

The Effect of Message Frames on Attitudes Toward Internationalizing Agricultural Extension

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Abstract

This study examines to what extent alternative message frames are capable of influencing attitudes for an internal organizational communication message. Communicators proposed framing messages to persuade internal audiences about the benefits of internationalization for their organizations. In this applied-communication context, framing was situated within the Elaboration Likelihood Model (ELM) of persuasion. Overall, the findings suggested that the psychological indicator of issue involvement was more strongly related to attitudes toward internationalizing Extension than the message frames presented. However, results indicate there is potential for alternative message frames to influence attitudes toward organizational initiatives.

So What?

The purpose of this study was to examine to what extent message frames within an internal message of the U.S. Cooperative Extension System are capable of influencing attitudes. As Extension communicators attempt to generate enthusiasm for organizational initiatives, it is helpful to consider the framing of messages and the effect on salience for audiences.

The Cooperative Extension System (CES) links the education and research resources of the United States Department of Agriculture (USDA), land-grant universities, and county administrative units in order to extend research-based scientific information and informal education to citizens (Seevers, Graham, Gamon, & Conklin, 1997). The organizational mission of the CES is to advance knowledge of agriculture, the environment, human health and well-being, and communities (Cooperative State Research,

Education, and Extension Service [CSREES], 2007). Researchers maintain that globalization is a key issue for the CES, as it has become increasingly apparent that to be considered educated in agriculture, one must be cognizant of the interrelationships between various agricultural systems and the governments, cultures, and societies in which they function (Ludwig, 1994).

The CES is a governmental, educational organization with various internal and external publics. In fulfilling its mission of advancing knowledge and extending information to citizens, the CES develops national initiatives to address organization-wide issues like globalization, as well as issues such as agricultural biotechnology, food safety, invasive species, and water management. This study examines a national initiative by the CES to internationalize Extension, with the goal of empowering Extension personnel to prepare their clientele to operate in a globally interdependent world. Communicators within the CES are responsible for communicating to internal publics—in this case, Extension agents (informal educators)—about the importance of the initiative. Facing differences in attitudes and perceptions within Extension, organizers for the national initiative have engaged in efforts to persuade Extension audiences of the importance of internationalizing Extension.

Literature Review

Organizational communication, as defined by Tompkins (1984), is “the study of sending and receiving messages that create and maintain a system of consciously coordinated activities or forces of two or more persons” (p. 662-663). This definition emphasizes organizational communication as interactive and dynamic (Allen, Tomkins, & Busemeyer, 1996). Persuasion theories rooted in cognitive psychology can be applicable for organizational communicators who are attempting to find effective ways to present messages to their publics. The Elaboration Likelihood Model of persuasion (ELM) theorizes about the factors involved in an individual’s response to a persuasive communication. The ELM posits that individual attitudes are not always formed in a thoughtful manner (Petty & Cacioppo, 1986). It offers a framework for investigating factors that may increase or decrease the likelihood of a message receiving thoughtful consideration.

Elaboration was defined by Petty and Cacioppo (1986) as the extent to which an individual cognitively processes issue-relevant arguments contained in a persuasive communication. The ELM is based on two distinct message-processing routes. When individuals process a message via the central route, they are persuaded or not persuaded (an attitude change takes

place or does not take place) by the issue-relevant arguments presented. When an individual processes a message via the peripheral route (because of lack of ability or motivation to process the message), the individual is persuaded or not persuaded by issue-irrelevant cues in the message. In public relations messages, information that appeals to rationality is often combined with information that appeals to emotion.

Petty and Cacioppo (1986) asserted that while attitude change can take place via either the central or peripheral routes, attitude change that results mostly from processing topic-relevant arguments (the central route) will last longer, showing greater prediction of behavior and greater resistance to counterpersuasion than attitude change that occurs via the peripheral route. According to Petty and Cacioppo (1979), attitude change via the central route, while effective, is difficult to achieve. Petty and Cacioppo identified three conditions that must be met for attitude change to take place. First, a message must hold personal relevance for a recipient. Second, the recipient must have the ability to process or understand the message content. Third, the arguments in the message must produce mostly favorable thoughts in the mind of the recipient (Petty & Cacioppo).

