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ABSTRACT

This report investigated which of seven kinds of information would be most valuable in helping students make a decision concerning personal adoption of a new educational practice. Three hundred education and noneducation majors from the University of New Hampshire completed questionnaires containing seven information sources: a) personal experience; b) logical considerations; c) standardized test results; d) teacher-made test results; e) teacher questionnaires; f) renowned educator's endorsement; and g) school administrator questionnaires. Seven forms of this questionnaire were used, each giving a different ordering of the information sources. Students indicated their single most preferred type of information source. Data from the students were compared with figures from university and junior high school faculty members. The students' sources which showed above the chance level, personal experience and logical considerations, were the professors' and teachers' second choices, respectively. This disparity between professors' preference for logical considerations and the students' for personal experience has been incorporated into the Rutgers curriculum through basic educational psychology courses. (BRB/CCM)

COLLEGE STUDENTS' PREFERENCES FOR VARIOUS KINDS OF INFORMATION ABOUT EDUCATIONAL INNOVATION[1]

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Three hundred education and non-education majors completed a questionnaire that required their selecting which of seven kinds of information about an educational innovation they would find most influential in determining whether or not to adopt it. Analysis of the data revealed that all Ss considered personal experience with the innovation as the most important factor. Logical considerations were also chosen with greater than chance frequency. The results of the student sample differed from data of a previous study of university faculty and public school teachers. The implications for those who teach educational psychology courses is discussed.

In an earlier investigation into the apparent independence of educational practice from the recommendations of educational research it was shown that public school teachers and university faculty members respond quite differently to the same sources of information (Murray, 1970). When asked to rank their preferences for various kinds of information about educational innovation, the professors rely most heavily upon the results of standardized tests and secondarily on logical considerations. The school teachers prefer the results of teacher questionnaires most and personal experience with the innovation ranked second. It is clear from this finding that in order to be credible educational researchers should choose their method of evaluation according to the target group for which their study is intended.

This study seeks to discover what types of information are important to college students, particularly the education

majors. Are they more like their professors or the school teachers that many of them will soon join? Are they responsive to the same kinds of information that persuade professional educators? The answer to this question is important for those of us who hope to influence educational practice through our teaching of present and future teachers.

Method

Subjects:

Three hundred college students from the University of New Hampshire drawn randomly from large classes were given a questionnaire which required that they indicate which one of seven kinds of information would be most valuable in helping them make a decision about whether or not to adopt a new educational practice. Included in the sample were 100 Elementary Education majors, 100 Secondary Education majors, and 100 Non-Education majors. The Non-Education majors in turn included 24 Natural Science, 35 Social Science, 18 Humanities, 15 Business, and 8 Physical Education majors. While 70 percent of the Ss were residents of New Hampshire or Massachusetts, all the New England and Middle Atlantic states were represented in the group.

Materials:

The questionnaire consisted of a biographical cover sheet (names were not required) with a second sheet attached detailing seven kinds of information which were derived from Peirce's four ways of knowing or fixing belief about something

(Buchler, 1955). The seven kinds of information given the Ss (and in the order here as on Form A) follow:

1. The results of a questionnaire administered to teachers who have used or practiced the innovation. This information could come to you in the form "such and such a percentage of the teachers who have tried this innovation believe it is valuable and prefer to continue using it" or "such and such a percentage of teachers who have tried this innovation believe it is a better method than former practice." (This is called the TQ source in the tables which follow.)

2. The results of a questionnaire administered to school administrators (Principals, Supervisors, Superintendents, etc.) who have supervised the use of the innovation. This information would come to you in a form similar to that in No. 1 above. (This is called the AQ source in the tables.)

3. Personal experience such as observing the use or practice of the innovation in the classroom setting. (The PE source.)

4. A comparison of teacher-made test results between children who have and have not been subjected to the innovation. This information could come to you in the form: "On a spelling (arithmetic, language, etc.) test made up by the teachers, the group which has been using the never method scored such and such and a group equivalent in as many ways as possible, except for the fact that they used the older method, scored such and such. The difference which favors the _____ group is significant at the _____ level." (The TT source.)

5. A comparison of standardized test results between children who have and have not been subjected to the innovation. This information could come to you in a form similar to that in No. 4 above except that a published test such as the Stanford Achievement or the Metropolitan Achievement, etc., would be substituted for the teacher-made test used above. Differences between the groups in terms of their grade level could be reported. (The ST source.)

6. Logical considerations based on reflection about the innovation -- the way it is introduced, what it is supposed to accomplish, how it is thought to solve a particular problem, why it is thought to be beneficial, etc. An example of this kind of information is given below.

> "The fact that each letter of our alphabet may serve to represent more than one sound is confusing to beginning readers. For example,

how is the child to know which sound should be assigned the letters 'ough' in the following words: cough, furlough, ought, plough, thorough, though, through, and tough? There is nothing in the letters 'ough' themselves to indicate that they are pronounced differently. This situation is repeated over and over again in English. Hence, the child stumbles through his reading lesson losing confidence as he goes. The _____ system of teaching reading eliminates this problem. This series of readers indicates unfailingly to the child the sounds of the letters -- no more guessing, no more stimbling. Now the child can read with confidence. System has been introduced where chaos reigned previously. It stands to reason that such a system is better than the old, etc. (The LC source.)

