

A MEASURE OF THE RELATIONSHIP BETWEEN INVOLVEMENT AND
BEHAVIORAL INTENTIONS

by

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ABSTRACT

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Marketing

(ABSTRACT)

Because involvement is believed to influence or determine individuals' behavioral intentions, the objective of this research was to examine the relationship between involvement and behavioral intentions. But because there is confusion over what precisely involvement is, personal relevance, which is identified by most consumer behaviorists and social psychologists as an important dimension of the involvement construct, served as its surrogate to achieve the objective of this research.

The research method used was a mail questionnaire. Virginia Tech engineering alumni residing in the state of Virginia and its vicinity were asked a series of personal

relevance questions, which were then followed by two questions regarding their intentions toward enrolling in the Virginia Cooperative Graduate Engineering Program.

In this research, correlation analyses of the answers to the two different series of questions were performed to identify the strength of the relationship between personal relevance and behavioral intentions. The results from the correlation analyses provide empirical evidence to support that there exists a positive linear relationship between involvement and behavioral intentions.

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Chapter I
INTRODUCTION

OVERVIEW

"Involvement" has increasingly played an important role in the area of consumer behavior. Speculation in the past few years was that the involvement concept might become one of the most important areas in consumer research (Mitchell 1979). Based on the number of papers written on the subject in recent years, researchers' growing interest in and perception of involvement as an important mediator of consumer behavior has been increasing. Consumer behaviorists and marketers have extensively examined the notion of involvement, which they believe influences or determines consumers' behavioral intentions, which in turn affect consumers' final purchasing decisions.

However, involvement has not quite lived up to researchers' expectations. In spite of the amount of research done in the area of involvement and its popularity, the exact functioning of consumer involvement is yet to be understood, and a unanimously accepted definition is non-existent. There is still confusion over precisely what involvement is, and involvement remains an elusive concept.

Nevertheless, a majority of researchers do identify a critical dimension within this multi-dimensional construct as being personal relevance. Although researchers have examined the involvement construct from different perspectives, each research perspective, as will be shown in Chapter II, at least implicitly, cited personal relevance as a central aspect of involvement. In this study, personal relevance is used as the surrogate for involvement.

Involvement and Personal Relevance

Before using personal relevance as the surrogate for involvement, it is important to look at how involvement and personal relevance are conceptualized and viewed in this study.

Involvement is viewed as the degree to which an individual perceives the importance or interest (e.g., benefits) evoked by a stimulus (e.g., an object or a situation) in attaining his or her personal goals; it is also viewed as a state of motivation or arousal (Rothschild 1984; Antil 1984).

Personal relevance is viewed similarly. It is the perceived relationship between a stimulus and an individual's self-schema (Antil 1984). Theoretically, an individual's self-schema or self-system represents a hypothetical cogni-

tive structure that consists of an individual's knowledge of self in terms of his or her basic values and beliefs (Markus and Sentis 1982; Markus and Nurius 1985; Rogers 1981) or in terms of his or her value and goal hierarchies, and self-perceptions (Greenwald and Pratkanis 1984). Additionally, personal relevance can be defined as the cognitive relationships between salient aspects of one's self-schema and salient product attributes (Gutman 1982; Olson and Reynolds 1982). Therefore, all stored knowledge should be personally relevant, except the degree of relevance varies. Personal relevance is clearly a fundamental dimension within the construct of involvement (Zaichowsky 1985).

RESEARCH OBJECTIVES

Rothschild (1984) criticized that there had been too many abstract ideas presented in past involvement research with too few data sets to support them; perhaps the data collected in this present study will remedy part of the discrepancy.

This study will not attempt to define involvement because it is essentially an obscure and multi-faceted phenomenon. Because involvement is believed to influence or determine individuals' behavioral intentions, the purpose of this study is to examine the relationship between involve-

ment and behavioral intentions. As an important dimension of the involvement construct, personal relevance is used as the surrogate for involvement here; its relationship with individuals' behavioral intentions will reflect the relationship between involvement and individuals' behavioral intentions.

To examine the above relationship, an empirical examination of the relationship between personal relevance and behavioral intentions is conducted. The empirical aspect of this research is presented via a Professional Education Survey (see Appendix A) of Virginia Tech engineering alumni residing in the state of Virginia and its vicinity (Washington D.C. and Southern Maryland) regarding the graduate televised program offered by the university. This survey was conducted in August, 1986. Details of how the survey is used to investigate the relationship between involvement and behavioral intentions will be described in Chapter III.

ORGANIZATION OF THE THESIS

This thesis consists of five chapters.

Chapter I provides an introduction to the concepts of involvement and personal relevance and states the objective of the study.

Chapter II presents a review of the literature that outlines different research streams in the area of involvement.

Chapter III outlines the theoretical hypothesis and the methodological procedures of this empirical study.

Chapter IV describes the data and observations of the study, and then provides a discussion of the results and analyses.

Chapter V depicts the findings of this research, and then concludes with final remarks concerning the limitations and implications of the research as well as suggestions for further research.

Chapter II
REVIEW OF THE LITERATURE

CHAPTER OVERVIEW

The purpose of this chapter is to examine various schools of thought in the area of involvement, and then to identify personal relevance as the fundamental dimension of involvement.

Despite their great interest in the area of involvement, very few researchers can come to agreement on a general definition. Some consider involvement as a state (e.g., Mitchell 1981; Antil 1982; Cohen 1983; Burkrant and Sawyer 1983); some claim that it is a process (e.g., Engel and Blackwell 1982; Engel, Warshaw, and Kinnear 1983; Greenwald and Leavitt 1984; Houston and Rothschild 1979; Krugman 1965, 1967; Petty and Cacioppo 1981; Ray 1979; Smith and Swinyard 1980); and social psychologists relate to it as one's ego-system (e.g., Sherif and Cantril 1947; Sherif and Hovland 1961; Sherif and Sherif 1967). As long as involvement is viewed in different perspectives, it is inevitable that its definition will remain unclear.

By and large, the involvement literature can be categorized into three different schools of thought: (1) social

psychology, (2) viewing involvement as a state, and (3) viewing involvement as a process. Each of these research streams will be examined to identify personal relevance as an important dimension within the construct of involvement.

SOCIAL PSYCHOLOGY

The concept of involvement originated in social psychology. This school of thought represents mainly the work of the Sherifs and their colleagues (Sherif and Cantril 1947; Sherif and Hovland 1961; Sherif, Sherif, and Nebergall 1965; Sherif and Sherif 1967).