If individuals make choices based on their personal motivation (issue involvement and need for cognition) as to what route to take in processing a message, how can message elements be distinguished to determine which are being utilized for processing via the central route and which are being utilized for processing via the peripheral route? According to the ELM, when individuals are motivated and able to think about an issue, they carefully consider the issue-relevant information presented in a message. This information can take the form of arguments presented in the message, or pieces of information that make claims about the position being taken (Petty, Priester, & Brinol, 1994).

On the other hand, when individuals are less motivated or unable to think about an issue, they form favorable or unfavorable attitudes without careful consideration of the arguments presented. They rely on peripheral cues. Researchers believe that many of the same message elements have potential for use in both types of processing, depending on the individual. Some of these message elements include the perceived credibility of sources in the message (Petty, Cacioppo, & Goldman, 1981) as well as the number of arguments presented in the message or their length (Alba & Marmorstein, 1987; Petty & Cacioppo, 1984; Wood, Kallgren, & Priesler, 1985). Message framing is one message element that has not previously been examined for its potential to influence the processing route taken.

In general, framing involves the organization and packaging of information (Simon & Xenos, 2000). The way information is framed is the way people come to understand that issue. Media frames interact with audience frames, or schemas. At an organizational level, frames "represent strategic devices for mobilization; they are a potentially rich organizing tool, securing additional members for social movement organizations and creating a more sympathetic political environment in which movements can evolve" (Carragee, 1997, p. 3). Frames are one way to promote this mobilization, as disseminated in internal communications such as newsletters, brochures, orientations, and training. Within organizations, public relations practitioners are often called upon to "sell" the organization's programs to internal and external publics.

Within the context of this study, the term "globalization" may inspire various interpretations in individuals based on their experiences and interests. According to Knight (1997), "Public relations practitioners occupy positions ideally suited for framing issues in a way likely to advance both public and organizational interests" (p. 4). For the most part, frames have been studied in the context of mass media, where journalists use familiar themes or frames to introduce new information (Hallahan, 1999) but do not overtly use frames to persuade audiences. However, researchers have suggested that framing could have a prominent role within public relations. According to Weick (1969, as cited in Hallahan, 1999), "Public relations counseling involves defining reality for organizations by shaping organizational perspectives about the outside world" (p. 206). According to Knight (1997), "Framing can and should be applied not only in communication with an organization's publics but also in those targeting the organization itself" (p. 4).

In 2002, the Cooperative State Research, Education, and Extension Service (CSREES) of the United States Department of Agriculture (USDA) launched the National Initiative to Internationalize Extension with the goal of preparing Extension agents and other stakeholders in the land-grant system to address globalization and its effects on their clientele. A central part of this initiative was to summarize key elements of previous communication research and to adapt it to the needs and interests of the CSREES and its university partners in order to communicate effectively about global interdependence in agriculture.

Global Interdependence in Agriculture: A User's Guide to Effective Communication (Radomski & Larew, 2002) provides a synopsis of previous research findings and discusses common frames and metaphors, providing examples of how to use this framing approach. This user's guide proposes

several frames that might be effective when communicating about global interdependence in agriculture.

Two potentially useful frames suggested by the guide are moral norms and mutual benefit. The moral norms frame is based on communicating such sentiments as “solving world hunger is the ‘right thing to do’” and “making the world a better place for future generations” (Radomski & Larew, 2002). The mutual benefit frame is based on communicating that internationalizing Extension is a “win-win” situation that benefits both developing countries and the United States (Radomski & Larew).

Radomski and Larew (2002) outlined several reasons, from CSREES’ standpoint, why the mutual benefit frame may be more persuasive, given that the goal is to promote internationalizing Extension. First, the frame describes the benefits of internationalizing Extension in general terms and does not limit the benefits to self-interest. This frame communicates that it is acceptable to reap rewards as long as you are “doing the right thing.” This frame fits well with other positive frames (environment, partnership, mentoring) identified by Radomski and Larew’s guide. This frame dispels the idea that internationalizing Extension only helps competitors, emphasizing global interconnections instead (Radomski & Larew, 2002).

While the moral norms frame was shown to have potential for influencing the American public on global issues (Bostrom, 2001), Radomski (2002) suggested that the mutual benefit frame may be particularly effective for communicating within Extension, where agents are particularly interested in helping their agricultural clientele compete in global markets.

