

## AN ABSTRACT OF THE THESIS OF

*Robert Craig Lundy* for the degree of *Doctor of Education in College Student Services Administration* presented on *April 6, 1982*.

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The primary purpose of this study was to determine if significant differences existed between the engagement styles of management students and practicing managers. The term "engagement" is used to refer to the processes by which organizational members establish an effective relationship with important human systems of the organization (*i.e.*, superiors, peers, subordinates, political systems, and network).

A secondary purpose of this study was to determine if significant differences existed between independent variables of students and managers and their engagement styles. The five student variables and six manager variables examined in this study were: Students - sex, year in college, years of fulltime employment, employment status, and age; Managers - sex, years of fulltime employment, age, number of employees in unit, type of position, and level within the organization.

Development of an instrument to provide a reliable and valid measurement of the engagement styles of management students and managers was viewed as the tertiary purpose of this study. Two methods were used to calculate the instrument's reliability. The first method involved a test-retest, while the second estimate of reliability represented internal consistency based on coefficient alpha. The construct of the instrument was validated by factor analysis. The 12 variables were intercorrelated with the final solution rotated to orthogonal simple structure using the varimax procedure.

The results revealed that significant differences did exist between the engagement styles of management students and managers. Undergraduate management students engaged in passive and noncollaborative behaviors, while the practicing managers engaged in proactive and collaborative behaviors. The engagement style of the graduate students (fulltime and parttime) was proactive and noncollaborative and their scores fell between the undergraduate students and managers and closer to the middle of each scale. The independent variables had no significant impact on the engagement style of managers. However, year in college, years of fulltime employment, and age did have a significant impact on the engagement style of students. These results suggested that the years of fulltime employment represent a stable period in the formation of the engagement style of managers, while the college period represents a developmental stage and thus a unique opportunity for potential intervention.

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THE REAL WORLD AND THE MANAGEMENT CLASSROOM:  
A COMPARISON OF THE ENGAGEMENT STYLES OF  
MANAGEMENT STUDENTS AND MANAGERS

by

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# THE REAL WORLD AND THE MANAGEMENT CLASSROOM: A COMPARISON OF THE ENGAGEMENT STYLES OF MANAGEMENT STUDENTS AND MANAGERS

## I. INTRODUCTION

### *Background*

Schools, colleges, and universities are among society's major agents of socialization. Through norms that define the kinds of knowledge and skills to be learned and the conditions under which they are to be used, institutions of higher learning prepare individuals to occupy the various roles available in society. Certain occupational roles, notably those termed "the professions," usually require a special period of educational preparation in a professional school where the candidate is expected to acquire the knowledge, skills, attitudes, and behavioral practices necessary to perform his/her professional duties in a responsible manner.

An institution committed to excellence in higher education must be concerned that its graduates are adequately prepared to function and serve both in their career positions and as active members of society. As Feldman and Newcomb (1969) state:

Neither educators nor the public at large would justify the college experience in terms of the college years alone. College is supposed to do something to students, and that something refers primarily to consequences that make a difference in later years (p.16).

Preparing individuals to assume positions in society is not the only goal of higher education, but it is an important objective for a vast majority of the programs offered by colleges and universities. Schools of Business Administration and Management frequently affirm the objective of providing graduates with a sound professional preparation necessary for successful careers in business and other enterprises where managerial skills are needed.

#### *Graduates Experience Turnover and Disillusionment*

The quality of business education is an issue of growing concern among businessmen and some academicians. Reports that voluntary turnover, disillusionment, and human waste are increasing among college graduates are accumulating in college placement offices and in corporate personnel departments. Schein (1969), in a study of graduates from the Massachusetts Institute of Technology management program master's degree reported:

That 50% of the 1964 graduates already had left their first job, that 67% of the 1963 graduates had changed jobs, and that 72% of the 1962 class had moved on at least once with some on their third and fourth job (p.28).

The longitudinal study revealed that the first year of fulltime employment is full of frustrations and anxiety. Livingston (1971) reports that turnover among new recruits has been increasing for the past two decades and is particularly pronounced among students from the leading schools of management. In a recent study, Louis (1980) reveals that despite increased

attention by companies to orientation programs, disillusionment and voluntary turnover by new recruits is increasing:

Voluntary turnover during the first eighteen months on the job is increasing among college graduates in first career jobs, and reports of mounting disillusionment among new recruits are accumulating in college placement offices and in corporate personnel departments (p.226).

The real tragedy, according to Schein (1968), is when college graduates decide to stop trying and become apathetic and complacent. Graduates who become apathetic toward their new jobs may in fact be robbing their own future. From the company's point of view, the great loss is that graduates may be unable or unwilling to give their new employer their most valuable resources - their drive, integrity, and high hopes. Once apathy and complacency develop, it is difficult to resurrect the initial drive and commitment. Moment and Fisher (1973) point out that there is probably no objective way to assess the amount of human waste at the managerial levels of organizations.

However, most managers keenly sense a wide discrepancy between what they and what other managers feel they could accomplish in their work, and their actual results (p.46).

While an organization may accept the waste as a necessary consequence of doing business, individuals and particularly new recruits are confronted with uncomfortable and stressful situations.

### *University Engagement Style Creates Problems*

A review of the literature concerning the differences between management students and practicing managers (Refer to Chapter II) points

to the conclusion that new recruits experience difficulty in dealing with people and in establishing effective working relationships with the human aspects of an organization. As Livingston states:

Management graduates, as a consequence, suffer their worst trauma in business when they discover that rational solutions to problems are not enough; they must also somehow cope with human emotions in order to get results (p.83).

While the differences between management students and managers might be explained in a number of ways (*e.g.*, selection effects of university requirements, maturation, and a new breed of students coming into school), it seems likely that they can be explained in part by differences between university and business situations which lead to the learning of different engagement styles. In other words, the problems experienced by new recruits stem in large part from the learning of inappropriate engagement styles in university settings. The notion that the university environment (both in terms of classroom and extracurricular activities) imparts an orientation or engagement style which conflicts with business situations has been suggested by a number of authors.

Schein (1968) reports that while new recruits viewed the solving of complex technical problems as a great challenge, they found human problems unworthy of their efforts. In order for new recruits to develop into effective managers, they must unlearn this basic attitude concerning the low importance of human problems which has been developed as a result of their educational experiences. However, as Schein states, "This is not surprising in a group as recently out of college, where they lived a life full of feedback

through examinations and grades" (p.32). Schein concludes that universities, like companies, are social systems which indoctrinate or socialize their new members.

Livingston (1971) points out, that the university classroom imparts a problem solving and decision making style which is inappropriate when applied to business situations. Problem solving and decision making in the classroom require "response behavior" in order to obtain high grades. However, success and fulfillment in work situations demand what psychologists refer to as "operant behavior," the ability to find problems and opportunities, initiate action, and follow through to obtain results.

The view that the university environment imparts an engagement style to graduates which is far removed from that of practicing managers has also been suggested by Siegel (1973):

Our educational institutions, in emphasizing knowledge, skills, and techniques, may in the process be de-emphasizing the future manager's faith and trust in others. More specifically, it is argued that the university as a socializing institution imparts a set of values that are far removed from those held by practicing managers (p.409).

Dill (1962), in a study of young managers, also supports this view:

College students and young graduates are misled into passivity by a variety of influences. Not the least of these is the college environment itself. In many institutions, the student programs his life according to class schedules, assignment sheets, lecture notes, and final examinations. His performance is evaluated on a regular basis, and he is told how well he is doing. Some professors will even allege that their ratings are entirely "objective" and "fair." He usually has access to a variety of advisors and counselors. He is protected against a great deal of the uncertainty, irregularity, instability, and vagueness that he will meet in his first industrial assignment (p.78).

These authors suggest that the university environment, and in particular the traditional classroom, imparts to students an engagement style which, though adaptive to university settings, creates problems when applied to business situations. The traditional classroom setting is characterized by high teacher control; responsive rather than operant behavior, low student interdependence and proactivity, and an emphasis on rational and technical learning. As Bigelow (1980) has noted, through classroom and extracurricular activities:

Students are likely to learn that a passive, noncollaborative orientation and an emphasis on rational skills constitute the engagement style most likely to reap institutional rewards. In addition, students who do not learn this style are less likely to remain in the university system (p.8).

In summary, these studies suggest that many of the problems encountered by new recruits as they attempt to deal with the human aspects of an organization stem from learning an inappropriate engagement style in universities. For many students, the engagement style utilized at the university has been reinforced through many years of interaction with educational institutions, and thus it may be extremely difficult for them to develop a new approach. Consequently, it may be difficult for graduates to make the transition from a university style of engagement to one more appropriate for business.



