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**ABSTRACT**

The utilization of program evaluation may be made more effective by means of the application of contemporary persuasion theory. The Elaboration Likelihood Model--a model of cognitive processing, ability, and motivation--was used in this study to test the persuasive effects of source credibility and involvement on message acceptance of evaluation reports. The study used a two-by-two design to investigate the effects of the two independent variables of ascribed credibility and participant issue involvement. Subjects were 63 graduate students in four education classes. A simulated report describing a 5-year pilot study of a career options program supposedly implemented in seven school districts in a southern state was reviewed by the subjects. A cover letter contained the experimental manipulation, incorporating the variables of source credibility and issue involvement. An 11-point Likert scale was used to assess the effectiveness of the manipulation of source credibility and issue involvement. Results indicate that the credibility of an evaluator is an important aspect that educators attend to when reading evaluation reports. The study provided preliminary analysis for judging the psychometric soundness of items used in a subsequent investigation utilizing high-level administrators and certified program evaluator; as subjects. A 34-item list of references is included. (TJH)

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THE EFFECT OF PERSUASION ON THE UTILIZATION  
OF PROGRAM EVALUATION INFORMATION:  
A PRELIMINARY STUDY

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## ABSTRACT

The utilization of program evaluation may be made more effective with the use of persuasion theory. The Elaboration Likelihood Model was employed to test the persuasive effects of credibility and involvement. The results indicate that the credibility of an evaluator is an important aspect that educators attend to when reading evaluation reports.

THE EFFECT OF PERSUASION ON THE UTILIZATION  
OF PROGRAM EVALUATION INFORMATION:  
A PRELIMINARY STUDY

As the importance of program evaluation has increased, problems related to utilization of the evaluation reports have been more widely recognized. During the 1960's, program evaluations were thought to provide information for action (Weiss, 1972). Evaluators expected that their reports would lead to major program change when problems were detected. Evaluators became concerned when their efforts resulted in little direct utilization (Alkin, Daillak, & White, 1979, pp. 14-16; Thompson & King, 1981, pp. 3-4). As a consequence, researchers began to question whether these action expectancies were realistic. They also sought to determine if the use and non-use of evaluations by decision makers had discernible patterns. What emerged was a new and expanded definition of utilization and of how utilization related to the complexities of organizational decisions.

Among the first to acknowledge a problem with the action concept were Patton et al. (1977), who noted that "evaluation literature has focused on too narrow a definition of evaluation research impacts" (p. 161). The perception of underutilization ultimately led evaluation theorists to redefine utilization (Brown, Newman, & Rivers, 1984; Leviton & Hughes, 1981). Two major distinctive definitions for program evaluation utilization surfaced. Program utilization is viewed from both a narrow and a broad perspective. If evaluation information is

meant for immediate and direct use in improving the quality of a program, then use of the narrow perspective is indicated. However, when evaluation findings are used as supplemental information for future decisions, the broader perspective of use is more appropriate. Additional research from the late 1970's also indicates that the broader perspective is becoming more commonly used by evaluators (Alkin, Daillak, & White, 1979; Knorr, 1977; Patton, 1978). With the expanding definitions, utilization becomes "less dramatic and more difficult to explicitly measure and demonstrate. It represents a view of evaluation in which the role of human interaction in the communication process is given more credance" (Brown & Braskamp, 1980, p. viii).

Researchers (Leviton & Hughes, 1981, p. 528), concerned about program evaluation utilization, have systematically differentiated several categories of utilization: instrumental, conceptual, and persuasive. Instrumental use is an ideal. In instrumental use an evaluation is completed and direct discernible changes occur. Conceptual use of research information was defined by Rich (1977) as "influencing a policymaker's thinking about an issue without putting information to any specific, documentable use" (p. 200).

Persuasive use "draws on evaluation evidence in attempts to convince others to support a political position, or to defend such a position from attack" (Leviton & Hughes, 1981, p. 528). But as Patton (1978) states, "The traditional academic values of many social scientists lead them to want to be

nonpolitical in their research. Yet they always want to affect government decisions. The evidence is that they cannot have it both ways" (p. 46).