Radomski’s guide proposed the use of nonmedia frames, with the overt goal of persuasion. This applied communication context provided this study with an opportunity to make a unique theoretical contribution, situating framing within persuasion theory, specifically as a factor in the ELM, a dual-process model of persuasion.

Purpose

The purpose of this study was to examine to what extent these alternative message frames, when applied to the same issue, are capable of influencing attitudes within the ELM for an internal communication within a specific organization. Based on the literature presented, as well as the purpose and relevance of the study, the following hypotheses were generated:

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1. Subjects who are high in issue involvement and need for cognition and who are presented with the mutual benefit frame will have more positive attitudes toward internationalizing Extension than subjects who are low in issue involvement and need for cognition and who are presented with the moral norms frame.
2. Subjects who are high in issue involvement will have more positive attitudes toward internationalizing Extension than subjects who are low in issue involvement.
3. Subjects who are high in issue involvement and are exposed to the moral norms message will have more positive attitudes toward internationalizing Extension than subjects who are low in issue involvement and are exposed to the moral norms frame; concurrently, subjects who are high in issue involvement and are exposed to the mutual benefit message will have more positive attitudes toward internationalizing Extension than subjects who are low in issue involvement and are exposed to the mutual benefit frame.

Methods

A primary focus of this study was to determine the effect of message framing on cognitive processing of messages about internationalizing Extension within the ELM. "A framing effect is said to occur whenever different descriptions of the same decision situation lead to different preferences, despite the fact that the 'acts, outcomes, and contingencies' associated with the decision remain invariant across the descriptions" (Tversky & Kahneman, 1981, p. 453).

A 2 (issue involvement: high or low) \times 2 (need for cognition: high or low) \times 3 (message frame: mutual benefit, moral norms, control) between-subjects factorial experimental design with random assignment was used to test the moderating role of message frames on message elaboration regarding internationalizing Extension. In a factorial design, it is possible to study two or more independent variables simultaneously to determine their independent and interactive effects on the dependent variable (Christensen, 2001).

To test the hypotheses in this study, the population chosen was county Extension agents in the United States. Before the study began, the message and instrument were tested. Three phases of preliminary message testing were conducted in undergraduate classes where the researcher had no affiliation, followed by a pilot study conducted with subjects who were representative of the population under study. On a practical level, the

three phases of message testing were useful in determining the amount of time necessary to read the message stimulus. The primary objective of the message-testing stage was to evaluate the effectiveness of the three messages to communicate three different main ideas.

To establish the reliability and validity of the final instrument, a pilot test was conducted in the fall of 2003 with a random sample of Extension personnel from the state of Pennsylvania. Seventy-eight surveys were mailed out and 26 surveys were returned for a response rate of 33%. The analysis of the instrument focused on the psychometric properties of the instrument and its reliability and validity. Prior to the pilot test, content experts were utilized to assess the face and content validity of the instrument.

Questionnaires for the study were mailed and self-administered. The researcher derived the sample from the 2002-2003 *County Agents Directory* (Doane Agricultural Services Company, 2002). From this directory, every seventh name was entered into a database to constitute a systematic random sample. This resulted in a sample size of 1,662. Because this latest edition of the county agents directory was several years old, 293 of the questionnaires sent out were returned, some due to employee attrition (76.5%, $n = 225$) and some because of invalid addresses (23.2%, $n = 68$). This was determined to be an inaccessible group in the sample. The final accessible sample size of 1,367 was determined after removing individuals with invalid addresses. From the individuals in this sample, 727 responded, for a 52.6% response rate.

Individuals in the sample were randomly assigned to one of two treatment conditions and a control group as follows: (a) a questionnaire containing a message about internationalizing Extension conditioned with a mutual benefit frame; (b) a questionnaire containing a message about internationalizing Extension conditioned with a moral norms frame; and (c) a questionnaire containing a message about internationalizing Extension conditioned with a control message (no overt frame).

Independent Variables

In this study, two independent variables were hypothesized to provide motivation to process via the central or peripheral route: issue involvement and need for cognition. While the message frame can be manipulated, need for subject cognition is a pre-existing disposition in individuals and cannot be manipulated. It can only be measured for the purpose of comparison (Greer, 1996).

