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"What's in it for me?": Increasing content relevance to enhance students' motivation

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"WHAT'S IN IT FOR ME?": INCREASING CONTENT RELEVANCE TO ENHANCE STUDENTS' MOTIVATION

Ann Bainbridge Frymier and Gary M. Shulman

Frequently, students are skeptical of the significance of the material taught to them in the classroom. A question they often pose to teachers is "What's in it for me?" Making content relevant to students' personal and career goals addresses these concerns. A scale to measure content relevance in the classroom was developed, factor analyzed, and determined to be a valid and reliable unidimensional instrument. Making content relevant to students' personal and career goals was hypothesized to be a factor, in addition to immediacy, that increases students' state motivation. Relevance was found to be associated with state motivation to study. In addition, relevance accounted for a significant amount of variance in state motivation after taking verbal and nonverbal immediacy into consideration.

Apathetic students sitting in the back of the class, interested in getting out of the classroom rather than learning anything in the classroom, can be a familiar source of frustration for instructors. The reasons students lack motivation to attend class and study content are varied and probably include parents, the school system, drugs, teachers, as well as other variables. While there is little any single teacher can do to address these factors, how teachers communicate with their students has been found to impact students' state motivation in the classroom. Verbal and nonverbal immediacy have repeatedly been found to have a positive impact on students' motivation (Christophel, 1990; Richmond, 1990), especially of those students entering the classroom with low or moderate motivation (Frymier, 1993). Though immediacy is an important communication tool for teachers, it does not "do it all." We believe that there are communication behaviors, in addition to immediacy, that can positively influence motivation. Given that immediacy is a piece of the motivation puzzle, a goal of this study is to find yet another piece. A factor that has been hypothesized to impact motivation is "relevance," or what is more commonly called the "What's in it for me?" factor. In the following section we review the literature pertaining to immediacy, relevance, and motivation.

IMMEDIACY

Immediacy was conceptualized by Mehrabian (1971) as behavior that communicates approach. Mehrabian proposed that human beings are drawn to things they like and find desirable. Since it is not always possible or practical to physically move closer to people we like, we communicate this desire for closeness through immediacy behaviors. A more concise definition describes

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immediacy as perceptions of physical and/or psychological closeness (Richmond, Gorham, & McCroskey, 1987). The use of nonverbal immediacy behaviors (Richmond et al., 1987) and verbal immediacy behaviors (Gorham, 1988) by teachers have been found to have a positive impact on students. Specifically, immediacy has been associated with increases in affective learning (Andersen, 1979), perceived cognitive learning (Gorham, 1988; Richmond et al., 1987), recall of information (Kelley & Gorham, 1988), and motivation (Christophel, 1990; Frymier, 1993, 1994; Richmond, 1990).

Teacher immediacy may have a positive impact on students' motivation because it helps to increase attention, build confidence, and improve satisfaction (Frymier, 1994). These are three of four conditions necessary for motivation as listed by Keller (1987b). Initially, an immediate teacher gains students' attention. Immediate teachers move about the classroom, make eye contact, use vocal variety, and address students by name, all of which are attention getting. Use of immediacy behaviors may also help to build confidence in students. An immediate teacher seems to produce liking and positive feeling among students, which creates an environment where success may seem more likely. Students with such a teacher are also likely to be more satisfied with the learning experience than are students with a low immediacy teacher (Frymier, 1994). Students with a high immediacy teacher tend to report that they could not have learned very much more had they had an ideal teacher (Richmond et al., 1987), suggesting satisfaction with the teacher and the course itself. Immediacy behaviors are likely to increase motivation because of their positive impact on (a) attention, (b) confidence, and (c) satisfaction.

The fourth condition explicated by Keller (1987b) is relevance, i.e., the content must be made relevant to the students' interests and goals. It is unlikely that use of immediacy communication behaviors will increase relevance. Immediacy behaviors are behaviors that are relationship oriented. By definition, immediacy impacts the relationship between teacher and student. Relevance as conceptualized by Keller (1983), Sass (1989), and Weaver and Cottrell (1988), and as operationalized in this study, is content oriented. Communicating relevancy contributes to the linkage between content and a student's interests and goals. There is nothing in the conceptualization of relevancy that indicates that the teacher-student relationship will play a role in increasing relevance. For example, it is conceivable that students could be motivated by the enthusiasm and interest of a teacher communicating immediacy and still not recognize the relevance of the material to themselves. By the same token, students may be motivated by the relevancy of the content in spite of having a nonimmediate teacher.