### *Purpose of the Study*

The primary purpose of this study was to determine if significant differences exist between the engagement styles of management students and practicing managers. The term "engagement" is used to refer to the processes by which organizational members establish an effective relationship with important human systems of the organization (i.e., superiors, peers, subordinates, political systems, and networks). A secondary purpose of this study was to determine if significant differences exist between independent variables and the engagement styles of management students and practicing managers. The independent variables included in this study were: sex, years of fulltime employment, age, year in college, number of employees in unit, type position, level within the organization, and employment status. In order to measure the research questions, the writer developed the Engagement Style Survey. Therefore, the development of an instrument to provide valid and reliable measurement of the engagement styles of students and managers was viewed as the tertiary purpose of this study.

### *Significance of the Study*

It was hoped that this study would suggest hypotheses and raise questions that would stimulate further research concerning: (a) the relationship between what is learned in university settings to what graduates will encounter in business settings; (b) the importance of noncognitive skills in the preparation of business graduates; and (c) the

development of a methodology for measuring noncognitive skills that graduates of a business program should possess. Only with concerted effort to broaden our understanding of the impact of university experiences on students - both in terms of cognitive and noncognitive characteristics - will significant progress be made in the preparation of management students for roles in business and the community.

### *Research Questions*

The following research questions were asked:

1. Does the engagement style of undergraduate students in the School of Management at Rensselaer Polytechnic Institute differ significantly from that of practicing managers?
2. Does the engagement style of fulltime graduate students in the School of Management at Rensselaer Polytechnic Institute differ significantly from that of practicing managers?
3. Does the engagement style of parttime graduate students in the School of Management at Rensselaer Polytechnic Institute differ significantly from that of practicing managers?
4. Is there a significant relationship between the engagement style of management students and their:
  - a. Sex
  - b. Year in college
  - c. Years of fulltime employment

- d. Employment status
  - e. Age
5. Is there a significant relationship between the engagement style of managers and:
- a. Sex
  - b. Years of fulltime employment
  - c. Age
  - d. The number of employees in the department/unit
  - e. Type of position within the organization (*i.e.*, management or staff)
  - f. The level of position within the organization.

## II. REVIEW OF THE LITERATURE

### *Background*

The review of the literature is divided into two sections. The first section involves studies and published materials concerning differences between management students and managers. The second section includes a summary of the literature concerning the relationship between their attitudes and behaviors.

### *Differences Between Management Students and Managers*

While a number of authors have discussed differences between management students and managers, very little rigorous research exists. Most studies have been organized into three categories: (1) differences in personal value systems; (2) differences in attitudes and dispositions; and (3) differences in importance of educational factors. A summary of the findings highlights the fact that graduates experience difficulty in dealing with people.

### *Differences in Personal Value Systems*

Based upon a study by England (1967), Donald N. DeSalvia and Gary R. Gemmill (1971) undertook an exploratory study of the personal value systems of management students and managers. The personal values

questionnaire was administered to a sample of college management students and the results were compared to the responses obtained by England from over one thousand managers. Students' perceptions of managers' personal values were also explored to test the accuracy of student stereotypes and to determine how students view themselves as being different from managers.

DeSalvia and Gemmill (1971), concluded that students, to a greater extent than managers, tended to measure success primarily in terms of personal goals. Concepts such as power, achievement, influence, and individuality as well as money, dignity, security, prestige, and success were more operative for students than for managers. On the other hand, values pertaining to groups of people were more operative for managers. The company, customers, subordinates, managers, and coworkers had a greater behavioral relevance for managers, while the self had a greater behavioral relevance for students.

DeSalvia and Gemmill (1971), also discovered that there were some mythical differences between students and managers. Managers are perceived by students as being more concerned with influence, power, prestige, aggressiveness, force, and money than they actually are. Students also depicted managers as being more concerned with such things as conformity, loyalty, obedience, conservatism, and their company, implying that they are viewed as accepting the system and its authoritarian structure as well as being resistant to change:

Managers are viewed as status seeking and power oriented individuals who are organizationally oriented in the sense that they accept both its goals and structure of authority without question and resist changes to these goals and structure (p.235).

### *Differences in Attitudes and Dispositions*

Jacob P. Siegel (1973) conducted an investigation to examine the extent to which practicing managers and managers-to-be (MBA's) exhibit manipulative interpersonal dispositions as well as authoritarian versus democratic leadership attitudes. Authoritarian versus democratic leadership attitudes of practicing managers and MBA's was measured through the Theory X - Theory Y Leadership scale. The Mach V Machiavellianism scale, which was developed by Christie and Geir (1970) by polling 71 item statements from *The Prince* and *The Discourses*, was used to measure manipulative interpersonal dispositions:

Individuals who score high on the Machiavellian scale were found to manipulate more, win more, were persuaded less, and persuaded others more in face-to-face interactions. Christie labels the disposition of the high machiavellian as the "cool syndrome"; *i.e.*, a resistance to social influence, orientation to cognitions, and initiating and controlling structure. Low Machiavellian scores were seen as the "soft touch" in that they are susceptible to social influence, have an orientation to persons, and accept and follow structure (p.405).

Siegel's study revealed that MBA students were more manipulative than managers and they exceeded the Machiavellian norms established by Christie in nearly 800 subjects. Managers, on the other hand, tended to be less Machiavellian than the norm group. Business school faculty members displayed even higher Machiavellian scores than MBA students. In terms of

leadership attitudes, the managers were slightly more democratic (Theory Y) and less authoritarian (Theory X) than the MBA students.

The MBA student, according to Siegel, was probably coming closer to the stereotyped image of a manager than to the real practitioner of management. It was his belief that MBA's were responding to the North American "Zeitgeist" reflected in plays, novels, and popularized non-fiction in which managers are viewed as "cool," cognitive, and manipulative. The "cool" syndrome of MBA students may be more a reflection of the faculty's attitudes and orientations than the real world of managers. The impact of the professional school, and particularly the orientation of the faculty, on the attitudes of students was examined in an earlier study by Schein (1966). In studying the socializing effects of a graduate school of business, Schein noted that attitude changes of students were related to the attitudes of the school's faculty. Students tested upon entering and again upon completion tended to change their attitudes in the direction of their faculty. More attention, according to Schein and Siegel, should be given to the role of the graduate school of business in the career socialization of students.

A study by Bass (1958) concerning the extent to which MBA's and practicing managers accept the opinions of social and political theorists about what is necessary to succeed in large organizations provides additional insight into the differences in attitudes and dispositions among students and managers. The widest divergence of opinion on the various social approach items occurred in the question about the need to share decision making with subordinates. Experienced managers felt that decision

making was necessary "very often"; night students with some fulltime work experience felt less strongly about this; while the inexperienced day students called for this action only "fairly often." Managers were more in favor of leveling, openness, candor, and full commitment when compared with students.

Ronald Burke (1973) administered the Social Reaction Inventory to business students and managers to measure differences in beliefs regarding one's ability to control and shape his environment. The Machiavellian Scale was also used to measure individual differences in manipulative interpersonal disposition. On the Social Reaction Inventory, Burke reports that managers felt they exercised significantly greater control over events around them than did the business students. Burke's findings on the Machiavellian Scale were consistent with those that Siegel reported earlier: "Managers were significantly less likely than business students to endorse coercion, cajolery, or manipulation as operating procedures" (Burke, 1973, p.26). Previous research by Burke (1969, 1970), Lawrence and Lorsch (1967), and Blake and Mouton (1964) reveals that managers and business students differ in their perception of desirable methods for resolving conflicts. The business students saw "withdrawing" and "compromising" (previously shown to be ineffective methods) as significantly more desirable than did the experienced managers. In turn, the experienced managers saw "confronting" (previously found to be the most effective method) significantly more desirable than did the business students as a method of conflict resolution (Burke, 1973).



Differences between students and managers in Theory X-Theory Y orientations were investigated by Greenlaw, Pitts, and Sims (1978). The approach used by these researchers was to compare the results of 259 middle managers (in a study conducted by Allen, 1973) with 349 undergraduate students and 59 MBA students. The most striking finding was a greater Theory X orientation on the part of the students compared to Allen's managers:

A higher percentage of students in both groups indicated that most people "have no ambition," "dislike responsibility" and "are not very bright." Conversely, a higher percentage of Allen's middle managers replied that people tend to "prefer to assume a great deal of responsibility" and are very bright. (Greenlaw, Pitts, and Sims, 1978 p.32)

#### *Differences in Importance of Educational Factors*

How managers and business students rank the importance of various educational factors in their business administration courses has also received some attention. Bigelow and Easton (1979) report that 29.2 percent of the graduates of the classes of 1974-79 of the Oregon State University's School of Business Administration, the Management concentration ranked behavioral science as the highest (number one) course in usefulness, whereas, only 8.2% of the students surveyed (currently enrolled in the program) ranked behavioral science as the course highest in usefulness. A survey to learn what top executives believe society expects from the professionally educated business college graduate was conducted at

Marquette University. The authors concluded, that the business administration graduate needs to be a broad-based individual who understands the human relationships that are part of the organization and who is able to communicate effectively (Zollitsch and Krusing, 1970).