According to Petty and Cacioppo (1979), "In high involvement situations, the persuasive message under consideration has a high degree of personal relevance to the recipient, whereas in low involvement

situations, the personal relevance of the message is rather trivial" (p. 20). An individual's level of involvement with an object, situation, or topic is determined by the perceived personal relevance to the individual. Grunig and Hunt (1984) proposed the development of distinct public relations strategies for high and low involvement groups.

Under high involvement conditions, the content of a message is the main determinant of attitude change. However, under low involvement conditions, noncontent factors, such as source credibility or mental shortcuts, are more important in determining attitude change. In other words, attitude change can be influenced by different factors depending on issue involvement (Petty & Cacioppo, 1981).

While issue involvement has been manipulated in other studies (Petty & Cacioppo, 1979; Petty & Cacioppo, 1981), in this study, issue involvement was measured for each respondent using Zaichkowsky's (1985) Personal Involvement Inventory (PII) scale (Bearden & Netemeyer, 1999). According to Zaichkowsky, this scale measures an individual's perceived relevance for the object based on inherent needs, values, and interests. The scale presents individuals with the name of an object followed by a series of semantic differential items with opposing adjectives on a 5-point scale: for example, "important" versus "unimportant." The individual indicates his or her response to the object presented for each dimension of the object's personal relevance for him or her. Instrument reliability, established through test-retest and internal consistency in previous studies, ranged from .88 to .97.

Need for cognition (NFC) refers to an individual's motivation to engage in central route processing in general (Cacioppo & Petty, 1982). Subjects high in NFC are likely to process the message presented via cognitive elaboration in the central route, while subjects low in NFC are likely to process the message with the use of heuristics, or rules of thumb, and mental shortcuts in the peripheral route. In this study, NFC was measured by an 18-item scale derived from the original 34-item NFC scale developed by Cacioppo and Petty and refined by Cacioppo, Petty, and Kao (1984).

The questionnaire was designed around the message stimuli under examination. Subjects were randomly assigned to one of three messages. These messages were based on an actual message from an existing online monthly Extension publication titled *International FOCUS*. Each of the messages shared similar information about an Extension specialist with the pseudonym "John Richards," who traveled to Mexico and Nigeria in the summer of 2003 to participate in research projects related to the production and marketing of food in those countries. Each of the messages, delivered in the form of an article from the publication, included the same picture and caption.

Two of the messages were designed to emphasize a particular frame (mutual benefit or moral norms), while the third message was designed to serve as a control message, simply delivering the factual information about the international experience. The mutual benefit message began with the headline, "Value of international experience in Extension work." The message went on to point out that, through his experience, the specialist tested his Extension techniques in a different culture and expanded his ability to communicate with culturally diverse clientele.

In the moral norms message, the headline read, "Global responsibility: Professors share expertise overseas." The message began with a quote from Richards: "The University is morally responsible to offer its immense expertise and resources to bring an end to hunger around the world. It is the right thing for us to do." The message specifically discussed issues that plague developing nations, such as starvation, inadequate food safety, and hygiene concerns, pointing to Extension as an organization with the ability and responsibility to help with these issues.

Finally, in the control message, the headline read, "Assistant professor participates in international experience." The message described Richards' activities on the trip, but did not include a message frame. The messages were extensively pretested, and manipulation checks were included in the finalized instrument to verify that readers perceived the messages differently.

Dependent Variables

In accordance with the ELM framework and research hypotheses, attitude toward internationalizing Extension was the focal dependent variable. A *t*-test and analysis of variance (ANOVA) were used to compare means. Analysis of variance was used to examine the simultaneous effect of the independent variables on the dependent variables.

After reading the message, subjects were asked in the questionnaire to list the thoughts they had while reading the message presented. This thought-listing technique, developed by Brock (1967) and Greenwald (1968), is a way to assess elaboration (Petty & Cacioppo, 1981; Petty & Cacioppo, 1986).