It has been demonstrated that the use of immediacy in the classroom increases students' state motivation to study, although there is still much variance in motivation that remains unexplained. According to Keller (1979, 1983), making the content relevant to students will also increase state motivation. Combining both communication behaviors may increase motivation beyond that expected from either behavior alone. Specifically, teachers who make the content relevant to students' lives or career goals may further increase motivation levels over and above those achieved with the use of only immediacy.

RELEVANCE

Personal relevance, associated with information processing for a number of years in social psychology, has been defined as "the extent to which making a judgement has significant consequences for the self" (Sanbonmatsu, Shavitt, & Sherman, 1991, p. 125). Ego involvement, a concept similar to personal relevance was proposed as a moderating factor in Social Judgement Theory (Sherif & Hoveland, 1961; Sherif, Sherif, & Nebergall, 1965). More recently, personal involvement (sometimes referred to as personal relevance) has been proposed as a moderating factor in the Elaboration Likelihood Model (Petty & Cacioppo, 1984). According to this model, the extent to which a persuasive message is personally relevant determines whether a person will consider and analyze the message (take the central route). If a message is not personally relevant, then a person is expected to respond to some peripheral cue (take the peripheral route) and not spend much cognitive effort on the message (Petty & Cacioppo, 1984).

Relevance has also been defined as a student perception of whether the course instruction/content satisfies personal needs, personal goals, and/or career goals (Keller, 1983). Such perceptions are probably based, at least in part, on students' previous experiences and knowledge. How content is presented is also likely to determine its relevance in students' minds. Weaver and Cottrell (1988) suggest relating content to students' goals, values, and behaviors in order to increase relevance. Sass (1989) suggests the use of explicit explanations and examples to demonstrate the relevance of the content to career goals and experiences. Keller (1987a) suggests that teachers match the content with students' goals and motives, and that they make the content familiar to students. Keller (1987a) also notes that linking the content to familiar experiences/ideas will increase its relevance. Shulman and Luechauer (1993) recommend an interactive approach where instructors involve students in course design to align their goals with those of the instructors.

As mentioned above, Keller (1979, 1983, 1987b) identified relevance as an important factor in the increase of motivation in the classroom. Keller's (1983, 1987b) ARCS (attention, relevance, confidence, satisfaction) model of motivation proposed four necessary conditions for influencing students' motivation to study. According to Keller, an instructor must first gain the students' attention to increase motivation. Getting students' attention has often been considered to be a first step in motivating students to do a particular task (Brophy, 1986, 1987; Corno & Mandinach, 1983; Wlodkowski, 1978). If students do not pay attention, they will not be involved and put forth effort to learn. This is similar to the first step in Monroe's motivated sequence for public speaking (Gronbeck, German, Ehninger, & Monroe, 1992). The second necessary factor is relevance. Relevant tasks/content satisfies students' needs, such as the need for power, the need for achievement, and the need for affiliation (Keller, 1983). This is parallel to the second step in Monroe's motivated sequence which guides speakers preparing speeches. Although intuitive, Monroe did not rely on empirical research to support his recommendations.

Confidence, the third condition for motivation, indicates that students need to have positive expectancies for success in order to be motivated. Confidence is in part dependent on individual characteristics such as locus of control, but

Keller (1983) maintained that instructors can influence students' expectancies for success. Communicating to students what is expected of them and informing them that they can succeed at the task are examples of strategies Keller (1983) proposed for creating positive expectancies in students.

Satisfaction is the last condition necessary for students' motivation. Students need to feel satisfied with the outcomes of their effort in order to continue to be motivated. If a student were to put forth a great amount of effort, and receive an unsatisfactory grade, the student's motivation to pursue that task would be reduced.