The Marquette Survey identified areas of knowledge, skills, and attributes that every business administration graduate should possess. The findings obtained by Zollitsch and Krusing were used to develop the questionnaire employed by Edge and Greenwood in a similar study conducted in 1972. Edge and Greenwood (1972) sent a questionnaire to two hundred personnel managers in New York and Hawaii to determine the order of importance they place on different areas of knowledge, skills, and attributes possessed by business administration graduates. They discovered that there was a definite pattern and logical grouping to the order in which the personnel managers ranked areas of knowledge, skill, and attributes.

The results of the study led the authors to several conclusions:

The personnel managers who were evaluated showed a strong and consistent preference toward people-oriented knowledge, skills, and attributes. It appears that personnel managers in New York and Hawaii expect business administration graduates to be well grounded in managerial and human relations aspects of business. They expect them to be skilled in communications, planning, organizing, etc., in order to work with and use the skills of people. Of all attributes they would prefer him to be tactful and skilled in human relations (p.118).

The study went on to conclude that a relatively low percentage of college graduates meet the expectations of personnel managers. It appears that top managers and personnel directors find interpersonal skills (behavioral

sciences) to be the most important business school training for the real world of management; however, it seems likely that business students do not share the same perception. Business students tend to view the quantitative and technical areas as the most important factors in business.

### *Graduates Have Difficulty Dealing With People*

Inability to deal effectively with the human organization is viewed by the writer as a major factor contributing to high turnover, human waste, and disillusionment among new recruits. This conclusion is supported by several researchers.

Schein (1968) reports that most graduates felt their education had prepared them very well with the technical skills required in doing business; however, it had not given them the necessary tools for dealing and working with people. Graduates are not prepared to deal with the human problems they will encounter in their new work environment. While graduates were prepared to apply their rational decision making skills and willing to solve long range problems, they were ill prepared to deal with personal conflicts and day-to-day operating procedures. The basic approach with many graduates "was not to work in and around the human organization, but rather how to make the human organization go away" (Schein, 1968 p.32).

Livingston (1971) cites several reasons for the high attrition rate among college graduates. First, managers to be are not taught what they need to know in order to perform their jobs effectively:

Formal management education programs typically emphasize the development of problem solving and decision making skills, for instance, but give little attention to the development of skills required to find the problems that need to be solved, to plan for the attainment of desired results, or to carry out operating plans once they are made (p.82).

Livingston continues by stressing that management graduates suffer their worst trauma in their work experiences when they discover that rational solutions to problems are not enough, that they must also deal with human emotions if they are to obtain results and be effective.

A second reason for the high attrition rate is that executives use an "unreliable yardstick." As Marshall (1964) has stated, "academic success and business achievement have relatively little association with each other" (p.21). Academic success does not prepare graduates for working with people and has caused many employers to have unrealistic performance expectations of college graduates.

The myth of the well-educated manager has also resulted in graduates overestimating and overemphasizing the value of their formal education. Overemphasis on formal education not only can result in unrealistic expectations, it can also be a self-fulfilling prophecy which may inhibit on-the-job learning. Livingston (1971) concludes that:

As a consequence, men who hold degrees in business administration - especially those with advanced degrees in management - have found it surprisingly difficult to make the transition from academic to business life (p.81).

Webber (1976) also reports that one of the common complaints about business school graduates is that they overemphasize analytical tools and rational decision making to the detriment of human understanding. Drawing on

interviews and discussions with several hundred managers, Webber identified a number of common difficulties experienced by young specialists and managers, including:

1. Difficulty in adapting to the lengthened time horizons found in work.
2. Overindividualistic orientation - the desire to be considered unique.
3. Insensitive to the political aspects of organizations.
4. Overemphasis on analytical tools and rational decision making to the detriment of human understanding.
5. Passive orientation.
6. Inadequate probing of the work environment.
7. Tension with older managers.

The American Assembly of Collegiate Schools of Business (AACSB - the national business school accrediting agency) "In response to growing criticism among businessmen and some academicians about the quality of business education" (Business Week, 1979 p.171) conducted a study in which similar concerns were expressed. The AACSB suggested that accreditation for schools of business should hinge on how well its graduating students perform on a comprehensive examination rather than on how many degrees the faculty holds. The study also proposed , "that the new accreditation tests include some measure of a student's personal, or noncognitive skills, such as leadership and the ability to cope with stress" (p.171). The AACSB study pointed out that many graduates are inadequately prepared, particularly in the area of interpersonal skills and the ability to communicate and persuade others, for the real world of business.

Bigelow (1980), in a review of the difficulties graduates face engaging with business organizations, arrived at a similar conclusion. The heart of the problem, according to Bigelow, is not a lack of technical skills but rather the inability of graduates to deal with the human systems of the organization. "These studies suggest that students are not adequately learning appropriate engagement skills in their university programs" (p.5).

### *Summary*

In an attempt to better understand the possible causes of high turnover and apathy among new recruits, studies concerning the differences between management students and managers have been reviewed. The important findings in the review of the literature are summarized below:

#### A. Differences in Personal Value Systems.

1. Students, to a greater extent than managers, measure success in terms of personal goals (e.g., power, achievement, money, and prestige), while values pertaining to groups of people were more operative for managers than students, such as the company, customers, subordinates, and coworkers (DeSalvia and Gemmill, 1971).
2. Managers are perceived by students as being more status seeking and power oriented individuals than they actually are (DeSalvia and Gemmill, 1971).

#### B. Differences in Attitudes and Dispositions.

1. Students were found to be more manipulative, Machiavellian, and "Theory X" oriented than managers, while Managers were more participative, less Machiavellian than norm groups, and slightly more democratic ("Theory Y") than students (Burke, 1973; Greenlaw, Pitts, Sims, 1978; Siegel, 1973).
2. Managers showed a greater reliance on sharing decision making, openness, and leveling with others than did students (Bass, 1958).
3. Managers revealed a greater feeling of mastery of their own environment rather than a belief in fate (Burke, 1973).
4. Managers, to a greater extent than students, were found to endorse open confrontation and to place less emphasis on withdrawing and compromising (previously shown to be ineffective methods) as methods for conflict resolution (Burke, 1973).

#### C. Differences in Importance of Educational Factors.

Managers reported a greater emphasis on interpersonal skills and dealing with people as the most important business school training, while students placed heavy emphasis on technical skills (Bigelow and Easton, 1979; Edge and Greenwood, 1972; Zollitsch and Krusing, 1970).

#### D. Differences in Importance of Human Factors.

Graduates are not prepared to deal with the human factors essential for a successful career in business (Schein, 1968; Livingston, 1971; Webber, 1976; Bigelow, 1980).

### *The Attitude - Behavior Relationship*

The attitude-behavior connection is complex, tenuous, and uncertain. The connection is complex not only because of the variety of ways in which the term "attitude" is conceptualized, but also because of the extensive number of other variables (personal, situational, and methodological) which influence an individual's behavior. The connection is tenuous and uncertain because individuals have had very little training in doing what their attitudes say. As Ehrlich (1969) remarked; "The major determinant of attitude-discrepant behavior may be that an actor has not learned how to express his attitude in action competently" (p.32). Individuals are constantly confronted with a variety of complex situations. While elements of one situation may be similar to past situations, no two situations in the "real world" are identical. Thus, learning behaviors appropriate for various social situations can be difficult, without the additional task of trying to be guided by one's inner state or attitude. In addition, individuals often receive extensive practice and heavy rewards for performing socially acceptable behavior which may in fact conflict with their underlying attitudes.

Past behavior relevant to the object or situation has been found to be more predictive of future behavior than attitudes, particularly when the attitudes are formed through indirect experience (Zanna, Fazio, Olson, 1980). Attitudes, even when based upon previous experiences, are subject to an extensive number of factors which moderate the attitude-behavior relationship (refer to Lundy, 1980 for further explanation).



### III. RESEARCH METHODOLOGY

#### *Background*

Differences between management students and managers have been discussed in a number of articles; however, few empirical studies exist. Five studies were identified in which one or more of the following research instruments were used. (1) Personal Values Questionnaire (DeSalvia and Gemmill, 1971); (2) The Machiavellianism Scale (Siegel, 1973; Burke, 1973); (3) Theory X--Theory Y Leadership Scale (Siegel, 1973; Greenlaw, Pitts & Sims, 1978); (4) Social Reaction Inventory (Burke, 1973) and (5) Public Opinion Questionnaire (Schein, 1966).

While the above instruments provide valid information, the author elected to develop his own instrument based upon relevant past behaviors, for three main reasons:

1. Existing instruments do not adequately identify noncognitive skills important to managers. In particular, noncognitive skills required for dealing with situations involving interaction with authority, conflict resolution, and issues of interdependency have not been explored.
2. Existing instruments are designed to measure variables within the cognitive system (e.g., attitudes, values, beliefs, disposition, and norms), rather than focusing on overt behaviors. While measures of attitudes and values can be useful, a review of the literature reveals that:

- a. A strong relationship between attitudinal and behavioral entities has not been supported (Deuscher, 1973; Festinger, 1963; Fishbein, 1967; Fishbein, Ajzen, 1972; 1975; Wicker, 1969, 1971).
- b. Past behavior relevant to the object or situation will be more predictive of future behavior than attitude (Zanna, Fazio, Olson, 1980). In addition, it is much easier for individuals to change their overt behavior than it is to change attitudes or values. Moment and Fisher (1973), in discussing the elements of effective career development programs, present this view in the following statement:

It is the behavior of the person, rather than his "traits" which directly cause results, for better and for worse. People can change certain of their behaviors more easily than they can alter their traits. For any program of self-help or counseling to be effective, the individual must see and experiment with those aspects of himself which he can control. It is easier, and more possible to speak more quietly (behavior) than to become less aggressive (trait) (p.53).