The researcher analyzed the content of the thoughts listed by the subjects to determine the direction and amount of cognitive elaboration. The thoughts listed for each respondent were coded by the researcher for relevance to and favorability toward internationalization. In order to assess intercoder reliability, 7% ($n = 50$) of the responses were randomly selected for coding using a random numbers table. According to Kaid and Wadsworth (1989), for large samples, coding between 5% and 7% of the total responses is adequate to establish intercoder reliability.

For this subsample, the researcher, a faculty member, and a doctoral student in agricultural communications coded each of the 50 randomly selected responses. They coded complete thought units from the data independently of one another and without access to the experimental condition of subjects. The intercoder agreement using Cohen's Kappa, commonly used in content analysis, was .72, accounting for the number of chance agreements, the number of ratings given, the number of things rated, and the number of times a given category was used (Emmert & Barker, 1989).

In order to assess audience responses to persuasive messages, researchers measure a number of attributes to determine whether messages are perceived as believable, unbiased, informative, interesting, fair, useful, and persuasive (Pinkleton, 1993; Roddy & Garramone, 1988). Typically, semantic differentials, or adjective pairs representing opposite ends of a continuum (DeVellis, 2003), are used to measure responses. Items used in this study were adapted from several scales used by Thorson, Christ, and Caywood (1991) and Beltramini (1982). In previous studies, the reliability for the scales, measured by a coefficient alpha, ranged from .87 to .95. All of the items measured in the scale were aggregated to form a measure for argument quality. In order to measure the impact of the independent variables within the ELM, attitudes toward internationalizing Extension were measured after subjects were presented with the message. A scale including five semantic differential items measured these attitudes. In response to the statement "I feel that 'internationalizing Extension' is...", subjects indicated where their attitudes fell between anchors, including "Bad/Good," "Unfavorable/Favorable," "Negative/Positive," "Unwise/Wise," and "Harmful/Beneficial."

Response Rate

Nonresponse error occurs, according to Dillman (2000), when "a significant number of people in the survey sample do not respond to the questionnaire and have different characteristics from those who do respond, when these characteristics are important to the study" (p. 10). In order to maximize response rate, a cover letter at the front of each questionnaire was hand-signed by the researcher. Additionally, two follow-up e-mails were sent to nonrespondents to encourage them to return the questionnaire or indicate if they needed another copy.

The final response rate for this study was 52.6% of the nationwide sample, which is considered to be an acceptable response rate for this population. As is established practice to account for potential nonresponse error (Lindner, Murphy, & Briers, 2001), early subjects were compared to late subjects on the basis of selected demographics and variables of interest,

including age range, gender, position within Extension, specialization within Extension, issue involvement, and need for cognition.

Early respondents ($n = 514$) included those who responded prior to the first follow-up e-mail. Late respondents ($n = 213$) included those who responded after the first or second follow-up e-mail. The early and late respondents appeared to be similar in regards to age range, gender, position within Extension, and specialization within Extension. Regarding the main independent variables being measured in this study, there were no significant differences between the early and late respondents for the issue involvement indexed scale or the need for cognition scale, as demonstrated by an independent samples t -test.

Results

The general demographics collected in the survey were age, gender, state, current position within Extension, and primary specialization within Extension. Descriptive analysis of the demographic data showed that there were 400 female (55.0%) and 319 male (43.9%) respondents. Eight respondents did not indicate their gender. The mean age of the respondents was 46.2 years, and 39.2% ($n = 278$) of the respondents were in the 41-50 age range.

The classification of respondents as high or low in need for cognition (NFC) was based on their scores on the NFC scale. Respondents were split into high- and low-NFC groups based on a median split. The mean score was 3.60, the median was 3.61, and the mode was 3.61. In order to formulate the median split, those scoring below 3.61 were categorized as low in the need for cognition, while those scoring at or above 3.61 were categorized as high in need for cognition. The median split resulted in 359 high-NFC respondents ($M = 3.94$, $SD = .28$) and 311 low-NFC respondents ($M = 3.22$, $SD = .32$). The rest of the respondents ($n = 57$) did not fully respond to the NFC scale and could not be classified. A median split was indicated for the two groups, as a univariate ANOVA showed a significant difference in the means for each group, $F(1,668) = 938.7$, $p < .001$.