Newby (1991) observed beginning teachers and categorized their motivational strategies as either attention getting, making content relevant, confidence building, or satisfaction (operationalized as rewards and punishments). Newby found that though relevance strategies were used least, they were positively associated with time on task by students. This suggests that content relevant communication is not an intuitive behavior (at least in the case of new teachers). Rewards and punishments, used most frequently by teachers, were found to be negatively associated with time on task.

There is little empirical research on the impact of relevance on students even though it has been discussed as a factor (Weaver & Cottrell, 1988), it has been informally observed (Sass, 1989), and it has been applied to field settings (Visser & Keller, 1990). Newby's (1991) research provides the only empirical evidence available for relevance as having an impact on motivation. Newby's study utilized student teachers in elementary classrooms, which may or may not be generalizable to other teachers and classrooms.

Research by Keller and his colleagues focuses on instructional design. Neither relevance nor the other factors identified by Keller have been viewed as communication issues. A primary goal of the present research was to focus on relevance as a communication issue in the classroom. Teacher communication behaviors (e.g., immediacy, affinity-seeking, compliance-gaining strategies) influence the learning environment and directly impact students' motivation and learning (Christophel, 1990; Frymier, 1994; Richmond, 1990). Teachers who increase students' perceptions of the relevance of the content are expected to observe an increase in motivation in the classroom that parallels the positive impact that immediacy has on motivation.

MOTIVATION

Motivation has long been a widely studied construct in educational psychology (e.g., Atkinson & Feather, 1966; Hull, 1943; Lewin, 1951; Murray, 1938). It has been defined and studied in terms of drive reduction (Hill, 1985) and the satisfaction of needs (Maslow, 1962; Weiner, 1972). Generally these theories state that people are motivated to perform tasks that are reinforcing and to engage in behaviors that reduce drives or satisfy needs. Needs for achievement, affection and affiliation are examples of needs or drives that have been thought to influence motivation.

More recently, motivation was defined as existing as a state and as a trait (Brophy, 1986, 1987; Keller, 1983). State motivation refers to the students' motivation toward a particular class, task, or content area at a particular time. State motivation is dependent on the situation and can vary from time to time.

Trait motivation is more enduring and refers to the student's motivation toward studying or learning in general. This is an important distinction because it proposes that teachers can have an impact on students' motivation exhibited in the classroom. Being able to influence a student's state motivation to perform a task (e.g., studying for a statistics test) can have long term benefits for learning.

HYPOTHESES

As noted earlier, the focus of this study is to operationalize relevance as a teacher communication behavior. Based on Keller's ARCS model of motivation, relevance is expected to have a positive impact on state motivation and to have no strong association with trait motivation. We put forth the following hypothesis:

> H_1: A positive relationship exists between students' reports of teacher content relevant communication and students' state motivation to study.

Both relevance and immediacy are expected to contribute to state motivation. Together, immediacy (verbal and nonverbal) and relevance are expected to account for more variance in state motivation than either will alone. Overlap in the contributions of the two variables is expected to be minimal. The following hypothesis was proposed:

> H_2: Reports of teacher relevance and of verbal and nonverbal immediacy will together account for more variance in state motivation to study than immediacy or relevance alone.

Because this is an exploratory study of relevance, we were also interested in examining the frequency of relevance communication behaviors used by teachers. We put forth the following research question:

> RQ: How frequently do instructors use relevancy behaviors?

METHOD

PARTICIPANTS

Participants in this study consisted of 470 undergraduate students (214 males and 255 females, 1 unidentified) from a mid-sized Midwestern public university. Sophomores constituted 56% of the total, freshmen 19%, juniors 11%, and seniors 14%. Participants were asked to report on the teacher they had worked with immediately before their communication class, thus allowing for a variety of teachers and content areas to be represented in the sample. Participants reported on 309 male instructors and 160 female instructors in 41 departments representing all five colleges at the university. Participants were enrolled in one of two basic communication courses (public speaking or interpersonal) and received research credits for participating in the study.