Evaluators have a responsibility to provide not only a comprehensive quality evaluation but the additional responsibility of increasing the utilization of evaluation. So more evaluators have now come to appreciate House's (1977, p. 5) position that one of the primary functions of evaluations is to persuade. For example, following a five-year series of studies, Newman, Brown and Braskamp (1980) argued that the "evaluation reporting process can be viewed as analogous to a persuasive communication message" (p. 29). Thompson (1981), in his review of communication theory and program evaluation, emphasized applying theoretically grounded persuasion principles to establish a possible relationship between persuasive effort and program evaluation utilization.

The purpose of the present study was to investigate the effects of source credibility and issue involvement on message acceptance of evaluation reports. The present study provided preliminary analysis for judging the psychometric soundness of items employed in a subsequent investigation (Eason & Thompson, 1988) utilizing high-level administrators and certified program evaluators as subjects. Both studies have been completed. This paper reports the results from pilot study subjects, i.e., graduate education students at a large university. The study was grounded in contemporary persuasion theory, and the experimental variations examined were selected on this basis.

### Contemporary Persuasion Theory

Four primary theoretical approaches comprise contemporary persuasion theory. These include learning, consistency, perceptual, and functional approaches (Shelby, 1986, p. 10). The first approach, learning theory, attempts to explain or predict the relationship between a stimulus and a response (Staats, 1967, p. 373). The stimulus may be the source, the message, or the channel. The response is how the receiver reacts to the stimulus.

Several persuasion models have developed from learning theory. Two of the most commonly used are the information processing and cognitive response models (Shelby, 1986, p. 11). Information processing models developed by Hovland and associates received much attention in the 1950's and 1960's. A more recent theory, the cognitive response model developed by Brock (1967) and Greenwald (1968) and refined by Petty (1977), focuses on the receiver's cognitive response to a message. The theory hypothesizes that thoughts generated by the initial persuasive communication influence the receiver's attitude concerning acceptance or rejection of the message. The persistence of attitude is a function of the elaboration created by the cognitive responses to the message. The principles of this theory provided one important framework for the present study.

Consistency theory, a second approach to persuasion, focuses on the relationship between the stimulus and the receiver's frame of reference. In contrast to learning theory,

consistency theory focuses on the stimulus and the response. How much a receiver has stored in memory about the message content and/or the source affects the perceived persuasive intent.

Dissonance, a construct of consistency theory, has been applied to persuasion theory. Dissonance involves the inconsistency found to exist when new environmental phenomena confront previously formed, internally consistent knowledge, opinions, and attitudes of a person (Festinger, 1957). When dissonance occurs, tension or discomfort develops which will then motivate the person to achieve consistency or consonance. For example, cognitive dissonance occurs when a person who smokes is shown a graphic film of the health perils of smoking. To relieve tension, the person rationalizes that quitting smoking leads to weight gain which is also hazardous to health. Smoking is continued and the person has achieved consonance with the habit.

The third major theoretical approach to persuasion is the perceptual approach. It emphasizes how receivers perceive the message. The perceptual approach focuses in particular upon the receiver's attitude or frame of reference about the message. The approach emphasizes that it is the perception of the message rather than the actual message that affects attitude change.

Fourth, the functional approach to persuasion states that potential persuasive effects must be relevant to the needs of the receiver (Katz, 1960). Katz hypothesized that attitudes

serve at least one of the following functions: adjustment, ego-defense, value-expression, and knowledge acquisition (p. 461). An important theory in the functional approach, compliance-gaining, assumes that power is necessary for persuasion to occur (Carlsmith, Collins & Helmreich, 1966, p. 333).