Throughout the social psychological literature, involvement appeared as an attitudinal issue (Houston and Rothschild 1978). Involvement was associated with the ego, a concept which this research stream understood as a constellation of attitudes that was concerned with each individual's social and personal values, self-perceptions, and beliefs. This constellation of attitudes was viewed as positions held by individuals with respect to certain social objects or issues. Sherif, Sherif, and Nebergall's Social Judgment Theory (1965) categorized these attitudes as latitude of acceptance, latitude of rejection, and latitude of non-committance.

Lastovicka and Gardner (1979) viewed ego-involvement as an integral part of dictating the relative sizes of the above attitudinal categories. The degree to which an individual was ego-involved with a social issue was believed to affect his or her predisposition to either favorably or unfavorably respond to the social issue in question. The relative sizes of individuals' latitudes of acceptance, rejection, and non-committance were dependent upon the degree of his or her ego-involvement with the issue. As Eagly (1967) pointed out, high ego-involvement with an issue characterized the activation of an attitude continuum with a relatively narrow latitude of acceptance, a broad latitude of rejection, and a latitude of non-committance that approached zero. On the other hand, low ego-involvement with an issue characterized the activation of an attitude continuum with a broad latitude of acceptance, a relatively narrower latitude of rejection, and a broad latitude of non-committance.

Operationally, social psychologists looked at the relative size of an individual's latitude of rejection as an indication of the degree of his or her ego-involvement with an issue. The commitment to one's attitude position increased positively with involvement or personal relevance, which implied that one would be less likely to alter his or her attitude position when he or she became more involved with an

object or issue, or when an object or issue became more personally relevant to him or her.

Summary and Significance of Social Psychologists' View

In short, social psychologists viewed involvement as a pre-existing state or predisposition to respond to a specific social stimulus. Persuasion and the effect of involvement on attitudinal change were of primary importance, especially when one was confronted with counter-attitudinal information. Involvement was defined in terms of the personal relevance one perceived in a stimulus object or issue. The degree of one's ego-involvement was believed to be dictated by the degree to which one perceived a stimulus as psychologically associated with his or her self-schema.

The significance of the social psychologists' view of involvement is that they have built the foundation (associating involvement with one's ego) to conceptualize the notion. This foundation has become very influential to consumer researchers and marketers in better conceptualizing involvement, and perhaps upon this foundation a general definition of involvement can be established. By associating involvement and personal relevance with the ego, one can make the connection between the two constructs.

VIEWING INVOLVEMENT AS A STATE

This research stream looks at involvement as a mental state that is instrumental in information processing operations and processing outcomes. It represents mainly the work of Mitchell (1979, 1981), Cohen (1983), and Burkrant and Sawyer (1983).

Consumer researchers' views on involvement in this research stream stemmed from the social psychologists' conceptualization of ego-involvement. Although this research stream and the social psychologists viewed involvement similarly, there was a subtle difference. Whereas the consumer researchers in this research stream emphasized involvement as an actual state of activation aroused by one's ego-involvement (i.e., his or her predisposition to respond to a specific set of stimuli) and information perceived from the environment, the social psychologists merely viewed involvement as a potential state of activation.

Mitchell's Conceptual Model of Involvement

Using his conceptual model of involvement (Figure 1), Mitchell (1979, 1981) viewed involvement as a "state," which was reflected in this definition of involvement:

"Involvement is an internal state of an individual with both intensity and directional properties. As such, it is one of many different variables that may affect the information acquisition process." (1981, p.25)

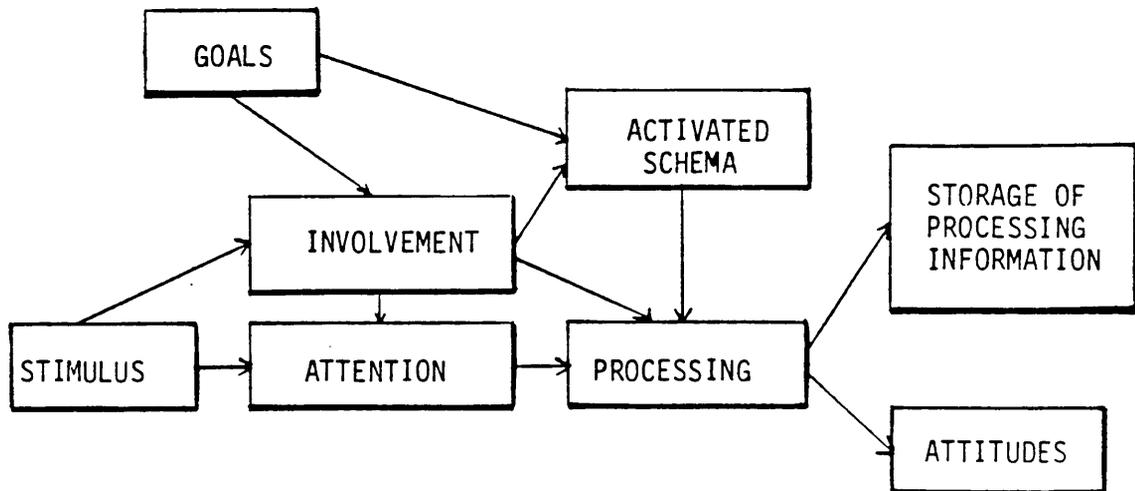


Figure 1: Mitchell's Conceptual Model of Involvement

As clearly indicated in his definition of involvement, Mitchell positioned involvement as a state of arousal containing both intensity and directional properties. By intensity, he referred to the level of involvement; by direction, he referred to the focus on which processing energy was expended.

Mitchell considered involvement as a function of one's goals and stimulus information. This holds whenever one is so involved in a stimulus that he or she perceives it as goal related or personally relevant. So in Mitchell's model, the internal knowledge or goals, along with external information or perceived stimuli, portrayed an internal state of involvement.

As intended by Mitchell, involvement was presented in his model as a motivational or an arousal state that served as a vehicle to information processing operations, and thus influenced information processing operations and outputs. Further, involvement, as an internal state of an individual, affected one's (i) level of attentions, (ii) activation of relevant knowledge structures, and (iii) subsequent processing operations.

The central view that Mitchell offered was that the activated level of involvement was taken as a function of the goal relatedness of a perceived stimulus. Hence, it follows

that goal relatedness or personal relevance is an important determinant of one's level of involvement with a stimulus.

Cohen's View on Involvement

Cohen basically looked at involvement the same way that Mitchell did. He agreed that involvement was fundamentally a state of activation, and that it was a function of situational stimulus information and one's internal predisposition to respond to a specific set of stimuli. Additionally, he pointed out that this state of activation was both directive and selective. In other words, when one was considered to be highly involved, his or her level of activation as well as her attention was viewed as focused inward. Cohen believed that involvement was closely related to attention; he felt that the two concepts could be considered congruent except that involvement was supposed to encompass certain properties that had effects other than on attention.