MEASURES

Immediacy. Verbal immediacy was measured with the Verbal Immediacy Scale (Gorham, 1988) consisting of 20 items. Likewise, nonverbal immediacy was measured with the Nonverbal Immediacy Scale (Richmond et al., 1987) consisting of 14 items. Participants were asked to indicate the frequency in which their teachers performed each immediacy behavior (verbal and nonverbal) using a Likert-type scale from zero (never) to four (very often). Previous use of the

immediacy scales have resulted in reliabilities ranging from .80 to .89 (Christophel, 1990; Frymier, 1994). In the present study, verbal immediacy had an alpha reliability of .87, $M = 41.88$, and $SD = 11.07$. Nonverbal immediacy had an alpha reliability of .82, $M = 38.30$, and $SD = 7.60$.

Motivation. Trait motivation and state motivation were operationalized with Richmond's (1990) motivation scale which consists of five, seven-step bipolar adjectives, and is an expansion of Beatty, Forst, and Stewart's (1986) three-item scale. Although the same adjectives were used for both the state and trait measures of motivation, the directions for each scale differed. The state motivation scale questioned students about their feelings toward studying for the class they took immediately before the class in which they were completing the scales. The trait motivation scale asked students how they felt in general about studying for classes. Previous reliability for the trait motivation scale has ranged from .78 to .92 (Frymier, 1993), and for the state motivation scale from .86 to .94 (Frymier, 1993; Richmond, 1990). In the present study, state motivation had an alpha reliability of .87, $M = 21.99$, and $SD = 6.12$ whereas trait motivation had an alpha reliability of .86, $M = 22.21$, and $SD = 5.01$.

Relevance. Relevance was measured with 12 Likert-type items using a 0–4 scale. Items were generated from the literature on relevance (Sass, 1989; Weaver & Cottrell, 1988; Keller, 1983, 1987a, 1987b). Students in one class were also asked for examples of how teachers can make content relevant. Their responses were consistent with the literature. The Likert-type items were carefully chosen to reflect explicit teacher behaviors. Earlier research with the immediacy scale has found that students are accurate in reporting explicit teacher behaviors (Andersen, 1979; Gorham & Zakahi, 1990). By having items that reflect explicit behaviors, one expects the student reports to be less influenced by subjective feelings. We also wish to distinguish between relevancy behaviors performed by teachers and students' perceptions of the relevance of content to their goals. In future research a scale may be devised to measure the degree to which students believe the content is relevant.

The relevance scale was conceptualized as a unidimensional scale. Responses to the relevance scale were subjected to principal factor analysis with iteration prior to factor extraction and rotation. Promax oblique rotation was used to determine the factor structure because of the assumption that factors representing relevance are correlated. The unrotated orthogonal matrix was first examined to determine if a single factor solution was appropriate. A unidimensional factor solution was required to have all items loaded highest on the first factor of the unrotated matrix with all retained items loading at $\geq .50$. Criteria for factor extraction were (a) eigenvalue ≥ 1.00, (b) examination of scree plot for the number of factors, (c) loadings at $\geq .50$ with at least two items loading at $\geq .60$ on each factor, and (d) each factor accounting for at least 5% of the variance.

PRELIMINARY RESULTS

The 12 relevance items were factor analyzed using the above stated criteria. Principal component analysis indicated a one factor solution. Sampling adequacy was indicated by an MSA = .88. Not only did the scree plot indicate one factor, but an eigenvalue of ≥ 1.00 was detected in only one factor. All items loaded on the first factor with loadings of $\geq .50$; the first factor accounted for

39% of the variance. See Table 1 for the factor loadings. The relevance scale had a theoretical range of 0–48 and an obtained range of 1–48. The scale had an alpha reliability of .88, $M = 26.96$, $SD = 8.86$.

CRITERION VALIDITY

To satisfy criterion validity concerns, a single item measure of students' perceived relevancy of the course content was used. The single item read, "I see how the material covered in this class applies to my world." Students responded using the same Likert-type scale that was used for the immediacy and relevance scales. The item had $M = 2.69$ and $SD = 1.08$. The correlation between responses to this single item measure of relevancy and summated responses to the teacher relevance scale was .46 ($p < .001$). This correlation indicates that when students report their instructors as performing relevance behaviors, they perceive the content as applying to themselves and their world, contributing to the validity of the relevance measure. See Table 2 for correlations among student perceptions of relevance with other variables.