- 3. Relevant past behaviors are especially important to new recruits. As Louis (1980) points out, the major input a newcomer has at his/her disposal in attempting to make sense of a new work environment is past experience. Insiders generally know what to expect, and when surprises arise they usually have sufficient background information to enable them to interpret situations accurately. In addition, insiders usually have a network of friends and associates with whom to compare perceptions and assess situations. New recruits, however, must rely heavily on past experiences in interpreting current situations. As Louis (1980) states:

Newcomers often attach meanings to action, events and surprises in the new setting using interpretation schemes developed through their experiences in other settings. Based on these, inappropriate and dysfunctional interpretations may be produced. For example, what it means to "take initiative" or "put in a hard day's work" in a school situation may be quite different from its meaning in a work setting. (p.243)

Development of an instrument which encourages students and managers to recall their past behaviors in specific situations is viewed by the writer as a significant contribution to the problem of measuring noncognitive skills important for business settings. Though the Engagement Style Survey is still a paper and pencil instrument, it is felt by the author to be a more reliable predictor of future behavior than measures based upon attitudes (refer to Figure 1).

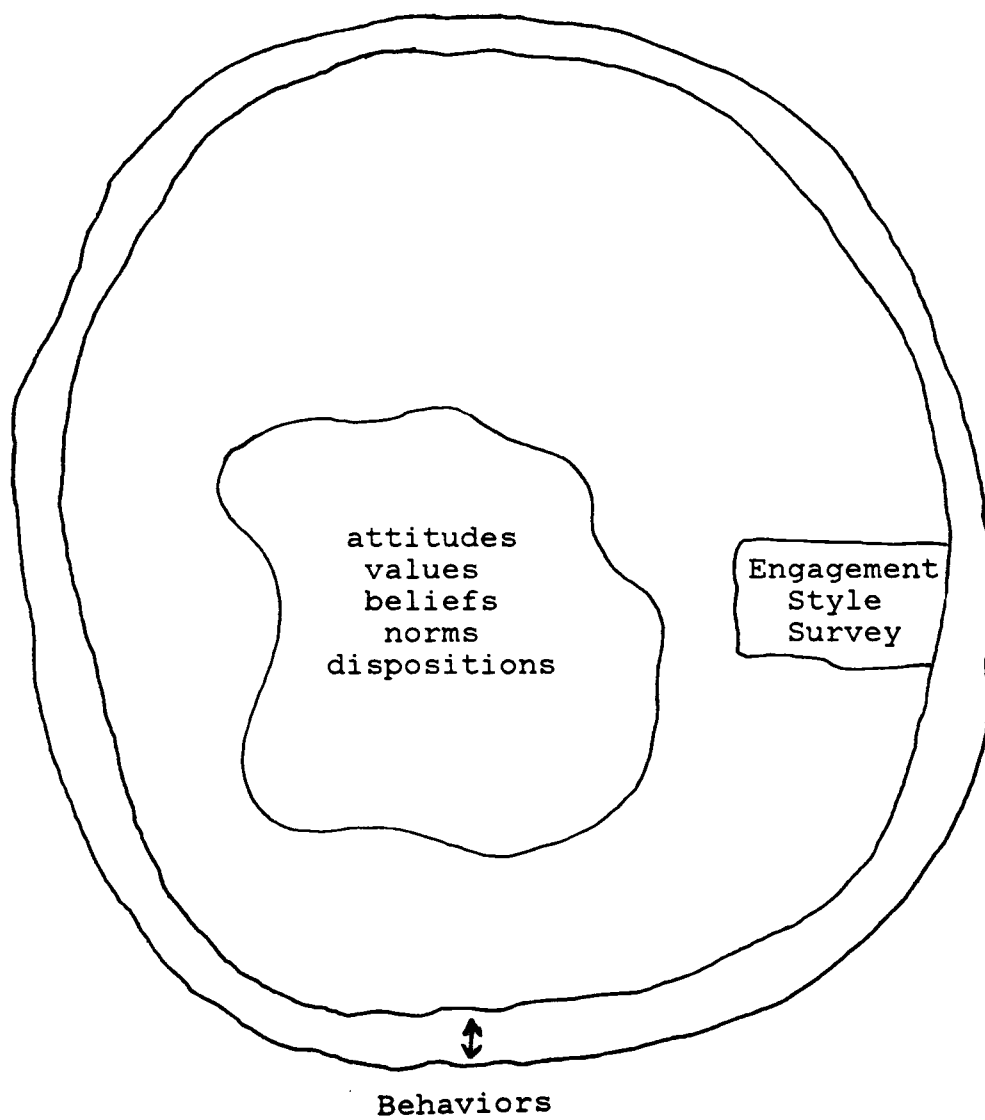
### *Procedure*

#### *Development of the Instrument*

During the 1978 summer session at Oregon State University, the author was involved in the coteaching of Organizational Behavior (B.A. 361) with Dr. John Bigelow. In preparing for this class, the instructors developed a "What Do You Do" exercise (see Appendix A). The "What Do You Do" exercise was designed as a mechanism to encourage students to become aware of what they actually do in certain types of situations. From this, the students would be able to think about the consequences of their

Figure 1  
Development of the Engagement Style Survey

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behavior and generate alternatives. The alternative approach could be examined and tested, and if it proved to be more desirable to the individual, it could be incorporated into the person's repertoire of response.

At the end of the first class session the students were presented with a "What Do You Do" assignment to be handed in at the next class session. The assignment described eleven typically occurring group situations. For each situation, the students were to briefly describe: (1) what they typically do in this kind of situation; (2) why they do it - the needs, goals, and values important in this situation; and (3) what they expect the consequences of their actions to be and how this related to their goals. The "What Do You Do" assignment had several objectives:

1. To encourage students to focus attention on their own behavior.
2. To encourage students to not only reflect on what they actually do but also on their reasons and the expected consequences of their action.
3. To facilitate insight on the part of the instructors into the engagement styles of students.

After reviewing the essays of over 40 students it was discovered that the responses were very consistent and fell into a logical pattern. In addition, the situational questions could be grouped into three areas: (1) interaction with authority; (2) conflict resolution; and (3) interdependency. Through previous research, practical experience, and a review of literature, the writer developed the premise that the engagement style of students differs in important ways from the engagement style of

managers. With this in mind, the writer undertook the task of refining the survey instrument through a process of four student pretests and two manager pretests to develop the current Engagement Style Survey (Appendix B & C). To ensure that each question was relevant to the business setting, a panel of practicing managers reviewed the instrument and provided helpful suggestions. In addition, the managers' pretest survey included a frequency of occurrence response (see Appendix D).

A major objective of the research method was to design an instrument which was situationally specific. The problems presented in each question represented situations which students and managers encounter during the course of either their educational activities or work experience. Early versions of the instrument consisted of two different sets of questions - one for students and one for managers. Though the situations in the managers' survey were very similar to the student survey, differences existed. Through a process of continual refinement and assistance from students, instructors, and managers, the writer was able to revise and improve the instrument. At present the survey instrument for students and managers is identical with the exception of a few key words (*e.g.*, "supervisor" in place of "instructor," "coworkers" in place of "classmates").

As noted earlier, the 12 questions are grouped into three subscales: (1) interaction with authority; (2) conflict resolution; and (3) interdependency. The responses within each subscale can be viewed as existing on a continuum. For example, the responses for the first set of four

questions progress from a passive to a proactive behavioral pattern. For the second set of four questions, the responses represent a continuum from avoidance to confrontive behavior; while for the last set of four questions the progression is from a noncollaborative to a collaborative behavior pattern. The chart (Appendix E) provides an overview of the three subscales and identifies the two predominate behavioral patterns for each question. Preliminary data suggest that management students engage in passive, avoidance, and noncollaborative behavioral patterns while the engagement style of managers typically involves proactive, confrontive, and collaborative behavioral patterns.

*Reliability.* Two methods were used to calculate the instrument's reliability. The first method involved a test-retest to determine reliability of scores over time. One class of students completed the questionnaire twice over a three week period. A reliability coefficient was obtained by computing the correlation between scores on the two test occasions.

The second estimate of reliability represented internal consistency based on coefficient alpha. Coefficient alpha was calculated for the entire questionnaire as well as for each of the three subscales: Passivity, Avoidance, and Collaboration.

*Validity.* Validity of the instrument was examined from two perspectives: construct and content. Factor analysis represents the method by which the construct (*i.e.*, subscales) of the instrument was validated.