While Cohen realized that the social psychologists positioned ego-involvement as a potential activated state that resulted from one's predisposition to respond to a specific set of stimuli, he added that involvement should rather be viewed as an actual activated state.

In short, Cohen's central view was that involvement was an actual activated state that resulted from the personal

relevance of a stimulus. He suggested that this actual activated state could be viewed similarly as one's level of attention, and that measures of attention (e.g., relative capacity use) could actually be used as a measure of involvement.

Burkrant and Sawyer's View on Involvement

Burkrant and Sawyer (1983) also saw involvement as a state. More specifically, Burkrant and Sawyer viewed involvement as a state of information processing intensity, or a level of cognitive effort. By processing intensity, they meant the level of attention that was determined by one's information processing needs. As a mediating variable to one's level of involvement, processing needs were taken as the crucial aspect of involvement, and they were defined as the personal importance (personal relevance) to an individual of understanding the meaning of the message. To what degree one needed the processing of information depended upon his or her personal relevance of correctly interpreting the meaning or content of a communication.

Burkrant and Sawyer agreed with Cohen that involvement was closely related to attention, and that it could be measured the same way attention was measured. They felt that involvement could be measured in terms of relative capacity

use or cognitive effort. For instance, they accepted the "secondary task Paradigm" experiment, commonly practiced by psychologists, to measure one's level of attention as an indicator of involvement. In this experiment, the subject was asked to perform two unrelated tasks from which his or her used relative capacity was measured. The first task presented to the subject was called the primary task, which was usually a word encoding task. Then a secondary task was abruptly presented during the primary task when a tone was randomly sounded, and the subject should then respond by pressing an electronic button. The conductor of the experiment would then record the response latencies to this secondary task as an indicator of the relative capacity expended to undertake the primary task of interest.

While Burkrant and Sawyer agreed with Cohen that involvement should be viewed as an activated state characterized by the level of one's attention to a stimulus, they deviated from Mitchell's view that attention was a product of involvement; rather, they essentially equated involvement to attention. On the whole, they viewed involvement as a motivational state whose intensity was determined by one's urge to understand the meaning of a stimulus.

Summary of "Viewing Involvement as a State"

It is apparent that Mitchell, Cohen, and Burkrant and Sawyer all viewed involvement as a state; more specifically, a psychological, mental, and motivational state that aroused information processing operations. Because they perceived the relationship between a stimulus and one's self-schema (i.e., the definition of personal relevance) as the fundamental determinant of one's level of involvement, personal relevance was actually being positioned as a critical dimension within the construct of involvement.

Although the overall view on and conceptualization of involvement between the social psychologists and this research stream are quite similar, a difference exists in that the latter viewed involvement as more than just a pre-existing state to respond to a specific set of stimuli. They viewed involvement as a motivational, mental, and psychological state wherein intensity and directional properties were determined by the personal relevance of a perceived stimulus in certain situations.

VIEWING INVOLVEMENT AS A PROCESS

This school of thought views involvement as cognitive processes in which individuals engage, and has been frequently studied by both social psychologists and consumer behaviorists in recent years. It is pioneered by the work of Krugman, and followed by some other researchers in social psychology and consumer behavior (Krugman 1965, 1967; Engel and Blackwell 1982; Engel, Warshaw, and Kinnear 1983; Greenwald and Leavitt 1984; Houston and Rothschild 1978; Petty and Cacioppo 1981; and Ray 1973, 1979).

Krugman's View on Involvement

Through his study of advertising, Krugman (1967) recognized that personal involvement could be measured by the number of one's connections, references, and conscious bridging experiences made between the content of a persuasive stimulus such as an advertisement and the content of his or her own life. He went on to define personal involvement as the type of conscious verbal elaboration resulting from a stimulus.

Krugman used what he called active and passive information processing to characterize different levels of personal involvement. A high level of personal involvement, characterized by active information processing, was explicitly em-

phasized by Krugman (1965) not to be confused with attention, interest, or excitement. Instead, it should be considered as the number of conscious bridging experiences that a viewer had made between his or her own life and a stimulus. When one was highly involved, as Krugman put it, his or her active response to a stimulus should immediately act to alter perceptions and beliefs. Conversely, when one was involved only at a low level or not involved at all with a stimulus, it meant that he or she could recall very few or none of the conscious personal bridging experiences (i.e., passive information processing). The lower one's involvement was, the less conscious he or she would be to a message (i.e., the stimulus) and the less urge he or she would feel to evaluate it.

However, Krugman realized that this low level of information processing would gradually shift one's cognitive and perceptual structure once overwhelming repetition was performed, even though television advertisements might not directly change attitude. He believed, consequently, that attitude change would result. For example, consumers may not be able to recall the brand name or idea of a product, but the next time they are in a purchasing situation, they will recollect the specific brand name and purchase the product, indicating that attitude is subsequently altered as a result of experience with the product.

By and large, Krugman determined the degree of personal involvement with a stimulus such as an advertisement by looking at various types of information processing that he proposed. He saw the number of personal connections, or personal references, or conscious bridging experiences about a stimulus one could relate to as indicative of the degree or level of one's involvement.

Krugman's view on involvement has contributed valuable insights to researchers interested in the area of involvement, especially the level (i.e., high and low involvement) of involvement. His work in this area has been widely referred to by both social psychologists and consumer behaviorists.

Ray's Learning Hierarchies

Building on Krugman's proposal on active and passive information processing and focusing on the effects of involvement on consumer learning, Ray (1973) defined involvement in terms of the sequence of learning stages through which consumers passed when considering a product.

Ray (1979; 1982, p.182) stated that his learning stages contained three levels: cognitive (attention, awareness, comprehension, learning, and belief), affective (interest, feeling, evaluation, conviction, and yielding), and conative

(intention, trial, action, adoption, and behavior) components. These components indicated how consumers' overall attitude structure towards a product could be influenced. He pictured these stages as occurring sequentially, not simultaneously.

Ray used the sequence in which consumers went through these learning stages to distinguish between high and low involvement. For instance, when consumers are highly involved with a product, they exhibit active information processing, and go through the learning hierarchy (i.e., the cognitive-affective-conative sequence). First, consumers learn about the product and form their own beliefs, then they engage in active information search to discover more about the product, and finally, they advance to the behavioral stage and purchase the product.

Conversely, when consumers are only slightly involved with a product, they exhibit relatively less active information processing, and go through the low-involvement hierarchy (i.e., the cognitive-conative-affective sequence). Initially, consumers will try to learn a little about a product, then they will purchase the product before they make any evaluation of it.