### The Elaboration Likelihood Model

The diversity of data on the traditional source, message, receiver, and channel variables, and the various theoretical approaches to persuasion led Petty and Cacioppo (1986) to develop a general theory of attitude change called the Elaboration Likelihood Model (ELM). The ELM attempts to integrate the many conflicting findings and theories from previous work into one viable framework.

"Elaboration" is defined as the degree to which a person cognitively processes the message. "Likelihood" refers to the person's ability and motivation. Therefore, if a person has the ability and is motivated to process issue-relevant information, elaboration likelihood is high. Conversely, if ability and motivation are not present, elaboration likelihood is low.

The ELM divides the previous empirical findings and theories into two "routes to persuasion" (Petty & Cacioppo, 1986, p. 3): central and peripheral. Within the central route a receiver is led by ability and motivation to cognitively consider the issues relevant to the message. The theorists hypothesize that the effort involved in mentally processing

information makes persuasion through the central route more permanent and more resistant to change. A central route is involved when a voter critically analyzes the political platform of a candidate rather than the candidate's projected charisma.

Conversely, in the peripheral route a receiver is led to react to a simple cue, rather than by cognitively processing issues. The credibility of the source, the topic of the communication, the attractiveness of the source, the length of the message, and the media type are only a few types of cues. In the previous example, the peripheral route might involve voters watching a TV commercial and focusing on the candidate shown with a happy family.

One of the basic differences between central and peripheral routes is the permanency of their effects on attitude change. Peripheral cues are easier to process, but because they lack cognitive press they are less resistant to competing messages. However, the power of cues can lead to persuasion even in the absence of issue-relevant information. For example, an automobile dealer may ignore the relative quality of a product but still persuade the buyer with the simple message, "Buy American." Conversely, central arguments are difficult to establish but do result in longer lasting attitudinal change. The ELM predicts that when both the source and message contain combinations of central issue-relevant arguments and peripheral cues, the power to persuade is increased.

The ELM also indicates that the relative effectiveness of persuasion techniques is, in part, a function of the characteristics of the receiver. Receivers may be differentiated by bias, motivation, prior knowledge, locus of control, and intelligence. Additionally, different receivers have different needs for information and different kinds of decisions to make (Newman, Bull, Brown, & Rivers, 1986).

Literature on the comparison of administrator and evaluator views of evaluation is scarce. Thompson and Miller (1984) explored these two perceptions of evaluation by employing Meltsner's model. The research question was whether administrators and evaluators had similar views of evaluation and the evaluator's role. Two of the Q-technique factors consisted of a mix of both groups. The results suggest that some administrators and evaluators hold similar views of evaluation. Also, since most administrators grouped in the first two subject clusters, the results suggest that administrators are more homogeneous in their views of program evaluations. The views of the evaluators were not as consistent. Presumably evaluators and administrators can communicate more adequately if they understand each other's views of program evaluation.

Two persuasive elements were the primary focus in the present study. These were source credibility and issue involvement. With respect to source credibility, attribution theory suggests that source characteristics have an impact on message acceptance or rejection. The source factor can affect

persuasion in several different ways: serving as arguments, serving as cues, or affecting the extent or direction of issue and argument processing (Petty & Cacioppo, 1986, p. 47).

The source factor can affect attitude change under varying conditions of high or low elaboration likelihood. When a person is unmotivated and unable to evaluate message arguments, simple cues such as source credibility are relied upon. Thus, under low elaboration likelihood a highly credible source tends to enhance persuasion. But when an audience member is highly motivated and able to cognitively process the issue-relevant arguments, the effects of source credibility tend to disappear. These principles have been corroborated in experimental research (Maddux & Rogers, 1980; Pallak & Francia, 1985).

A second variable, issue involvement, is a motivational variable affecting elaboration likelihood (Petty & Cacioppo, 1986, p. 81). Issue involvement, also referred to as personal relevance, concerns the extent to which the topic of the message is of relevance to the receiver. High personal relevance of a policy change in school dress code occurs if the change takes place in a receiver's own school. Low personal relevance might be typified by a change taking place in another state.