RESULTS

The first hypothesis predicted that students who perceive their teachers as making content relevant would exhibit high state motivation. The Pearson Product Moment correlation between teacher relevance and state motivation to study was $r = .46$, $p < .001$, indicating that when students perceived the content as more relevant they were more motivated to study for that course. Teacher relevance was not significantly correlated with trait motivation ($r = -.04$, $p = .37$). This relationship is as expected. Teachers' behavior in the classroom should not have an impact on students' trait-like characteristics given the short term nature of a college course. As expected, teacher relevance was positively associated with both verbal immediacy ($r = .63$, $p < .001$) and nonverbal immediacy ($r = .52$, $p < .001$). Table 2 lists correlations among all variables.

TABLE 1
FACTOR LOADINGS AND ITEM MEANS FOR RELEVANCE SCALE

Item	Loading	Mean*	SD
1. Uses examples to make the content relevant to me.	.73	2.84	.98
2. Provides explanations that make the content relevant to me.	.76	2.74	.97
3. Uses exercises or explanations that demonstrate the importance of the content.	.55	2.66	1.14
4. Explicitly states how the material relates to my career goals or to my life in general.	.68	1.93	1.28
5. Links content to other areas of content.	.57	2.45	.95
6. Asks me to apply content to my own interests.	.68	1.74	1.19
7. Gives assignments that involve the application of the content to my career interests.	.54	1.47	1.34
8. Helps me to understand the importance of the content.	.61	2.59	.95
9. Uses own experiences to introduce or demonstrate a concept.	.62	2.24	1.22
10. Uses student experiences to demonstrate or introduce a concept.	.67	1.74	1.14
11. Uses discussion to help me understand the relevance of the topic.	.54	2.31	1.21
12. Uses current events when teaching a topic.	.52	2.26	1.22

*Each item was measured using a scale of 0 (never) to 4 (very often).

TABLE 2
CORRELATIONS AMONG VARIABLES

	1	2	3	4	5	6
1. Verbal Immediacy	—					
2. Nonverbal Immediacy	.47**	—				
3. Teacher Relevance	.63**	.52**	—			
4. Trait Motivation	−.03	−.10*	−.04	—		
5. State Motivation	.47**	.34**	.46**	.18**	—	
6. Student Relevance	.28**	.21**	.46**	.04	.35**	—

*p < .05. **p < .001.

The second hypothesis predicted that relevance and immediacy would to-gether account for more variance in motivation than either variable would alone. To test this hypothesis, hierarchical multiple regression was used, the calculated semipartial regression coefficients being used to determine not only the amount of unique variance accounted for by each predictor variable but also the amount of shared variance. If the null of the hypothesis is correct, relevance would not account for any unique variance and would be statistically nonsignifi-cant in the regression equation. If relevance and immediacy each account for unique variances in state motivation, this would indicate that relevance and immediacy together account for more variance in state motivation than each would individually.

State motivation served as the criterion variable, with nonverbal immediacy entering the equation first, verbal immediacy second, and relevance third. The overall model was significant, $F(3/469) = 56.11, p < .001$, accounting for 27% of the variance in motivation. Relevance accounted for 3% unique variance [$F(1/469) = 18.42, p < .001$, beta weight = .16 (standardized = .23)] in motivation. Verbal immediacy accounted for 4% unique variance [$F(1/469) = 27.55, p < .001$, beta weight = .15 (standardized = .28)], but nonverbal immediacy did not account for a significant amount of unique variance [$F(1/469) = 3.65, p = .06$, beta weight = .07 (standardized = .09)]. The intercept for the regres-sion equation was 8.46. Verbal immediacy, nonverbal immediacy, and relevance shared 19% of the variance in motivation.

To respond to the research question posed, we calculated the average score for each of the 12 relevance items. The means and standard deviations for each are given in Table 1. Each item had a range of 0–4 indicating variance in frequency of behaviors by instructors. The item means ranged from 1.47 to 2.84 with most means lying just below the midpoint of 2.50. Based on these student reports, it appears that instructors do enact behaviors to make content relevant to their students but not frequently.