Petty and Cacioppo's View on Involvement

Petty and Cacioppo (1981) believed that individuals engaged in various types of information processing, determined by the degree to which the stimulus was personally relevant. Their primary concern was the impact involvement had on attitude change and persuasion.

Under high involvement situations, Petty and Cacioppo (1981, p.20) stated that the persuasive message (i.e., the stimulus) under consideration would have a high degree of personal relevance to viewers. On the other hand, under low involvement situations, the personal relevance of the message would become rather trivial.

Hence, viewers are motivated to accommodate the increased personal relevance in a message by expending more information processing or cognitive energy. By the same token, they are less willing to devote much cognitive energy to a message with little personal relevance.

Engel and Blackwell's View on Involvement

Engel and Blackwell (1982) have studied the high and low involvement decision processes. They defined high involvement as the activation of extended problem-solving behavior when the act of purchase or consumption was seen by the decision maker as having high personal importance or

relevance. Engel, Warshaw, and Kinnear (1983) stated that personal relevance was a direct sign that the purchase was important to a consumer in terms of his or her basic goals, values, and self-schema. The Extended Problem-Solving Decision Process is pictorially shown in Figure 2 (Engel and Blackwell 1982, p.33).

Because consumers want to make the right choice, they actively search for information to use. Then the collected information will be processed and stored in memory so that it can later be used for alternative evaluation. Typically, a few product attributes are evaluated and weighed to determine whether or not expected profits are offered. The result is development of beliefs about each alternative, an attitude for or against the purchase of each, and purchase intentions. In sum, thinking simply leads to feeling (i.e., behavioral intention) and feeling leads to action. Figure 2 indicates that the model consists of five stages: problem recognition, search, alternative evaluation, choice, and outcomes.

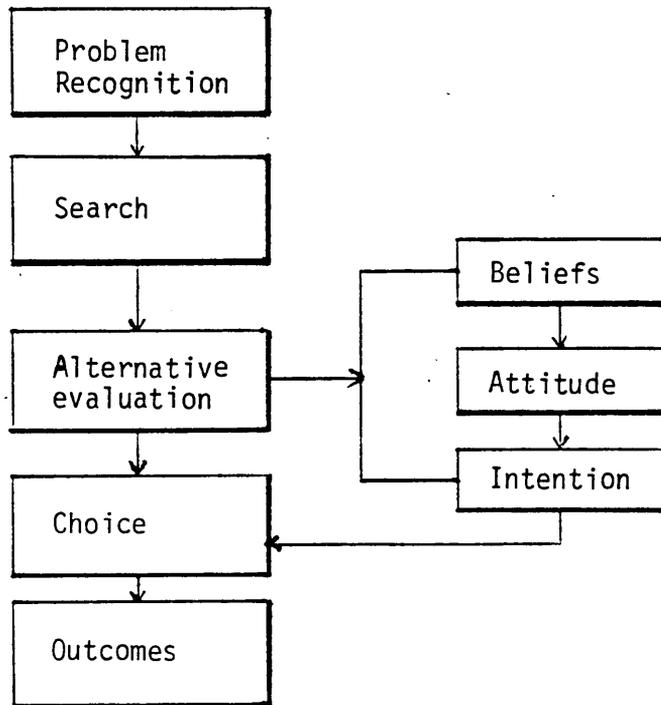


Figure 2: Engel and Blackwell's Model of the Extended Problem-Solving Decision Process

Based on the premise of the model of Extended Problem-Solving Decision Process, Engel and Blackwell completed a model for the High-Involvement Decision Process and a model for the Low-Involvement Decision Process, as shown in Figures 3 and 4 (Engel, Warshaw, and Kinnear 1983, p.70, 117).

The differences between the two models are explicitly depicted in the two figures---the information and decision processing in the low-involvement model are much less complex when juxtaposed with the one in the high-involvement model. In the low-involvement model, information processing consists of only four levels (Exposure, Attention, Comprehension, and Retention) as opposed to five levels (Exposure, Attention, Comprehension, Yielding/Acceptance, and Retention) in the high-involvement model. Additionally, in the low-involvement model, the decision process consists of only three levels (Problem recognition, Choice, and Alternative recognition); it lacks the "Search" process for additional information and the "Outcomes" process for evaluating the performance of the selected choice the high-involvement model has.

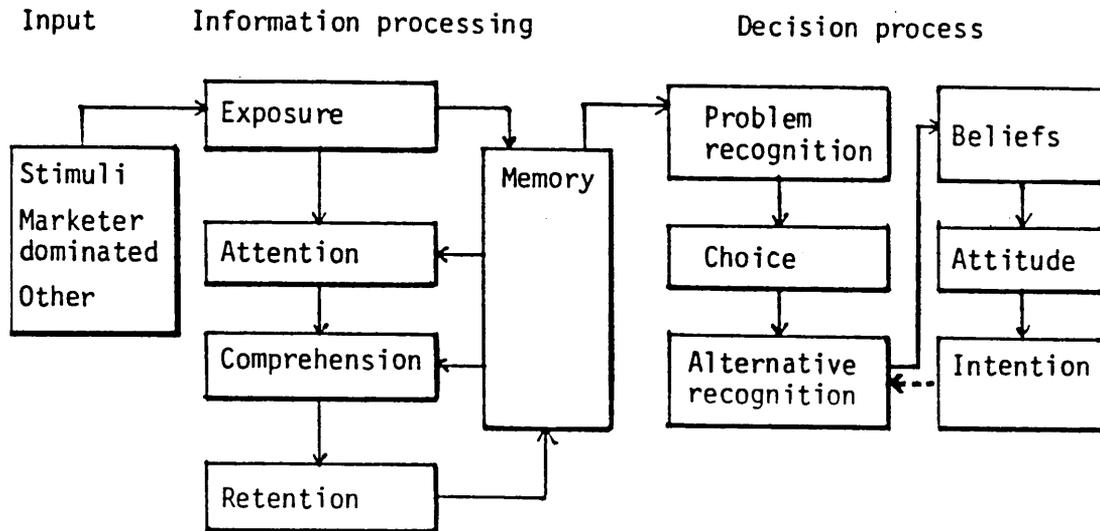
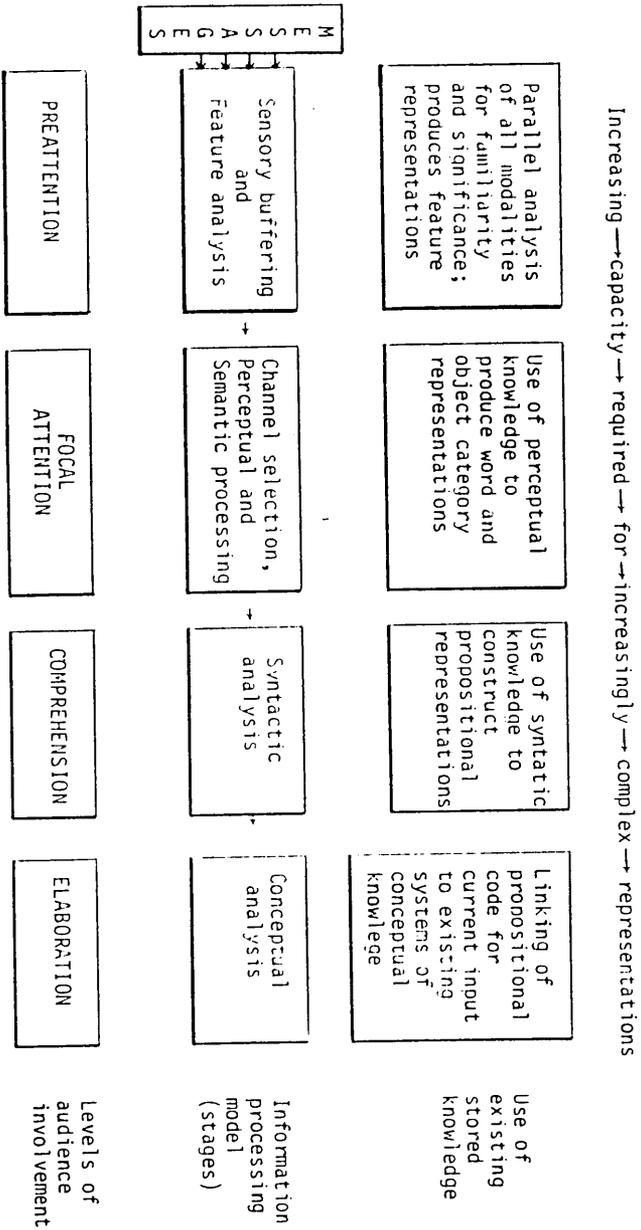