Involvement is based on social judgment theory which posits latitudes of acceptance, rejection, or noncommitment. After reviewing the persuasion research, Petty and Cacioppo (1986, p. 82) found that few researchers had considered the effects of issue-relevant arguments on persuasion. For

example, issue relevance of a new exam policy might be high for some undergraduate students but the topic of import duties on raw silk might be less relevant to these students.

If the information is consistent with the subject's initial opinion, processing of the strengths of the message will occur. However, if the information is inconsistent with the subject's opinion, high relevance topics will generate counterarguments to the message. Consequently, Petty and Cacioppo (1986) incorporated personal relevance as a central principle to their ELM. As personal relevance increases, people become more motivated to work harder to process issue-relevant arguments (Petty & Cacioppo, 1979a, p. 1915). The more involved the receiver is in the outcome, the more resistant the receiver will also be to changing attitudes. Again, previous research supports these theoretical principles (Norton, 1986; Petty & Cacioppo, 1979b).

In summary, the literature portrays persuasion theory as a viable framework for investigation regarding more effective program evaluation utilization. Several studies have been reported involving persuasion in studies of program evaluation utilization. For example, a series of studies conducted by Brown and Braskamp (1980) presented evidence suggesting that persuasion theory provides a viable framework for studying program evaluation utilization.

The present study employed a 2 x 2 (credibility manipulation x involvement manipulation) design to investigate the effects of the two independent variables on ascribed

evaluator credibility and participant issue involvement. Specifically, the study was designed to address two research questions. First, will peripheral involvement persuasive effects occur even if evaluation information does not directly and immediately impact evaluation report readers? Second, will evaluator peripheral credibility cue effects occur independently of involvement effects?

### Method

#### Subjects

The subjects in the present study were graduate students (n = 63) in four education classes. Evaluation reports and questionnaires were administered to the students during their regularly scheduled classes. Subjects in each of the four education classes were randomly assigned to one of the study's four experimental conditions.

#### Procedure

A simulated report was utilized to investigate the persuasive effects of source credibility and issue involvement on message acceptance. In order to make the report believable, a nonprofit company was created. The simulated evaluation described a five-year "pilot" study of a career option program. The report described the program, objectives, and the evaluation results and recommendations. Hypothetically, the five-step career option plan had been implemented in seven school districts of a southern state. The report was identical for all subjects. Subjects were asked to help evaluate the quality of the report before the report was to be distributed

to other educators.

The cover letter contained the experimental manipulation, and involved the variables of source credibility and issue involvement. The inclusion of the intervention in the cover letter was to make the manipulation less obtrusive and to minimize reactivity.

Our operational descriptions for the variables of source credibility and issue involvement have been used in several previous studies (Maddux & Rogers, 1980; Norton, 1986; Petty, Cacioppo, & Heesacker, 1981). These descriptions were adapted for the present study. The evaluator titles, "researcher" and "art specialist," were determined from previous evaluation use research to have high and low evaluator credibility, respectively (Braskamp, Brown, & Newman, 1978). In the present study the evaluator described as an art specialist was defined as a specialist in the field of music. In the high credibility condition the cover letter described the evaluator as a professor of educational research.

Issue involvement, also referred to as personal relevance, was manipulated in the cover letter as well. Both involvement conditions were designed to not involve direct immediate impacts on the subjects. The evaluation report presented to the more highly-involved subjects was preceded by information that the subject was to help evaluate the quality of the report before the report was to be distributed to educators, civic organizations, and government officials within Louisiana and other southern states. Thus, the possibility of future

involvement within the same geographic region was indicated.

The message for the low involvement group was preceded by similar instructions. However, subjects in the low involvement condition were told that the results were to be distributed in Wisconsin, and that results of the evaluation would not be employed for some time. Thus, involvement was portrayed as being remote in both time and place.