The variables were intercorrelated, with the resulting correlation matrix submitted to a principal factor analysis with intercorrelation. Squared multiple correlation was used as the initial communality estimate and was intercorrelated by refactoring until stability was achieved.

Selection of the number of factors was based on the percent of variance accounted for by the factors. A scree test (Cattell, 1966) was employed which involves searching for a possible "elbow" in the plot of latent roots versus factors; that is, a place where the latent roots failed to drop appreciably as the number of factors increased by one. The final solution was rotated to orthogonal simple structure using the varimax procedure.

Content validity indicates the degree to which items in the test represent a meaningful domain of behavior (*i.e.*, Passivity, Avoidance, and Collaboration) found in educational and industrial organizations. This was achieved by extensive behavior sampling of managerial and student experiences through the use of essays and interviews. The process involved a series of steps:

1. Written essays on the "What Do You Do" exercise were collected from over 40 students.
2. The essays were sorted rationally into meaningful constructs. An evaluation of the essays by the writer led to the development of hypothesized subscales (*i.e.*, Passivity, Avoidance, Collaboration).
3. In addition, the essays were discussed with the class in order to facilitate further insight into the hypothesized constructs.



4. After a review of the essays and discussion with the class, the first draft of the "Engagement Style Survey" was produced.
5. The "Engagement Style Survey" was reviewed by a panel of managers and changes were made in the questions and responses in order to ensure that the survey represented a domain of behavior typical to managerial situations.
6. Four pretests of student populations were conducted (between the Fall term 1978 and the Fall term of 1979) involving data from 324 students. Results of the survey were discussed with each class involved and appropriate changes were made.
7. Two pretests of manager populations were conducted (Summer 1979; Fall 1980) involving data from 23 managers. Results of the survey were discussed with the managers to ensure that the questions represented a domain of behavior typical to managers.
8. The second pretest of managers included a frequency of occurrence response.
9. Questions were also reviewed by the Personnel Departments of General Electric and The Norton Corporation prior to final data collection.

It was felt that this procedure resulted in a set of behavioral responses which adequately represented the constructs of interest.

### *Population of the Study*

The population of the study was divided into two major categories. The first category consisted of students enrolled at Rensselaer Polytechnic Institute; the second category included practicing managers.

*Students.* The sample included 156 management students at Rensselaer Polytechnic Institute. The students involved in the study were enrolled in specific management courses which were viewed by a panel of management school faculty to be representative of the total population. The student sample consisted of 30 fulltime and 56 parttime graduate management students, and 70 undergraduate management students (refer to Table 1).

Table 1  
Classification of Sample Population

Classification	Sample	Population	%
Graduate Students, Full-time	30	70	43%
Graduate Students, Part-time	56	165	34%
Undergraduate Students	70	148	47%

*Managers.* The manager population included all middle level managers (59) currently employed by General Electric (Schenectady) and The Norton Corporation with between 1 and 38 years of employment. These particular companies were selected because they are typical of the type of organizations which employ Rensselaer Polytechnic Institute Management graduates.

### *Data Collection*

Data from the student sample were obtained during the students' regular class session. Prior arrangements were made with faculty members in the School of Management at Rensselaer Polytechnic Institute. This method was chosen because of its ease of operation and assurance of a high return.

For the manager sample, a facilitator in each organization was identified. These individuals distributed the questionnaire to all middle level managers and monitored their return.

### *Analysis of Data*

A multivariate analysis of variance (MANOVA) was used to test for significant differences in the mean factors of the 12 items among the student and manager groups. After completion of the MANOVA test, a one way analysis of variance was used to test for differences among student and managerial groups on each item. All hypotheses previously cited were tested with the one way analysis procedure. Where significance was found, a *post hoc* test (Newman-Keuls) was used to locate and determine the nature of the significant difference.

In addition, a Pearson's Correlation Coefficient procedure was used to determine if significant differences existed between various independent variables of students and managers and their engagement styles. Item responses of students and managers were correlated with their sex, year in school, years of fulltime work experience, employment status,

age, number of employees in unit, type of position, and level within the organization.

## IV. RESULTS

The results of this study are presented in three sections. The first section provides the results of the instrument's reliability, while section two contains an examination of the validity study. Section three includes the results of the research questions.

Research question one determines if significant differences exist between the engagement styles of undergraduate students and practicing managers. Research questions two and three determine if significant differences exist between the engagement styles of fulltime and parttime graduate students (respectively) and practicing managers. The fourth and fifth research questions relate to differences in the engagement styles of management students and practicing managers based on various independent variables.

### *Reliability Study*

Two methods were used to calculate the instrument's reliability. The first involved a test-retest to determine the reliability of scores over time. The survey was administered twice to one group of 26 students over a three week period. A reliability coefficient was obtained by computing the correlation between the profile of item responses on the two occasions for each subject. The average test-retest reliability coefficient across subjects

(after transforming the correlations to Z scores) was .80, which was viewed as an acceptable level of consistency. The average item correlation (test-retest reliability coefficient for the 12 questions) was .47.

The second estimate of reliability represented internal consistency based on coefficient alpha. Coefficient alpha's were calculated for the entire questionnaire as well as for each of the three (hypothesized) subscales: Passivity, Avoidance, Collaboration. For the entire questionnaire (12 items) a coefficient alpha of .54 was obtained, which represented a moderate level of internal consistency. The coefficient alpha for the first four questions dealing with Passivity was .48, which also represented a moderate level of homogeneity; however the coefficient alpha's for the other two scales were low: Avoidance .23, and Collaboration .13. This indicated a rather high level of heterogeneity; that is, the items within a particular subscale may have measured more than a single construct.

### *Validity Study*

Validity of the instrument was examined from two perspectives: construct and content. The constructs (*i.e.*, subscales) of the instrument were validated by factor analysis. The 12 variables were intercorrelated with the resulting correlation matrix submitted to a principal components analysis.

Selection of the number of factors was based on both empirical and judgmental grounds. Several factor solutions were explored based on the

percent of variance accounted for by the factors. A scree test (Cattell, 1966) was employed which involved searching for a possible "elbow" in the plot of latent roots versus factors; that is, a place where the latent roots failed to drop appreciably as the number of factors increased by one. Several possible solutions were rotated to orthogonal simple structure using the varimax procedure. An examination of the interpretability and meaningfulness of these rotated factor matrices led to the final selection of the two factor solution accounting for 30% of the obtained variance. The factor structure of these engagement style dimensions can be found in Table 2.

In addition, an oblique factor rotation was also performed to determine the degree of interrelatedness between the selected dimensions. Oblique rotation relaxes the orthogonality (independence) restriction among the factors allowing the axis to rotate freely to summarize the clustering of variables. This method is more flexible and is often considered to be more realistic because the theoretically important underlying dimensions are not assumed to be unrelated to each other (Nie, Norman, and Associates, 1975). However, the intercorrelation between the two factors was .04, suggesting that the factors were naturally orthogonal. The varimax rotation was, therefore, selected as the rotation of choice.

Content validity was achieved by extensive behavior sampling of managerial and student experiences through the use of essays and interviews. The "Engagement Style Survey" was based upon written essays from over 40 students. During a three year period (Fall 1978 - Fall 1980),

Varimax Rotated Factor Matrix  
Two Factor Solution

Item Number	Passivity Factor 1	Collaboration Factor 2
1	.60	-
2	.48	-
3	.55	-
4	.60	-
5	-	-
6	-	.52
7	.37	-
8	-	-
9	-	.59
10	.58	-
11	-	.43
12	.50	-



four student groups and two managerial groups completed the survey. Mean scores for each group are recorded in Table 3. Information obtained on the surveys and from follow-up discussions with each group indicated that the questions represented a meaningful domain of behavior found in educational and industrial organizations. The second group of managers ( $n = 18$ ) completed a frequency of occurrence of each question. After each question, the managers were asked to indicate how frequently the situation occurred in their work: never (1); seldom (2); sometimes (3); frequently (4). As can be seen from the data in Table 3, frequency of occurrence for the questions fell within the middle range. Since the survey questions were based upon essays, discussions, and several pretests of students, it was felt that a frequency of occurrence from the student population was not necessary.

### *Research Questions*

The primary purpose of this study was to determine if significant differences exist between the engagement styles of management students and practicing managers. A secondary purpose was to determine if a significant relationship exists between engagement styles and individual characteristics, such as: age; years of fulltime work experience; year in college; employment status; years of fulltime employment; number of employees in department; level of position within the organization.