Figure 4: The Low-Involvement Decision Process

Greenwald and Leavitt's View on Involvement

With an information processing model, Greenwald and Leavitt viewed involvement as having four levels: pre-attention, focal attention, comprehension, and elaboration, as shown in Figure 5 (Greenwald and Leavitt 1984, p.585).

They believed that this framework was comprehensive to the extent that it could be applied to most theories of involvement in consumer behavior. For example, they compared the pre-attentive and focal levels to Krugman's low personal involvement (i.e., passive information processing), and the comprehension and elaborative levels to Krugman's high personal involvement (i.e., active information processing). In this model, each level of involvement was characterized by increasing levels of attention, increased capacity allocation, and increased controlled processing.



NOTE: This figure indicates relationships to sequential stages of information processing and use of increasingly complex representational systems in the four levels of involvement.

Figure 5: Four Levels of Involvement

Houston and Rothschild's View on Involvement

Houston and Rothschild (1979) talked about three different types of involvement: situational involvement, enduring involvement, and response involvement. They also viewed involvement as a process.

They defined the three different types of involvement as:

"Situational involvement is the ability of a situation to elicit from individuals' concern for their behavior in that situation." (1979, p.184)

"Enduring involvement is the reflection of the strength of the preexisting relationship between an individual and the situation in which behavior will occur." (1979, p.184)

"Response involvement is the complexity or extensiveness of cognitive and behavioral processes characterizing the overall consumer commitment to the brands." (1979, p.185)

Houston and Rothschild actually viewed involvement as more than just a process. They concluded that response involvement was influenced by the integrated effect of situational involvement and enduring involvement.

On the whole, Houston and Rothschild's model touched on all three research streams presented in this chapter. For instance, enduring involvement reflects the social psychologists' view on involvement; it can basically be referred to as a predisposition or potential to respond to situational

stimuli, and that it is seen as a factor intrinsic to the individual. Moreover, a parallel can be drawn between Houston and Rothschild's perspective and "viewing involvement as a state"; under both perspectives, the combination of situational involvement and enduring involvement are seen as a state of activation that influences subsequent information processing operations (i.e., response involvement).

Summary of "Viewing Involvement as a Process"

This research stream is similar to the previous two in that they all determined and differentiated one's level (i.e., high and low) of involvement by examining the cognitive effort he or she expended on processing information. For example, comparison can be made between Krugman's active and passive information processing, Ray's learning hierarchies, and Greenwald and Leavitt's four levels of involvement. Houston and Rothschild's definition of response involvement as the complexity of processing operations essentially encompasses all of the mentioned processing perspectives. Despite the similarity between this research stream and the previous two, a critical difference exists in that the previous two viewed involvement as a predisposition to respond or as a state that affected processing operations.

INTEGRATION

In this chapter, three major research streams (i.e., social psychology, viewing involvement as a state, and viewing involvement as a process) have been presented.

The first research stream (i.e., social psychology) viewed involvement as a potential pre-existing state or predisposition to respond to a specific social stimulus, and it defined involvement in terms of the personal relevance one perceives in a stimulus object or issue.

The second research stream (i.e., involvement as a state) viewed involvement as an actual pre-existing state or predisposition to respond to a specific set of stimuli. It perceived personal importance or personal relevance as the fundamental determinant of one's level of involvement.

The third research stream viewed involvement as a process where the degree of personal importance or personal relevance dictated the level of involvement.

In sum, these research streams detect not only how important involvement is to humans' comprehension processes, but also how crucial a dimension personal importance or personal relevance is within the involvement construct. They all suggest that involvement should be viewed as one's self-relatedness of his or her goals, values, perceptions, and stored knowledge. Overall, each research stream pro-

vides a better understanding of involvement to those who are interested in the construct.

Although it is quite clear that nobody can prove any of these research streams is more important than the others, in this present study, the way involvement is viewed leans toward the second research stream (i.e., viewing involvement as a state) because the first research stream's (i.e., social psychology) emphasis on strictly the relation of involvement with one's self-schema poses too narrow a view, and conversely, the third research stream's (i.e., viewing involvement as a process) exploration of involvement in terms of different processing operations (which encompass a number of endogenous factors such as personal experience and ability and exogenous factors such as message quality and communication formats) represents simply too broad a view. Hence, involvement is viewed here as an arousal state where an individual perceives the importance or interest evoked by a stimulus such as an object or a situation in attaining his or her goals, and personal relevance is viewed as the perceived relationship between a stimulus and an individual's self-schema.

The next chapter, Chapter III, details the methodological techniques and statistical tools utilized in this study to examine the relationship between involvement and behavioral intentions.

Chapter III

METHODOLOGY

CHAPTER OVERVIEW

Throughout the involvement literature reviewed in Chapter II, the consumer behaviorists and social psychologists suggest that personal relevance is an important dimension of the involvement construct. Therefore, it is justified to use personal relevance as the surrogate for involvement to examine the relationship between involvement and behavioral intentions in this research.