Previous empirical research has clearly established that stark contrasts of no involvement versus immediate, direct, personal involvement do produce discernable differences in message processing. But direct immediate involvement is not characteristic of real evaluation settings in which decision responsibility is often shared and in which movement toward decisions is often incremental. Our purpose in designing the involvement intervention was to produce a more ecologically valid intervention involving a more realistic contrast. Such research may also be useful in defining the limen at which involvement effects occur.

An 11-point Likert scale was employed to assess the effectiveness of the manipulation of source credibility and issue involvement. The same scale has been used in previous research (Norton, 1986; Petty & Cacioppo, 1979; Pallak & Francia, 1985; Swasy & Munch, 1985). The questionnaire included 14 items to measure direct manipulation effects, divided into the following categories: five items measuring credibility, five items to assess adequacy of involvement, and the remaining four items in this section acted as fillers used

to lessen reactivity. The credibility and involvement items were summed to form two overall composite scores that measured each dependent variable. Four items in this section were reverse phrased to minimize response set.

Other procedures similar to those utilized in studies by Petty and Cacioppo (1979a, p. 1918) and Norton (1986, p. 43) were also followed. Thus, subjects were also asked to indicate their personal attitude about the topic, i.e., career option plans, and their agreement with the evaluator's recommendations.

### Results

Preliminary analyses were performed to test the reliability of each of four scales. The scales were: credibility, with five items; involvement, with five items; attitude, with four items; and five items measuring reaction to report recommendations. The alpha reliability coefficients were .81 for credibility, .83 for involvement, .88 for attitude, and .39 for recommendations. The low internal-consistency reliability for the five recommendation items was not unexpected since the items were diverse in their content.

The analysis of the involvement scale indicated a low item-total correlation ( $r = .16$ ) for the first item. Based on the result, modifications to that item were deemed necessary for the subsequent use of the item. The alpha coefficient for the remaining four items, omitting the first item, was .93.

The study's first research question asked whether

peripheral involvement persuasive effects occur even if evaluation information does not directly and immediately impact evaluation report readers? "Involvement" was measured using five 11-point Likert-scale items (e.g., Norton, 1986; Swasy & Munch, 1985) with the extreme descriptive anchors, "agree strongly" or "disagree strongly", lower scale scores indicate higher involvement. The mean for the high involvement condition was 26.39 ( $SD = 12.93$ ) and the mean for the low involvement condition was 28.93 ( $SD = 12.98$ ). A univariate test of these differences was not statistically significant ( $F(1,61) = .65, p > .05$ ). This finding indicates that the subjects did not perceive any difference between the high and low involvement conditions. As presented in Table 1, no other main or interaction effects were statistically significant ( $\alpha = .05$ ) for this dependent variable. Since the scale ranged from five (most involved) to 55 (least involved), and the means for the two involvement conditions were near the middle of this range, the subjects were moderately involved in processing the evaluation report information.

The study's second research question asked, do evaluator peripheral credibility cue effects occur independently of involvement effects? As noted previously, the subjects rated the extent to which they found the source "credible". The rating system utilized an 11-point scale where "1" indicated "agree strongly" and "11" indicated "disagree strongly." Five statements were combined so that maximum acceptance of the source equalled five and least acceptance equalled 55.

Subjects in the high credibility condition rated the evaluation report source as being more credible ( $\underline{M} = 25.19$ ,  $\underline{SD} = 6.96$ ) than subjects in the low credibility condition ( $\underline{M} = 34.84$ ,  $\underline{SD} = 8.37$ ). This difference in means was statistically significant ( $\underline{F} (1,61) = 24.44$ ,  $p < .001$ ); the correlation ratio effect size for this analysis was 28.6% ( $1461.24/5108.52$ ). In a 2 x 2 factorial analysis of variance, presented in Table 2, no other univariate null hypotheses involving effects on the credibility dependent variable were rejected.

To address the first two research questions in a multivariate context (Fish, 1988), a 2 x 2 MANOVA involving the two dependent variables, credibility and involvement, was conducted. Only the null hypothesis involving the credibility main effect was rejected ( $\lambda = .76$ ,  $\underline{df} = 2/62$ ,  $p < .001$ ).