The "Engagement Style Survey" (the development of which can be viewed as the tertiary purpose of the study) was designed specifically to

**Table 3**  
**Pre-Tests of Engagement Style Survey**

Student Population-Group Means					Manager Population-Group Means		
Question	First Test	Second Test	Third Test	Fourth Test	First Test	Second Test	Frequency of Occurance
1	1.08	1.11	1.38	1.21	2.00	2.70	3.11
2	2.80	2.46	1.92	2.36	4.00	3.54	3.12
3	2.68	2.82	2.46	2.86	4.00	4.00	2.94
4	2.83	2.46	2.35	2.58	3.80	3.35	3.05
5	1.79	2.21	2.47	2.28	2.40	2.23	3.05
6	2.92	2.64	2.88	2.80	3.00	2.86	2.94
7	2.54	2.68	2.69	2.57	2.60	2.50	2.81
8	2.44	1.77	1.43	1.79	1.00	2.31	3.13
9	2.66	1.64	1.81	1.63	2.00	1.50	3.11
10	1.10	1.14	1.48	1.31	2.00	2.00	2.22
11	1.57	1.94	1.42	1.70	1.60	1.60	2.88
12	3.29	3.04	3.23	3.08	4.00	3.64	2.81
Total	76	28	32	188	5	18	18

investigate the research questions. A multivariate analysis of variance (MANOVA) was used to test for significant differences in the mean vectors of the 12 items. After completion of the MANOVA test, a one way analysis of variance was used to test for differences among student and managerial groups on each item. Where significance was found, a *post hoc* test (Newman-Keuls) was used to locate and determine the nature of the significant difference. The first three research questions were tested using the one way analysis procedure. A correlational procedure was used to examine the relationship between individual difference characteristics.

The MANOVA and the one way analysis of variance revealed that significant differences existed at the .01 level between the engagement styles of student and managerial groups for eight of the twelve items. As can be seen from the data in Table 4, significant differences existed between the groups on items 1, 2, 3, 4, 7, 9, 10, and 12. Item 8 was significant at the .05 level, while no significant differences existed between the groups for items 5, 6, and 11.

### *Research Question One*

One of the major purposes of this study was to determine if significant differences existed between the engagement style of undergraduate management students enrolled at Rensselaer Polytechnic Institute and practicing managers employed by General Electric and The Norton Corporation.

Table 4

## Comparison of the Engagement Styles of Students and Managers

Question Number	Description of Question	F value	P level	Percentage
1.	Authority is clear, but you feel there is a better way	16.53	0.00 <sup>a</sup>	17.80%
2.	Authority is unclear on minor points	10.03	0.00 <sup>a</sup>	12.30%
3.	Authority is unclear on major points	12.34	0.00 <sup>a</sup>	13.66%
4.	Authority makes an error	12.74	0.00 <sup>a</sup>	14.07%
5.	Important decisions must be made, but little gets achieved	0.88	0.45	1.30%
6.	One member is not participating	0.32	0.81	0.60%
7.	The group's energy level seems low	4.63	0.00 <sup>a</sup>	4.80%
8.	Two members are arguing	2.62	0.05 <sup>b</sup>	2.20%
9.	You have an important assignment due	8.88	0.00 <sup>a</sup>	9.90%
10.	You are required to form a group	30.40	0.00 <sup>a</sup>	29.10%
11.	The group needs to organize itself	1.13	0.34	0.20%
12.	Two individuals are dominating discussion	4.45	0.00 <sup>a</sup>	4.60%

<sup>a</sup> Correlation significant at the 0.01 level<sup>b</sup> Correlation significant at the 0.05 level

The Newman-Keuls test procedure was utilized to examine the research questions. The Newman-Keuls approach was particularly appropriate since all four groups could be statistically compared at one test setting. This procedure involved computation of mean scores for each of the four groups (*i.e.*, undergraduate students, fulltime graduate students, parttime graduate students, and managers). In addition, the groups were divided into subsets which were significantly different from each other.

An analysis of the data of the Newman-Keuls test at the .01 level (Table 5) revealed that significant differences existed between the engagement styles of undergraduate management students and practicing managers on eight of the twelve items (*i.e.*, items 1, 2, 3, 4, 7, 9, 10, and 12).

For item number 1, the mean score for the undergraduate management students was 2.00 while the mean score for the practicing managers was 2.92. The undergraduate management students clustered into subset 1, along with the fulltime and parttime graduate students; however the practicing managers from General Electric and The Norton Corporation fell into subset 2. For item number 1, the subjects were asked to indicate "what they do" if they believed there was a better way to complete the project than what the authority person (supervisor/instructor) had specified. Students (including the undergraduate management group) stated that they would "discuss with classmates their ideas about how to complete the project," while the managers stated that they "would discuss with their supervisor their ideas about how to complete the project." Rather than approach their instructor, students indicated that they would discuss their opinions with other classmates.

Table 5

A Comparison of the Engagement Styles of  
Student Groups and Managers

Question	Subset 1	Subset 2	Subset 3
1	FT. Mgt 1.97 UG. Mgt 2.06 PT. Mgt 2.23	Mgr. 2.92	
2	UG. Mgt 2.43 PT. Mgt 3.16	PT. Mgt 3.16 FT. Mgt 3.63	FT. Mgt 3.63 Mgr. 4.03
3	UG. Mgt 3.01 PT. Mgt 3.23 FT. Mgt 3.27	Mgr. 3.93	
4	UG. Mgt 2.29	FT. Mgt 2.80 PT. Mgt 2.80 Mgr. 3.20	
5	UG. Mgt 2.27 PT. Mgt 2.38 FT. Mgt 2.40 Mgr. 2.63		
6	PT. Mgt 3.00 UG. Mgt 3.13 FT. Mgt 3.17 Mgr. 2.22		
7	UG. Mgt 2.79 PT. Mgt 3.13 FT. Mgt 3.17	PT. Mgt 3.13 FT. Mgt 3.17 Mgr. 3.34	
8	PT. Mgt 2.21 Mgr. 2.42 UG. Mgt 2.56 FT. Mgt 2.60		
9	FT. Mgt 1.37 PT. Mgt 1.40 UG. Mgt 1.64	Mgr. 1.97	
10	UG. Mgt 1.20	PT. Mgt 1.41 FT. Mgt 1.50	Mgr. 2.03
11	FT. Mgt 2.67 PT. Mgt 2.73 UG. Mgt 2.77 Mgr. 2.81		
12	FT. Mgt 3.23 UG. Mgt 3.27 PT. Mgt 3.41	Mgr. 3.79	

Code: UG. Mgt - Undergraduate Management Students  
 FT. Mgt - Fulltime Graduate Management Students  
 PT. Mgt - Parttime Graduate Management Students  
 Mgr. - Norton and General Electric Managers

Item 2, involved a situation in which the authority person was unclear on minor points. Undergraduate students stated that they would "discuss the problem in class," while the practicing managers stated that they would "go ahead with their own plan of action." The total mean scores for item 2 were divided into three subsets. Undergraduate management students fell into subset 1 with a mean score of 2.43, and the practicing managers grouped into subset 3 (mean score of 4.03).

For item 3, the individual was requested to complete a project; however, the supervisor (instructor) was unclear on major points. In this situation, the response by undergraduate management students was very similar to item 2, in which the authority person was unclear on minor points. Undergraduate management students indicated that they would still discuss the problem in class. However, practicing managers stated that if their supervisor were unclear on major points they would "discuss the problem privately with him/her." The mean score for the undergraduate management students was 3.01 (subset 1), while the mean score for the practicing managers was 3.93 (subset 2).

Item 4, involved a situation in which the instructor (supervisor) made a statement which one is certain is not correct. Undergraduate management students stated that they would talk to classmates about the statement, while the practicing managers stated that they would present their opinions during the staff meeting. The mean score for the undergraduate management students was 2.29, which placed the group into subset 1 and the mean score for practicing managers was 3.20 (subset 2).

In item 7, the group had a great deal of work to do, but the energy level seemed low. The mean score for the undergraduate management students was 2.79 which, indicated that the group's responses fell between item b ("tell the group to stop wasting time and get to work") and item c ("use various techniques to redirect conversation"). The mean score for the practicing managers was 3.34, which placed the group closer to item d ("discuss with the group your observations and concerns").

Significant differences were also found in item 9 concerning the best approach to take in order to complete a very important assignment. Undergraduate management students obtained a mean score of 1.64 and practicing managers a mean score of 1.97. While the students indicated that they would prepare the report without assistance, practicing managers stated that they would begin to organize the project, then approach other employees for assistance. It was interesting to note that the mean scores for the fulltime and parttime graduate students were smaller than the undergraduate management students. Practicing managers were the only group in subset 2.

Three subsets were present for item 10. The undergraduate management students fell into subset 1, fulltime and parttime graduate students in subset 2 and the practicing managers in subset 3. For item 10 the students/managers were required to select two other individuals from their class/department to work on a project. Undergraduate management students stated that they would ask their two friends to work with them on



the project (mean score 1.20). However, the practicing managers stated that they would select the most capable members in the department to work with them (mean score 2.03).

The last item involved a situation in which the discussion was dominated by two individuals. The student groups (including undergraduate management students) indicated that they would maintain a very limited involvement in discussions (mean score 3.27), while the practicing managers stated that they would become directly involved in the discussions (Mean score 3.76).

#### *Research Questions Two and Three*

Research questions two and three were designed to determine if significant differences existed between the engagement styles of graduate management students enrolled at Rensselaer Polytechnic Institute and managers employed at General Electric and The Norton Corporation.