A Professional Educational Survey (see Appendix A) was conducted in August, 1986 to examine the correlation between respondents' answers to personal relevance questions and behavioral intention questions, and thus uncover the relationship between personal relevance and individuals' behavioral intentions.

This chapter outlines the theoretical hypothesis and the methodological procedures of this empirical study.

THEORETICAL HYPOTHESIS

Having explained why personal relevance is used as the surrogate for involvement in this empirical study, the following theoretical hypothesis is proposed:

Personal relevance and involvement are positively correlated with individuals' behavioral intentions.

METHODOLOGICAL PROCEDURES

The method used was a mail questionnaire (i.e., the Professional Educational Survey), which was designed for two purposes. First, it was designed for the College of Engineering at Virginia Polytechnic Institute and State University to evaluate the growth potential of the existing Cooperative Graduate Engineering Program (an off-campus televised program) and the possibility of a future Cooperative MBA Program. To achieve this goal, the questionnaire attempted to identify potential class-takers' characteristics, awareness of the program, perception of the importance of graduate education (both in engineering and business), and interest and intention toward enrolling in televised graduate courses. Second, it was designed to achieve the objective of this research, i.e., to test the theoretical hypothesis.

Because only certain questions (questions 1, 2, 3, 4a, 4c, 4d, 5, 8a, 8b, 9a, and 9b) of the questionnaire are instrumental in achieving the objective of this research, "The Questionnaire" section presented later will only describe the design of these questions and how they were used to test the theoretical hypothesis.

Target Population

The questionnaire, along with the Virginia Cooperative Graduate Engineering Program brochure, its class schedules, and a postage-paid envelope, were sent to 8,500 Virginia Tech engineering alumni in the state of Virginia and its vicinity of Washington and Southern Maryland (the target population) in August, 1986. The list of names and addresses of these engineering alumni were provided by the Virginia Tech Alumni Association. The number of returned questionnaires totalled 1,278, constituting a response rate of approximately 16%.

The Questionnaire

The questionnaire begins with a series of questions on personal relevance (questions 1, 2, 3, 4a, 4c, 4d, and 5), which are later followed by two questions (questions 8a, 8b,

9a, and 9b) regarding respondents' behavioral intentions toward enrolling in graduate courses and graduate televised courses.

Questions 1, 2, 3, 4a, 4c, and 4d, and 5 are considered to be personal relevance questions to all engineering alumni contacted because all these questions concern them directly. Question 1 asks about the importance of having new and up-to-date knowledge in their fields. Questions 2 and 3 ask how likely it is that a graduate engineering degree or an MBA degree would benefit them (i.e., get them a better job, a promotion, or a salary raise). Question 4a asks whether there has been external pressure from their employers requesting or encouraging them to take graduate engineering or business courses. Questions 4c and 4d are financially relevant to them; the former asks whether their employers will pay the tuition if they enroll in graduate engineering or business classes, and the latter asks whether they will pay their own way to enroll in graduate engineering or business classes. Question 5 asks whether time constraint is a factor that prevents them from taking classes.

Question 8a is designed to find out respondents' behavioral intentions toward taking graduate courses. If respondents answer "Highly likely" or "Likely," they are asked in question 8b to state what courses they intend to take.

Question 9a is designed to find out respondents' behavioral intentions toward taking graduate televised courses. If respondents answer "Highly likely" or "Likely," they are asked in question 9b to state what courses they intend to take.

Questions 1, 2, 3, 8a, and 9a adopt a five-point Likert scale, ranking from the least favorable answer (e.g., "Highly unlikely" or "Very unimportant") to the most favorable answer (e.g., "Highly likely" or "Very important"), and each of the five answers on the Likert scale is allotted a score. For example, "Highly unlikely" is allotted one point, "Unlikely" two points, "Indifferent" three points, "Likely" four points, and "Highly likely" five points.

Questions 4a, 4c, 4d, and 5 are simply "Yes-No" questions, where "Yes" is allotted five points, and "No" one point. That is, "Yes" is treated as the most favorable answer and "No" the least favorable answer.

By assigning a score to each answer in all the above questions, correlation analyses of the answers to the two different series of questions were performed to examine the strength of the relationship between personal relevance and behavioral intentions.

CHAPTER SUMMARY

This chapter details the methodological procedures that were used in this research as well as the theoretical hypothesis to be tested in this study. The target population and the design of the questionnaire are outlined. The results of this research will be presented and analyzed in Chapter IV.

Chapter IV
RESULTS AND ANALYSIS

CHAPTER OVERVIEW

In this chapter, the correlation analyses set forth in Chapter III are described. The results of the analyses of answers to the personal relevance and behavioral intention questions will then be discussed. Also, additional analyses were conducted to confirm the results of the correlation analyses.

GENERAL OBSERVATIONS

Before the correlation analyses set forth in Chapter III were conducted, it was essential to investigate whether there was a significant difference in the way various demographic groups (e.g., age groups and education levels) answered the set of personal relevance questions and the two behavioral intentions questions. If differences exist among different demographic groups, a "global" correlation analysis will be an inappropriate tool to use, for it will yield results that are not representative of the whole population. Instead, separate correlation analyses would need to be conducted for each separate demographic group. Questions 15-20

(refer to Appendix A) are the questions asking respondents' demographic information.

To find out whether or not the use of separate correlation analyses for each separate demographic group was necessary, Chi-square analyses were performed. These analyses were to detect the presence of significant differences by comparing respondents in each demographic group in each of the demographic questions answered questions 1, 2, 3 (personal relevance questions), 8a, and 9a (behavioral intention questions).

The results of the Chi-square analyses indicated there was no significant difference ($p > 0.05$) among various demographic groups in every demographic question, with the exception of the older age groups in question 16 and the group of post-graduate degree-holders in question 17. However, this exception was to be expected and was desirable.

For respondents in the older age groups, most have retired and are no longer interested in enrolling in graduate or graduate televised engineering or business courses. Thus, they would not find having up-to-date knowledge in their fields or a graduate degree in engineering or business personally relevant. Therefore, most of these respondents answered questions 1, 2, and 3 "unfavorably" (i.e., "Very unimportant," "Unimportant," "Highly unlikely," or "Unlike-

ly") and questions 8a and 9a "unfavorably" (i.e., "Highly unlikely" or "Unlikely"), generating a consistent pattern. In other words, how these respondents answer questions 8a and 9a depends upon how they answer questions 1, 2, and 3.