In order to treat issue involvement as an independent variable, two groups were created for high and low issue involvement. A median split was conducted. The median was 3.69, resulting in 332 high-issue-involvement respondents ($M = 3.02$, $SD = .52$) and 317 low-issue-involvement respondents ($M = 4.28$, $SD = .43$). The rest of the respondents ($n = 78$) did not fully respond to the issue involvement scale and could not be classified. A median split was indicated for the two groups, as an ANOVA showed the issue involvement scores for each group to be significantly different, $F(1,647) = 1121.9$, $p < .001$.

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Several hypotheses were made about the independent and intervening effects of message frame, need for cognition, and issue involvement on subjects' attitudes toward internationalizing Extension. An overall means table (Table 1) provides an introductory glimpse at average attitudes toward internationalizing Extension scores, split by low/high need for cognition, low/high issue involvement, and the frame presented.

Table 1. Means (Frequencies) for Attitude Toward Internationalizing Extension

Experimental condition	Low need for cognition		High need for cognition	
	Low issue involvement	High issue involvement	Low issue involvement	High issue involvement
Control	3.29 (50)	4.17 (47)	3.41 (51)	4.21 (46)
Moral norms	3.33 (53)	4.07 (45)	3.25 (48)	4.39 (68)
Mutual benefit	3.37 (54)	4.04 (34)	3.35 (38)	4.43 (64)
Total	3.33 (157)	4.10 (126)	3.34 (137)	4.36 (178)

Note. Means on a semantic differential scale. 1 = strong negative attitude and 5 = strong positive attitude.

It was expected that subjects exposed to the mutual benefit frame who were high in issue involvement and need for cognition ($n = 64$) would have more positive attitudes toward internationalizing Extension than subjects exposed to the moral norms frame who were low in issue involvement and need for cognition ($n = 53$). A factorial ANOVA supported this hypothesis. The ANOVA (Table 2) showed a significant three-way interaction between message frame, issue involvement, and need for cognition on attitudes toward internationalizing Extension, $F(1,598) = 363.94, p < .001$.

Table 2. ANOVA Results for Message Frame, Issue Involvement, and Need for Cognition

Source	<i>df</i>	<i>F</i>	<i>p</i>
Message frame	2	.167	.701
Issue involvement	1	252.63	.000
Need for cognition	1	5.68	.017
Message frame * issue involvement * need for cognition	1	363.94	.000

The ANOVA also showed main effects for issue involvement, $F(1,598) = 252.63$, $p = .000$, and need for cognition, $F(1,598) = 5.68$, $p = .017$. The strong main effect for issue involvement was further investigated, looking at a two-way interaction for issue involvement and message frame.

According to the ELM (Petty & Cacioppo, 1986), individuals for whom an issue holds more personal relevance will possess more enduring attitudes toward the issue. The assumption was made that subjects who were high in issue involvement ($n = 332$) would have more positive attitudes toward internationalizing Extension than subjects who were low in issue involvement ($n = 317$). There was a significant difference between the mean attitudes for the high-involvement group ($M = 4.25$, $SD = .59$) and the low-involvement group ($M = 3.32$, $SD = .79$). A univariate ANOVA supported this hypothesis, $F(1,641) = 285.91$, $p < .001$.

Hypothesis 3 tested whether subjects exposed to the same frame would respond differently based on their level of issue involvement with internationalization. To determine whether the two groups (high- vs. low-involvement subjects) indicated significantly different attitudes toward internationalizing Extension, independent samples *t*-tests were used. The mean for attitude was more positive for high-involvement subjects in the moral norms condition ($p < 0.001$) and the mutual benefit condition ($p < 0.001$). This demonstrates the importance of considering individual differences regarding issue involvement when attempting to influence attitudes about internationalizing Extension.

Conclusions and Implications

This ELM study explored the effect of alternative message frames applied to the same issue on subjects' attitudes toward an internal communication disseminated within a specific organization. To carry out this study, a nationwide sample of county Extension personnel was asked to respond to a randomly assigned framed message that demonstrated the benefits of internationalizing Extension by recounting the international experiences of one Extension specialist. This benefit was presented

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differently in the message, based on inclusion of one of three different message frames.