An analysis of the data of the Newman-Keuls tests at the .01 level revealed that significant differences existed between the engagement styles of graduate students (fulltime and parttime) and practicing managers. Fulltime graduate management students differed significantly from practicing managers on five of the twelve items (*i.e.*, 1, 3, 9, 10, and 12); while parttime graduate management students differed significantly from practicing managers on six of the twelve items (*i.e.*, 1, 2, 3, 9, 10, and 12).

For item 1, the mean score for the fulltime graduate students was 1.97 and the mean score for the parttime graduate students was 2.23. Both graduate student groups fell into subset 1, whereas the critical value for the managers was 2.92, placing them in subset 2. When the managers were in a situation in which they believed there was a better way to complete the project than what their supervisor had assigned, they stated that they would discuss their ideas with their supervisor. In contrast, the student groups indicated that they would discuss their ideas with classmates rather than the instructor.

The Newman-Keuls procedure divided the data for item 2 into three subsets. Subset 1 included undergraduate management students (mean score 2.93) and parttime graduate management students (mean score 3.16). Subset 2 included parttime and fulltime graduate management students, while subset 3 included the fulltime graduate management students (mean score 3.63) and the managers (4.03). Though the parttime and fulltime graduate management students were in subset 2, only the parttime students (not the fulltime students) were significantly different from the managers. If the supervisor/instructor were unclear on minor points, parttime graduate management students stated that they would discuss the problem during class. Managers indicated that they would go ahead with their own plan of action. The fulltime graduate students fell between the parttime graduate students and the managers.

It was interesting to note that when the problem became more acute (supervisor/instructor unclear on major points), the parttime and fulltime

graduate students still expressed a desire to discuss the problem in class. However, managers preferred to discuss the problem privately with their supervisor. The mean scores on item 3 for the parttime and fulltime graduate management students were very similar (3.23 and 3.27 respectively), while the mean score for the managers was 3.93.

Significant differences between graduate students and managers were also present in item 9. Fulltime and parttime graduate students were grouped into subset 1 (mean scores 1.37 and 1.39 respectively), while the managers composed subset 2 with a mean score of 1.97. Item 9 presents a situation in which the individual had very little time to prepare a very important assignment. Graduate students (parttime and fulltime) stated that they would prepare the report without assistance from classmates; however, managers stated that they would begin organizing the project and then approach other employees for their ideas.

For item 10, the data were distributed into two subsets. Parttime and fulltime graduate students represented subset 2 with mean scores of 1.41 and 1.50 respectively, while the managers were grouped into subset 3 (mean score 2.03). The situation posed in item 10 required the individuals to select two others in the group (class or department) to work with on a project. Furthermore, it was stated that two individuals in the group were very close friends. When placed in this situation, the managers stated that they would select the most capable members in the department to work with rather than simply selecting their friends. Undergraduate management students indicated that they would select their friends, and the graduate students fell between the managers and the undergraduate students.

Significant differences were also discovered for item 12. The student groups clustered into subset 1 and the managers were grouped into subset 2. The situation involved participation in a seminar in which two individuals dominated discussion. Students (including undergraduates, fulltime and parttime graduate students) indicated that they would maintain a very limited involvement in the seminar; while the managers stated that they would become directly involved in the discussions.

#### *Research Questions Four and Five*

Research questions four and five were designed to determine if significant differences existed between various independent variables of students and managers and their engagement styles. In other words, was there a significant relationship between the item responses of students or managers and their sex, year in school, years of fulltime work experience, employment status, age, number of employees in unit, type of position, and level of position within the organization? The position type was defined as management versus staff, while level of position within the organization was divided into the following categories: (a) Vice-President, (b) Departmental Manager, (c) Section Manager, (d) Subsection Manager, (e) Unit Manager, (f) Subunit Manager.

*Managers.* An analysis of the data of the Pearson's Correlation revealed that relatively no significant relationship existed between the independent variables of the managers and their item responses. For each of

the twelve items, no significant relationships were found between the managers' item responses and their sex or number of employees in their unit. Years of fulltime employment, age, and level within the organization each recorded one significant item. The type of position managers held in the organization (*i.e.*, management versus staff) was significant at the .05 level for three of the twelve items (refer to Table 6). Since only a few items showed any significant correlation, it was safe to conclude that systematic differences did not exist between the selected independent variables of managers and their responses to the items.

*Students.* Though the relationship between the managers' independent variables and their item responses was not significant, the relationship between three of the students' independent variables (year in college, years of fulltime employment, and age) and their item responses indicated significant and systematic differences. Significant differences at the .05 level were recorded between the students' year in school for five of the items. The Pearson's Correlation Coefficients also revealed that the students' age and years of fulltime employment were significant for four of the item responses. As outlined in Table 7, there appeared to be a significant positive correlation between the item responses of students and their year in college, years of fulltime employment, and age. The students' sex and employment status did not reveal any systematic relationship with the item responses. However, a systematic relationship existed between the item responses and the students' age, work experience, and particularly

Table 6

**Correlation Between Independent Variables of  
Managers and Their Item Responses**

Item	Sex		Years F/T Employment		Age		No. Employees in Unit		Type Position		Level in the Organization	
	F Value	P Level	F Value	P Level	F Value	P Level	F Value	P Level	F Value	P Level	F Value	P Level
1	-0.03	0.83	-0.06	0.67	-0.06	0.63	0.09	0.52	0.14	0.28	-0.00	0.99
2	0.02	0.90	-0.05	0.73	-0.01	0.96	-0.19	0.14	-0.27	0.037 <sup>a</sup>	-0.01	0.95
3	-0.02	0.85	0.17	0.21	0.07	0.61	0.09	0.48	0.27	0.04 <sup>a</sup>	-0.05	0.70
4	-0.15	0.25	0.34	0.01 <sup>a</sup>	0.36	0.01 <sup>a</sup>	-0.13	0.34	-0.17	0.21	0.18	0.16
5	-0.21	0.12	-0.12	0.36	-0.09	0.50	-0.14	0.28	0.05	0.74	-0.18	0.18
6	-0.10	0.44	0.28	0.03 <sup>a</sup>	0.12	0.36	0.02	0.88	-0.18	0.18	0.01	0.92
7	-0.10	0.45	-0.01	0.91	-0.13	0.34	-0.06	0.64	0.05	0.71	-0.21	0.01 <sup>a</sup>
8	-0.09	0.50	0.06	0.64	0.05	0.72	0.21	0.12	0.30	0.02 <sup>a</sup>	0.03	0.82
9	-0.01	0.96	-0.14	0.28	-0.19	0.16	0.05	0.69	0.08	0.57	-0.05	0.70
10	0.17	0.90	-0.08	0.56	0.01	0.95	-0.07	0.60	-0.02	0.90	0.04	0.78
11	-0.40	0.77	0.07	0.62	-0.03	0.81	-0.29	0.03	0.11	0.41	-0.12	0.36
12	-0.06	0.64	0.18	0.18	0.13	0.32	0.08	0.53	-0.03	0.85	-0.34	0.77

<sup>a</sup>Correlation significant at the 0.05 level

Table 7

**Correlation Between Independent Variables of  
Students and Their Item Responses**

Item	Sex		Years in College		Years F/T Employment		Employment Status		Age	
	F Value	P Level	F Value	P Level	F Value	P Level	F Value	P Level	F Value	P Level
1	0.03	0.71	0.11	0.17	0.11	0.19	-0.11	0.18	0.19	0.02 <sup>a</sup>
2	0.17	0.03 <sup>a</sup>	0.17	0.04 <sup>a</sup>	0.04	0.65	-0.04	0.60	0.07	0.38
3	0.05	0.57	0.11	0.19	0.06	0.42	-0.09	0.28	0.14	0.08
4	0.04	0.61	0.21	0.01 <sup>a</sup>	0.17	0.04 <sup>a</sup>	-0.21	0.01 <sup>a</sup>	0.23	0.00 <sup>a</sup>
5	-0.09	0.27	0.12	0.14	0.11	0.19	-0.12	0.14	0.12	0.13
6	0.05	0.50	-0.01	0.87	0.09	0.27	0.01	0.88	0.10	0.24
7	0.08	0.32	0.22	0.01 <sup>a</sup>	0.06	0.43	-0.06	0.45	0.13	0.11
8	0.15	0.06	-0.13	0.11	0.18	0.02 <sup>a</sup>	0.14	0.08	-0.13	0.10
9	0.03	0.69	0.20	0.00 <sup>a</sup>	0.19	0.02	0.15	0.06	0.19	0.02 <sup>a</sup>
10	0.08	0.30	0.21	0.01 <sup>a</sup>	0.19	0.02 <sup>a</sup>	-0.06	0.47	0.27	0.00 <sup>a</sup>
11	-0.11	0.17	0.05	0.54	0.13	0.10	-0.12	0.14	0.08	0.33
12	0.06	0.43	0.04	0.63	0.02	0.84	-0.03	0.51	0.47	0.56

<sup>a</sup>Correlation significant at the 0.05 level

their year in college. While an additional study is necessary in order to determine the specific nature of the relationship (*i.e.*, freshmen, sophomores, juniors, seniors, and graduates) we can safely conclude that the students' year in college had a significant and positive correlation with five of the item responses. The positive correlation provided additional insight into the specific nature of the relationship. Besides indicating that a significant relationship existed between five of the item responses and the students' year in college, we were also able to conclude that as students progress in college (freshman to graduate student) their item responses more closely parallel those of practicing managers. It was unclear, however, that this improved correlation was directly a result of academic preparation or a result of other variables (*e.g.*, age, experience, and maturation). In any case, there remained a significant difference between the engagement styles of fulltime graduate students and those of practicing managers.