For the group of post-graduate degree-holders, most feel that it is unnecessary to take any more graduate courses and answer questions 8a and 9a "unfavorably," yet they would also answer questions 1, 2, and 3 "unfavorably" because there is a lack of personal relevance in obtaining a graduate degree in engineering or business. Hence, this group of respondents also exhibits a consistent pattern when answering questions 1, 2, 3, 8a, and 9a. In other words, how these respondents answer questions 8a and 9a also depends upon how they answer questions 1, 2, and 3.

Therefore, the results of the Chi-square analyses allowed for correlation analyses across the entire sample.

Correlation Analyses

Correlation analyses were conducted to examine the relationship between personal relevance and behavioral intentions, thus uncovering the relationship between involvement and behavioral intentions. The results of these correlation analyses are presented in Table 1.

In Table 1, the Pearson correlation coefficients of the set of personal relevance questions (questions 1, 2, 3, 4a, 4c, 4d, and 5) versus the two behavioral intention questions (questions 8a and 9a) are shown. These Pearson correlation coefficients range from a low 0.07 (question 5 versus question 9a) to a high 0.45 (question 2 versus question 8a), and they are all statistically significant ($p < 0.05$). They indicate that personal relevance is positively significantly correlated to behavioral intentions.

TABLE 1

Results of the Correlation analyses

	Q8a	Q9a
Q1	0.11285 0.0002 1063	0.11829 0.0001 1063
Q2	0.45773 0.0001 1063	0.39005 0.0001 1063
Q3	0.40698 0.0001 1063	0.34794 0.0001 1063
Q4a	0.24073 0.0001 1049	0.15335 0.0001 1049
Q4c	0.14085 0.0001 847	0.08704 0.0113 847
Q4d	0.22997 0.0001 716	0.24518 0.0001 716
Q5	0.14274 0.0001 1025	0.07447 0.0171 1025

NOTE: This table is to be read as follows:

Each column consists of seven "blocks;" each block consists of three rows of numbers. The first row of each block denotes the Pearson correlation coefficient of the corresponding questions, the second row denotes the p-value, and the third row denotes the number of observations.

ADDITIONAL ANALYSES

To confirm the above findings, two "composite factors" (M1 and M2) for personal relevance were built to run correlation tests against the two behavioral intention questions (questions 8a and 9a). Two composite factors were built because one (M1) concerned the relevance of a graduate engineering degree to the respondents whereas the other (M2) concerned the relevance of an MBA degree to the respondents. M1 stands for the mean score of all the answers to one set of personal relevance questions---questions 1, 2, 4a, 4c, 4d; and 5. M2 stands for the mean score of all the answers to another set of personal relevance questions---questions 1, 3, 4a, 4c, 4d, and 5.

However, before this correlation test could be performed, the elements within each of these factors had to be correlated significantly with each other.

The correlation analyses showed that they certainly were at least indirectly significantly correlated with each other. For instance, although question 1 is not significantly correlated with questions 4c and 5, it is significantly correlated with question 2, which is significantly correlated with questions 4c and 5 (i.e., question 1 is indirectly significantly correlated with questions 4c and 5).

Because all the elements within the two factors were significantly correlated with each other, the correlation tests between the two factors and questions 8a and 9a were conducted. The results of these correlation tests are shown in the correlation matrices in Table 2. The Pearson correlation coefficients range from 0.34 (M2 versus question 14) to 0.44 (M1 versus question 12), and they are also statistically significant ($p < 0.05$). Hence, similar findings are obtained from correlation tests between M1, M2 and questions 8a and 9a. Thus, personal relevance is again shown to have a positive linear relationship with individuals' behavioral intentions.

TABLE 2
Correlation Matrices

	M1	Q8a
M1	1.00000	0.43653
	0.0000	0.0001
	1063	1063
Q8a	0.43653	1.00000
	0.0001	0.0000
	1063	1063
	M2	Q8a
M2	1.00000	0.43159
	0.0000	0.0001
	1063	1063
Q8a	0.43159	1.00000
	0.0001	0.0000
	1063	1063
	M1	Q9a
M1	1.00000	0.34233
	0.0000	0.0001
	1063	1063
Q9a	0.34233	1.00000
	0.0001	0.0000
	1063	1063
	M2	Q9a
M2	1.00000	0.33710
	0.0000	0.0001
	1063	1063
Q9a	0.33710	1.00000
	0.0001	0.0000
	1063	1063

NOTE: This table is to be read as follows:

Each column of the correlation matrices consists of two "blocks;" each block consists of three rows of numbers. The first row of each block denotes the Pearson correlation coefficient of the corresponding questions, the second row denotes the p-value, and the third row denotes the number of observations.

Squaring the Pearson Correlation Coefficients

Squaring the Pearson Correlation Coefficients of the two composite factors of personal relevance (M1 and M2) versus the two behavioral intentions questions (questions 8a and 9a) yielded the correlation coefficients of determination (Churchill 1983). They provide the degree to which behavioral intentions are related to personal relevance.

Table 3 shows that personal relevance explains, in this study, at least 11.4% and as much as 19% of behavioral intentions. The percentages simply express the weight personal relevance carries in explaining individuals' behavioral intentions and indicate the relationship between them.

TABLE 3
Correlation Coefficients of Determination (CCD)

	CCD
M1 By Question 8a	19%
M2 By Question 8a	18.6%
M1 By Question 9a	11.7%
M2 By Question 9a	11.4%

CHAPTER SUMMARY

This chapter describes the test of the theoretical hypothesis set forth in Chapter III and presents the results. The analyses of the results are also discussed.

Chapter V will present the conclusions drawn from these findings, the limitations and implications of this empirical study as well as suggestions for further research.

Chapter V

DISCUSSION AND CONCLUSIONS

CHAPTER OVERVIEW

In this chapter, the results and findings obtained from testing the theoretical hypothesis are discussed. From these results and findings, conclusions are drawn. Limitations and implications of this research will also be discussed. Suggestions for further research will close the chapter.

DISCUSSION OF THE RESULTS AND FINDINGS

Recall that the theoretical hypothesis in Chapter III predicted that personal relevance and involvement are positively correlated with individuals' behavioral intentions. The results and findings presented in Chapter IV support this theoretical hypothesis:

First, the correlation analyses of the set of personal relevance questions (questions 1, 2, 3, 4a, 4c, 4d, and 5) versus the two behavioral intention questions (questions 8a and 9a) yielded positive correlation coefficients that were statistically significant (refer to TABLE 1), reflecting a

positive linear relationship between personal relevance and behavioral intentions.

Second, the correlation analyses of M1, M2 (composite factors that contain the set of personal relevance questions) versus the two behavioral intention questions also yielded positive correlation coefficients that were statistically significant (refer to TABLE 2), indicating that personal relevance is related to individuals' behavioral intentions.