7. The say-so of a nationally-known and highly-respected educator. (The SS source.)

Since both this questionnaire and Murray's (1970) are based on a prototype first used in 1966 by the senior author, the two studies share seven kinds of information source permitting intercorrelation of the data.

There were seven forms of the questionnaire used in this study each of which contained a different ordering of the information sources. These forms were distributed randomly within each college major.

Ss indicated their single most preferred type of information by circling the appropriate number (and letter of the questionnaire form they were using) on the cover sheet.

Results

Because the responses given on the different forms of the questionnaire were essentially the same, the results from

the seven forms were combined. The data are presented in Table 1.

Table 1. Responses of 300 College Students Classified by College Major and Information Source.

College Major	Information Source TQ	AO	PE	TT	ST	LC	SS	TOTALS
Elementary Education	9	0	39	12	13	26	1	100
Secondary Education	6	0	42	8	14	30	0	100
Non-Education	10	1	41	9	9	28	2	100
TOTALS	25	1	122	29	36	84	3	300

The data were tested first to determine whether the students' choices within each college major were distributed randomly across the seven sources of information. They were not. The lowest chi-square value was obtained with the Elementary Education majors and it is significant (X^2= 81.64, df= 6, p<.001). So the data are of some theoretical interest.

Next, the groups were compared in a three by seven contingency table to determine whether the response patterns differed for each college major. They do not. (X^2= 7.51, df= 12, .80<p<.90). Rank order correlations (rho) between the rankings of the seven sources of information within each group range from .88 (df= 7, p<.05) (calculated between both the Elementary Education and Secondary Education majors and the Non-Education majors to .99 (df= 7, p<.01) (calculated between the two Education majors). The data were combined across college major and further analyses were performed on the responses of the total group.

The ordering of the information sources from the most to least preferred is as follows: (1) personal experience (41%); (2) logical considerations (28%); (3) standardized test results (12%); (4) teacher-made test results (10%); (5) teacher questionnaires (8%); (6) renowned educator's endorsement (1%); and (7) school administrator questionnaires (0%). Of the seven, only personal experience (X^2= 170.1, df= 1, p<.001) and logical considerations (X^2= 46.2, df= 1, p<.001) are chosen more often than the chance level (14.3%).

How do these choices compare with those of a Minnesota University faculty and the faculty of a junior high school also from Minnesota? Rank order correlations were computed between the information preferences of the college students and those obtained by Murray (1970) and presented in Table 2.

Table 2. The Rank Ordering of Information Sources by Three Groups (1 = Preferred Most).

Information Source	Students	Murray (1970) Teachers	Murray (1970) Professors
PE	1	2	3
LC	2	3	2
ST	3	6	1
TT*	4	5	5
TO	5	1	4
SS	6	4	6
AO	7	7	7

*Student grades in the Murray (1970) study.

Table 3 presents the inter-correlations between the rankings shown in Table 2. As can be seen there, only the cor-

relation between the college students and the university faculty is statistically significant (rho = .82, df= 7, $p<.05$).

Table 3. Table of Rank Order Correlations Calculated Between Student, Professor, and Teacher Preferences.

	Murray (1970) Professors	Teachers
College Ss	.82*	.44
Professors	-	.30

*$p<.05$

Conclusions

Overall, college students' information preferences about the effects of changes in educational practice are aligned with those of a university faculty but not with the preferences of a junior high school faculty. However, if one examines only the students' first two choices, personal experience and logical considerations (that is, the two sources which were chosen above the chance level), it may be noted that these are the teachers' and professors' second place choices, respectively. So from consideration of only their top two choices, students seem to occupy a position that is intermediate between the two faculties.

While the correlation between the students' and professors' preferences is high enough (rho = .82) to allay any fears of a "credibility crisis" in our college classrooms, there is still enough disparity to suggest a reconsideration of our teaching methods may be warranted. Whereas professors place

the results of standardized tests first and, therefore, can be expected to rely on this source of information when assembling material to be presented to their classes, the students prefer personal experience most. At Rutgers, we have taken this finding seriously and have made provision for laboratory sessions in our basic educational psychology courses. Now our students experience first hand the psychological phenomena of conditioning, paired-associates learning, associative interference, etc.

One surprise in our findings concerns the indifference of the students to the recommendations of nationally known, highly respected educators. Only one percent of our sample preferred this source of information -- a significant departure from chance performance ($X^2 = 1537.2$, df= 1, $p<.001$). If educational practice is not to be based on the recommendations of Holt, Silberman, Kozol, and others, to what can we attribute the popularity of their writings among our students?

References

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Footnotes

1. Paper presented at the annual meeting of the American Educational Research Association, New Orleans, February 28, 1973.