Ancillary analyses were performed to test for other effects that were also of interest in the study. A two-way factorial analysis of variance on attitude toward career option plans involved no statistically significant main effects or interactions. The findings indicated that the attitudes toward career option plans were similar across design conditions. The grand mean ( $13.04$ ;  $\underline{SD} = 7.10$ ) indicated a moderately positive attitude toward career option plans, since these items were rated on a 9-point scale (lower scores being more favorable) such that total scale scores therefore ranged from four to 36.

A second ancillary analysis was computed for the five recommendation items. The results indicated that the subjects were generally positive ( $\underline{M} = 18.71$ ,  $\underline{SD} = 6.77$ ) in their

acceptance of the report recommendations. Thus, subjects were open to the topic in the evaluation report.

### Discussion

Conclusions important to the utilization of program evaluations may be drawn from the present study. First, expectations concerning the detection of source credibility information was supported by the findings of this study. The findings were in agreement with those of Hovland and Weiss (1951) who observed that source credibility is attended to by subjects. Also, the source credibility findings were in agreement with those in the related program evaluation research of Brown, Braskamp, and Newman (1978).

These findings suggest the importance of attending to Standard A2 of the Joint Committee on Standards for Educational Evaluation (1981, pp. 24-26). This standard requires that "The persons conducting the evaluation should be both trustworthy and competent to perform the evaluation, so that their findings achieve maximum credibility and acceptance." The results of the present study suggest that educators do attend to information about evaluator experience and job title when making judgments about evaluator credibility.

The standardized effect size for the credibility intervention on perceptions of evaluator credibility was 1.26  $((34.84 - 25.19)/((8.37 + 6.96)/2))$ . These are very large effect sizes.

Second, the results of the present study indicated that the issue-involvement intervention failed to directly affect

perception of involvement, as noted previously and also reported in Table 1. This finding is noteworthy given recent research which has indicated that issue involvement is an important motivational variable in changing how people cognitively respond to information (Petty & Cacioppo, 1986; Greenwald, 1968). Thus, cognitive response data were collected and analyzed in the subsequent study (Eason & Thompson, 1988) to further explore this finding.

More studies emphasizing ecologically valid involvement manipulations are needed if we are to understand the subtle influences on involvement in a reality in which authority is shared and in which change is incremental. What are not needed are more studies offering stark but unrealistic contrasts of involvement conditions.

The results in the present study suggest that evaluator credibility is perceived by report readers. Clearly, these results suggest that evaluators must actively and systematically endeavor to present themselves as being credible sources of information.

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Table 1  
ANOVA Source Table for Involvement

| Source      | SOS      | <u>df</u> | MS     | <u>F</u> | p calc | Effect Size |
|-------------|----------|-----------|--------|----------|--------|-------------|
| Credibility | 35.97    | 1         | 35.97  | .21      | NS     | 0.4%        |
| Involvement | 107.17   | 1         | 107.17 | .62      | NS     | 1.0%        |
| Interaction | 33.75    | 1         | 33.75  | .20      | NS     | 0.3%        |
| Residual    | 10170.47 | 59        | 172.38 |          |        |             |
| Total       | 10349.65 | 62        | 166.93 |          |        |             |

Table 2  
ANOVA Source Table for Credibility

| Source      | SOS     | <u>df</u> | MS      | <u>F</u> | p calc | Effect Size |
|-------------|---------|-----------|---------|----------|--------|-------------|
| Credibility | 1457.63 | 1         | 1457.63 | 25.38    | .00    | 28.5%       |
| Involvement | 5.06    | 1         | 5.06    | .09      | NS     | 0.0%        |
| Interaction | 253.96  | 1         | 253.96  | 4.42     | NS     | 5.0%        |
| Residual    | 3388.26 | 59        | 57.43   |          |        |             |
| Total       | 5108.52 | 62        | 82.40   |          |        |             |