Third, squaring the correlation coefficients between M1 and M2 and questions 8a and 9a gave the correlation coefficients of determination, which accounted for the percentage of behavioral intentions explained by personal relevance. TABLE 3 shows that personal relevance explains as much as 19% of behavioral intentions in this study, reflecting again the relationship between personal relevance and individuals' behavioral intentions.

LIMITATIONS

As with every study, this study has its limitations: First, although personal relevance is identified as an important dimension of the involvement construct, it is not the equivalence but only a subset of involvement. Therefore, the relationship found between personal relevance and

behavioral intentions does not necessarily reflect precisely the relationship between involvement and behavioral intentions.

Second, the low response rate (16%) in this study might have caused biased results because the respondents are not necessarily representative of the true population.

Third, external validity is not assured because the extent, to what populations/social groups and situational contexts/settings, to which the results of this study can be generalized is unknown.

CONCLUSIONS

The results and findings in this study support the theoretical hypothesis set forth in Chapter III. In short, given that personal relevance was used as the surrogate for involvement, it can be concluded that, at least in this study, both personal relevance and involvement were positively significantly correlated to individuals' behavioral intentions and that they explained or accounted for almost one fifth of behavioral intentions.

IMPLICATIONS

The relationship between involvement (personal relevance) and individuals' behavioral intentions should be looked at as an integral part of marketing because involvement is believed to influence or determine consumers' behavioral intentions, which in turn will affect their purchasing decisions.

In short, the more that is known about the relationship between involvement and individuals' behavioral intentions, the more insights will be shed as to how consumers go about making their purchase decisions.

FURTHER RESEARCH

The conclusions from this research support the hypothesis that personal relevance and involvement are positively significantly correlated with behavioral intentions. However, further research on this subject is needed.

Further research should be done using various social groups and under different situational contexts (e.g., purchasing situations) to investigate whether the results and findings from the present study hold across all social groups and under different situational contexts.

Additionally, most future research in the area of involvement should be done empirically because abstract ideas

may be conceptually sound, but they can become more convincing when data sets are used to support them.

Finally, future investigation of the degree of importance of personal relevance as a dimension of the involvement construct should be emphasized because it may well provide new insights as to how involvement can be measured.

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Appendix A

PROFESSIONAL EDUCATION SURVEY

The College of Engineering is gathering information for the Cooperative Graduate Engineering Program and MBA Program offered by Virginia Tech. This information will help us provide you with an on-going opportunity to pursue graduate course work to gain new and up-to-date knowledge in your field as well as a Master's degree on a part-time basis. Completion of this questionnaire will only take a few minutes and your information and opinions will be held in strict confidence.

Some of the statements or questions may not be worded exactly the way you would like them to be; however, please answer the best way you can. Thank you very much for your time and cooperation.

Benjamin S. Blanchard
Assistant Dean, Eng. Extension,
College of Engineering

1. How important is it for you to have new and up-to-date knowledge in your field? (CHECK ONE)

Very unimportant
 Unimportant
 Indifferent
 Important
 Very important

2. How likely is it that a graduate engineering degree would get you a better job, a promotion, or a salary raise?

Highly unlikely
 Unlikely
 Indifferent
 Likely
 Highly likely

Appendix A Continued

3. How likely is it that an MBA degree would get you a better job, a promotion, or a salary raise?
- Highly unlikely
 - Unlikely
 - Indifferent
 - Likely
 - Highly likely
4. a. Has your employer ever requested or encouraged you to take graduate courses in engineering or business? Yes No
4. b. If yes, which of the following?
- Engineering courses
 - Business courses
 - Both engineering and business courses
- c. Will your employer pay the tuition for you?
 Yes No
- d. If you have to pay the tuition yourself, will you still enroll in classes? Yes No
5. Do you find there is not enough time to take courses?
 Yes No
6. How far are you willing to travel from work/home to class if you want to take a course? _____ Miles
7. a. Have you heard about the off-campus televised courses offered by the Cooperative Graduate Engineering Program at Virginia Tech?
 Yes No
- b. If yes, from what source(s) of information did you hear about the program?
-
8. a. How likely is it that you will take graduate courses in the near future?
- Highly unlikely
 - Unlikely
 - Indifferent
 - Likely
 - Highly likely

Appendix A Continued

- b. If your answer is highly likely or likely, which of the following would you like to take?
- Engineering courses
 - Business courses
 - Both engineering and business courses
9. a. How likely is it that you will take graduate televised courses in the near future?
- Highly unlikely
 - Unlikely
 - Indifferent
 - Likely
 - Highly likely
9. b. If your answer is highly likely or likely, which of the following would you like to take?
- Engineering courses
 - Business courses
 - Both engineering and business courses
10. If you are interested in taking graduate televised courses, what courses do you want to see offered?
-
11. a. Do you think you will be adequately prepared academically prior to taking these courses?
 Yes No
- b. If no, please state reason(s): _____
-
12. How many hours do you think you can dedicate to studying/preparing/attending a course each week?
_____ hours

Appendix A Continued

13. Which of the following would be the most effective source in informing you about the televised graduate courses?

Direct mailings from the College of Engineering
 Training Directors/Supervisors from your company
 Word-of-mouth (friends)
 Newspapers
 Radio
 Local television
 Personal contact with representatives from VT
 Trade journals
 Other (PLEASE STATE): _____

14. Which of the following would be the most effective source in persuading you to take a televised graduate course?

Direct mailings from the College of Engineering
 Training Directors/Supervisors from your company
 Word-of-mouth (friends)
 Newspapers
 Radio
 Local television
 Personal contact with representatives from VT
 Trade journals
 Other (PLEASE STATE): _____

15. Sex: _____
 Marital status: _____
 No. of children: _____

16. In which age range do you fall?

20-25 36-40 51-55
 26-30 41-45 56-60
 31-35 46-50 Over 60

17. Which of the following best describes your level of education?

BA/BS or equivalent Some graduate work
 MA/MS or equivalent Ph.D or equivalent

18. a. Year you received your Bachelor's degree: 19____
 b. Year you received your highest degree: 19____

Appendix A Continued

19. a. Your undergraduate major: _____
b. Your graduate major: _____
20. Years of professional experience: _____
21. Name and location of the company/organization you
are working for:

22. Your job title: _____
23. Your job responsibility: _____

24. Your name and address: _____

TEL. NO. _____

25. Do you have any other comments regarding televised
graduate education?

Thank you for your help. Please place this completed
questionnaire in the envelope provided and mail it to:

Virginia Tech
College of Engineering
Engineering Extension
330 Norris Hall
Joseph Y. Leung
Blacksburg, Virginia 24060-9985.

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the scanned document**