In this study, different frames did not, by and large, play a significant role in influencing attitudes toward internationalizing Extension. Subjects with high issue involvement indicated significantly more positive attitudes toward internationalizing Extension than did subjects with low issue involvement. Concurrently, subjects with high need for cognition indicated significantly more positive attitudes toward internationalizing Extension than did subjects with low need for cognition. However, individuals exposed to different frames were not significantly different in terms of their attitudes toward internationalizing Extension.

The significant differences for issue involvement and need for cognition reinforce their roles as posited in the ELM. While these individual differences make persuasion complicated, understanding how individuals who differ in terms of issue involvement and need for cognition perceive internally framed messages may help internal organizational communicators become more sophisticated in targeting messages to particular audiences.

Although this study's findings showed that the specific message frames utilized did not significantly affect the attitudes of subjects, the direct connection of internal benefit frames and the ELM is a new and relatively unexplored area of research; only a few studies in the literature have looked at frames within the context of the ELM framework. Additionally, the use of internal frames and the ELM with a representative national sample drawn from the Extension population represents a start to exploring the dynamics of persuasion and message concept development within the context of a public information agency with a long historical tradition and unique organizational characteristics.

Research shows that attitudes are resistant to change. As shown in this study, subjects' expression of their attitudes toward internationalizing Extension was more significantly influenced by their individual differences in issue involvement and need for cognition than by the message frame. Message frames may have the potential to influence attitudes in the ELM. However, the impact measured in this study was based on a single exposure to a message. If subjects were exposed over time and in response to multiple iterations of a message frame, the message frame may have more significant effects on attitudes.

Further research could include exposing subjects to multiple frames and comparing their responses. Additionally, it might be useful to include other types of frames in a similar study. Activating attitudes more directly, such as by first exposing subjects to an international speaker or by having them

take part in a discussion related to internationalization prior to exposure to the message frames, might also affect responses. It could be constructive to compare subjects' responses to internal frames with responses to some external frames, possibly found in the mass media. The results of this study also provoke questions about how to effectively persuade subjects who are low in issue involvement.

It may be possible to increase individuals' level of issue involvement and, in turn, positively impact their attitudes toward internationalizing Extension. Messages may be developed that elevate the level of issue involvement for readers by relating international experiences to their local areas, specializations, or clientele groups. More research is needed to determine the effect of manipulating issue involvement in a similar applied communication context.

In developing more targeted messages, practitioners may want to focus on two key types of messages—one targeted toward individuals who are involved with the issue of internationalization and one for individuals who are not involved with the issue of internationalization. Individuals with high issue involvement demonstrated more positive attitudes toward internationalizing Extension. Messages should be constructed to reinforce these attitudes via the central processing route in the ELM. Increasing the quality of arguments and/or the number of arguments in the message may support this objective. Raising the quality and/or number of arguments in the message increases the likelihood that individuals who are highly motivated to process a message (issue involvement and need for cognition) will process the message via the central processing route in the ELM.

Practitioners may also want to work on developing a series of messages targeted to individuals with low issue involvement. Practitioners may consider using peripheral cues, such as expert or likable sources, to influence attitudes of low-issue-involvement individuals. According to the results of this study, based on the generation of negative topic-relevant thoughts and the less positive attitudes for the low-issue-involvement group, many of these individuals may have strong negative attitudes toward internationalizing Extension. The negative attitudes of this group may be mitigated by constructing messages that address the negative perceptions and schemas held by these individuals. For example, practitioners might write a message describing the international experience of an Extension agent who, prior to the experience, believed internationalizing Extension would increase competition for American farmers, but who felt differently after the experience.

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This study demonstrates the importance of issue involvement on attitudes toward internationalizing Extension, perceptions of message quality, and message elaboration. If Extension communicators can construct messages that increase the issue involvement of readers toward internationalizing Extension, their messages may be more effective in causing Extension audiences to engage in cognitive processing about the benefits of internationalizing Extension.

Based on the results of this study, there is great potential for persuading internal audiences regarding organizational initiatives. The use of message frames could play a significant role in this process. However, it is important to consider individual differences and pre-existing attitudes about concepts and to use this information to segment audiences, creating more targeted messages. There is a need for different messages for different audiences, and internal communicators need to have the resources to develop an understanding of the internal audiences with whom they are communicating. This understanding can be used to craft messages that are more effective in persuading audiences.

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