DISCUSSION

One of the objectives of the study was to develop a scale that could be used to measure the degree to which teachers made content relevant to students. The relevance scale was found to be a valid unidimensional scale with good reliabil-ity. A full range of relevance scores were obtained with the mean (26.96) being close to the theoretical mid-point of 24. With a standard deviation of almost 9, there appeared to be variation in the degree to which teachers are perceived by

their students as performing these relevancy behaviors, suggesting differences in the ways teachers communicate content relevancy.

The first hypothesis predicting that relevance would be associated with state motivation to study was supported. A positive, moderate sized correlation (.46) between state motivation and teacher relevance was found. Keller's ARCS model proposes that relevance is a factor that results in motivation. Although the present study used a cross-sectional design where causal relationships are difficult to isolate, we do have reason to believe that the teachers' efforts at making content relevant probably led to increases in motivation. One may argue that motivated students may be more likely than unmotivated students to notice, and therefore report teacher efforts in making content relevant. If high levels of motivation lead to greater reporting of relevance, then we would expect both trait motivation and state motivation to be significantly associated with relevance (i.e., the type of motivation would not matter). Examination of the correlations in Table 2 indicates a moderate, positive correlation between state motivation and teacher relevance (.46), and a nonsignificant, near zero correlation between trait motivation and teacher relevance. This result does not support the argument that motivated students are more likely to notice and therefore report their teachers' efforts at making content relevant. It does support the argument, however, that making the content relevant leads to increases in students' state motivation to study. Behavior such as relevance on the teacher's part would be expected to influence situational variables such as state motivation, but not trait-like characteristics such as trait motivation.

The differential impact of the relevance measure on state and trait motivation also contributes to the construct validity of the measure. Construct validity is demonstrated when a measure performs as predicted from theory (Kerlinger, 1986). Motivational theory predicts that situational variables such as relevancy behaviors will influence state motivation but will have little, if any, impact on trait motivation (Brophy, 1987). The construct validity of the relevance measure is also demonstrated by the outcome of the second hypothesis. Although this hypothesis was not as strongly supported as the first hypothesis was, relevance did account for a significant portion of unique variance in motivation, indicating that relevance is distinct from verbal and nonverbal immediacy. Additional research is needed to further establish the uniqueness of the relevance measure.

The second hypothesis predicted that relevance would account for unique variance in motivation when verbal and nonverbal immediacy were included in the equation. The hypothesis was supported, with relevance accounting for a small but significant portion of unique variance in state motivation. Nonverbal immediacy appeared to play a small role compared with those of verbal immediacy and relevance, accounting for no significant unique variance in state motivation despite the significant correlation it has with state motivation. More variance was shared by these three variables than was expected, indicating that immediacy and relevance may not be as independent as hypothesized. Relevance and immediacy are conceptually different and there are no grounds for believing that one influences the other. While relevance has been defined by Keller (1983, p. 385) as referring to "whether the learner perceives the instruction to satisfy personal needs or to help achieve personal goals," immediacy has

been defined as perceived physical or psychological closeness (Richmond et al., 1987).

The items making up the relevance scale (see Table 1) were designed to measure teachers' efforts at making connections between course content and students' personal goals/needs and career goals. Some of these behaviors may best be carried out when immediacy is also used. For example, it is difficult to imagine class discussions that help make content relevant (item #11) with low levels of immediacy. Immediacy has also been described as an attention getting device (Frymier, 1994; Kelley & Gorham, 1988). Teachers who are successful at making content relevant for students may first be using immediacy to gain students' attention. This explains why immediacy and relevance appear to overlap although they are operationalized differently. It also explains the redundancy of nonverbal immediacy. Predictor variables which have a zero partial regression coefficient often influence the criterion variable indirectly. Immediacy may be a necessary condition for relevance. Nonimmediate teachers' efforts to make content relevant may go unnoticed by students because they are not paying attention.

With this study we sought to explore the concept of relevance and how it related to motivation to study. The results suggest that relevance is an important instructional technique. Further research may explore more specifically how teachers increase perceptions of relevance through communication. The items included in the relevance scale consist of general categories of communication. How do teachers use specific personal experiences to increase perceptions of relevance? Does a teacher have to be immediate in order for students to perceive the relevance of the content? Relevance, as well as other communication behaviors, may also impact other types of motivation such as state motivation to participate in class discussions. Such questions need to be examined in future research.

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