-square $=$	8.09*		

*Significant at .01 level (P = .01 when X^2 = 6.63 with 1 d.f.).

appear from the data in Table 5 that Group A_2 pupils tended to give each other more favorable scale ratings than they accorded to Group A_1, but the differences did not reach a significant level.

Table 5

Mean Scale Ratings Given and Received by Groups A_1 and A_2

Group Giving Ratings	Ratings Received by Each Group A_1	A_2	Mean	S.D.
A_1	2.52	2.52	2.52	.70
A_2	2.75	2.58	2.66	.73
Total	2.70	2.56	2.59	.74

Note: None of the differences between mean scale ratings is significant.

Summary of Findings Pertaining to Hypotheses

The hypotheses pertaining to a positive relationship between intelligence and social acceptance in groups with narrow ranges of ability cannot be sustained by the data:

1. Based on the distribution of No. 1 choices, the highly gifted children in Group A_1 found all children in the narrow range classes equally acceptable, whereas their less gifted classmates with IQ 130-149 gave to each other more No. 1 choices proportionately than they gave to Group A_1.

2. Based on the distribution of rejections, the Group A_1 children gave the same proportionate number of rejections to all pupils, whereas Group A_2 pupils rejected each other to a lesser degree than they did their more highly gifted classmates.

3. There were no significant differences among any of the mean scale ratings given or received by either group.

Discussion and Conclusions

The neat pattern of an increasingly better social status accompanying the ascending order of IQ's generally found in classes with broad ranges of ability would appear to be reversed by the data obtained in the narrow range classes.

The highly gifted children with IQ 150 and above did not share the social acceptability of their less gifted classmates with IQ 130-149.

The analysis of the data shows that by the use of either extreme or mean scale ratings, the more gifted children in the narrow range classes disclosed no preferences based on mental ability in the selection of socially acceptable classmates.

On the other hand, the Group A_2 pupils, with IQ 130-149, used the extreme social scale ratings to show that they found each other more acceptable than they did their more gifted classmates. Although the mean scale ratings tend to point to similar results, the differences never approach statistical significance, due in part, perhaps, to the small number of highly gifted children in the narrow range classes.

The problem of getting a large enough sample of highly gifted children, which similarly affected Gallagher's study (3), is difficult to overcome since such children represent less than one per cent of the total population. This problem becomes even more acute when an attempt is made to study such children in normal classes. Under ordinary circumstances one seldom finds a class with two children with IQ 150 or above. Rarely are there as many as three such children in the same normal class.

In order to compare the results found in the narrow range groups with the report previously made on broad range groups (7), it is necessary to first point out that under the rules set up when organizing the study, a mental ability group, to be so considered, had to have at least three pupils in the same class on that mental level. Inasmuch as the results with the pupils having IQ 150+ could not be foreseen and, since the sole consideration for including a class in the broad range study was that the class should have a good representation of pupils with low, medium, and high levels of ability, it happened by chance that none of these classes had a group of children with IQ 150+.

A comparison of results in both broad and narrow range groups shows that the children with IQ 130-149 are more socially acceptable to each other and to their classmates than are the children of other levels of mental ability.

The differences found between the two ability groups in the narrow range classes are statistically significant in spite of the fact that there were only 27 children with IQ 150+ and the results are definitive enough to indicate that the relationship between mental ability and social acceptance may be curvilinear with the apex in the vicinity of IQ 150.

Further study is needed with the highly gifted children in normal classes to learn whether they are more socially acceptable to more typical children.

The results of this study were forecast, to some extent, by Hollingworth (5) who had earlier noted that the likelihood of popular leadership in an unselected group decreased markedly beyond IQ of about 150. While it may be said that the narrow range classes used in this study may not be considered in the same category as the unselected group, it is well to consider that IQ 160 is just as high above IQ 130 as the latter is above IQ 100, and that a child with IQ 160 may have just as little in common with one who has IQ 130 as the latter may have with a child with IQ 100.

Since the effectiveness of a child's role as a student depends upon his sense of security, which is based on the nature of the group's acceptance or rejection, the educator is confronted with the responsibility of placing school children in an environment most conducive to a high degree of acceptance for the greatest number of children.

It is not enough simply to place children together in a classroom and expect them to learn to accept each other. Whatever it is the children must learn it is the curriculum that must provide the essentials necessary for developing desired learnings. Further study may be needed to point out existing inadequacies and the proper direction in which change in social acceptance must take place.

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