*Work Experience.* Further analysis of the data revealed a high degree of overlap between age and work experience. The correlation between age and work experience for all subjects (students and managers) including the test-retest population was .85. For the student test population (156 subjects), the correlation between age and work experience was .85. In all cases the relationship was highly significant ( $P = 0.00$ ), which suggested significant overlap between age and work experience. The high degree of overlap between age and years of employment is shown on Table 8. Increases in years of employment were coupled with increased age. Therefore, in



Table 8

## Correlation Between Age and Employment

Years of Employment

Age

Code:

U = Undergraduate Students  
 F = Fulltime Graduate Students  
 P = Parttime Graduate Students  
 M = Managers

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38		
18	3U																																								
19	13U																																								
20	25U	3U	1U																																						
21	13U	1U																																							
22	8U	1U			2F																																				
23	1F	4P			1P																																				
24	1F		1U		6P																																				
25	2F	1F			4P		1P																																		
26			1P	1F	2P	1P																																			
27				2F	1P	1P		1P	1F	1P	1P																														
28					1P	1P		1P	1F	1P	1P																														
29	1F			1F	3P					2P																															
30								1F	3P	1P																															
31								1P			2P																														
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33			1M					1P		1P	1F	2P																													
34					1M			2P		1P	1M	2M	1P	1M																											
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order to determine the unique contribution of work experience, it was necessary to partial out the effects of age and then correlate work experience with the item responses. In other words, if everyone were the same age, what degree of variance in the item responses was captured by years of work experience?

A review of the partial correlation coefficients holding age constant revealed that the correlation between work experience and the item responses dropped significantly. The data indicated that only items 6 and 10 ( $P = .033$  and  $.016$  respectively) were significant at the  $.05$  level after controlling for age. Similarly, holding work experience constant and correlating age with the item responses revealed similar results. Items 4 and 10 ( $P = .016$  and  $.024$  respectively) were significant at the  $.05$  level after controlling for age. Results of the partial correlation are provided in Table 9.

The partial correlation coefficients revealed a modest relationship between work experience and the item responses. After removing the effects of age, only a small amount of variance in item responses could be attributed to work experience. However, it should be kept in mind that this was a statistical manipulation rather than an experimental approach, which could provide a more accurate picture of the unique contribution of work experience. Because of the high degree of overlap between age and work experience, controlling for age resulted in a very restricted range and thus a high degree of error.

Table 9  
Contribution of Work Experience

Controlling for Age			Controlling for Work Experience	
Item	F Value	P Level	F Value	P Level
1	0.085	0.104	0.103	0.062
2	0.077	0.125	0.058	0.192
3	0.108	0.054 <sup>a</sup>	0.076	0.130
4	0.074	0.135	0.143	0.016 <sup>a</sup>
5	0.030	0.327	0.039	0.281
6	0.123	0.033 <sup>a</sup>	-0.029	0.336
7	0.065	0.168	0.009	0.450
8	-0.020	0.386	-0.001	0.492
9	0.100	0.068	-0.066	0.162
10	0.143	0.016 <sup>a</sup>	0.133	0.024 <sup>a</sup>
11	0.104	0.061	-0.075	0.133
12	0.101	0.066	0.150	0.410

<sup>a</sup> Correlation significant at the 0.05 level.

### *Engagement Style Subscales*

Analysis of the data (Newman-Keuls procedure) required each question to be viewed as an independent variable. However, it was also possible to analyze the data according to the Engagement Style Subscales: Passivity, Avoidance, and Collaboration. The responses within each subscale were organized on a continuum. For the first set of four questions, the responses represented a continuum from passive to proactive. For the second set of four questions, the responses progressed from an avoidance to confrontive behaviors, while for the last set of four questions responses ranged from noncollaborative to collaborative behaviors. The chart in Appendix D provides an overview of the three hypothesized subscales and identifies the dominate behavioral response (based upon pretesting) at each end of the continuum.

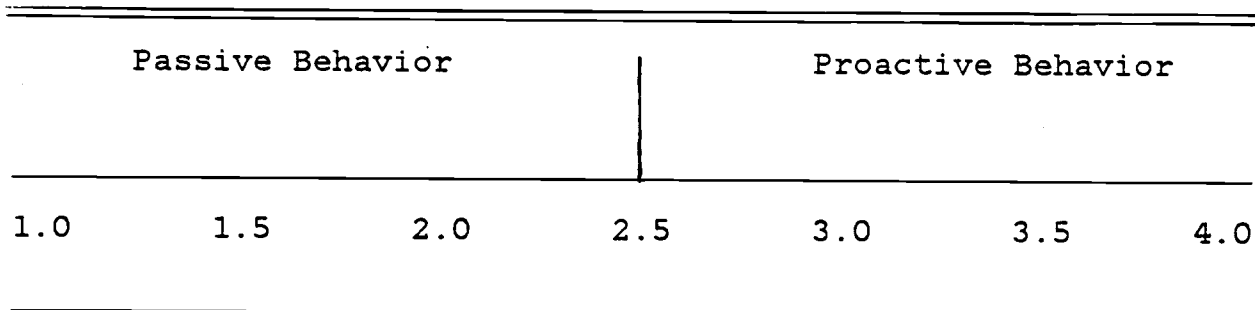
Analysis of the data indicated that significant differences existed between students and managers on the passivity and collaboration subscales; however, for the subscale dealing with avoidance behaviors, there was no significant difference between the groups.

#### *Passivity Subscale*

For the passivity subscale, the group mean scores ranged from 1.00 (extremely passive behavior) to 4.00 (extremely proactive behavior) with a mid-range of 2.50. As Figure 2 reveals, group mean scores from 1 to 2.5 represented the passive end of the scale, and group mean from 2.5 to 4 were viewed as proactive.

Figure 2

## Magnitude of Differences Within the Passivity Subscale



For item one, the first two responses (a and b) reflected passive behavior, while response c represented proactive behavior. The second item included five possible responses, with a and b representing passive behaviors and items d and e reflecting proactive behaviors. Response c is viewed as being neutral. For the third and fourth items, responses a and b are on the passive end of the continuum, while c and d are on the proactive end.

The mean scores for the four test groups are shown in Table 10 (*i.e.*, undergraduate students 2.45; parttime graduate students 2.86; fulltime graduate students 2.97; managers 3.52).

Analysis of the passivity subscale data provided the following conclusions:

Table 10

## Subgroup Differences by Engagement Style Subscales

Variables	UG Mgt.	FT Mgt.	PT Mgt.	Mgr.
Item 1	2.06*	1.97*	2.23*	2.92
Item 2	2.43*	3.63	3.16*	4.03
Item 3	3.01*	3.27*	3.23*	3.93
Item4	2.29*	2.80	2.80	3.20
Passivity Subscales	2.45	2.92	2.86	3.52
Item 5	2.27	2.40	2.38	2.53
Item 6	3.13	3.17	3.00	3.15
Item 7	2.79*	3.17	3.13	3.34
Item 8	2.56	2.60	2.21	2.36
Avoidance Subscales	2.69	2.84	2.68	2.85
Item 9	1.64*	1.37*	1.39*	1.97
Item 10	1.20*	1.50*	1.41*	2.03
Item 11	2.77	2.67	2.73	2.81
Item 12	3.27*	3.23*	3.41*	3.77
Collaboration Subscales	2.22	2.19	2.24	2.65
Number in Sample Group	70	30	56	59

\* Significant differences exist between the student groups and managers at the 0.01 level as measured by the Neuman-Keuls procedure.

1. The undergraduate management students engaged in passive behavior.
2. The practicing managers engaged in proactive behavior.
3. The fulltime and parttime graduate students fell between the undergraduate students and managers, and slightly more to the proactive end of the scale.

The passivity subscale results are summarized in Table 11.

### *Avoidance Subscale*

The avoidance subscale contained a response range from 1.00 (extreme avoidance behavior) to 3.75 (extreme confrontive behavior), with a mid-range of 2.375. Group mean scores from 1 to 2.375 were classified as avoidance behaviors, while group mean scores from 2.375 to 3.75 were considered confrontive behaviors (refer to Figure 3).

Figure 3

### Magnitude of Differences Within the Avoidance Subscale

Avoidance Behavior		Confrontive Behavior	
1.000	2.375		3.750

**Table 11**  
**Subgroup Differences by Passivity Subscale**

Group Label	N	Group Means	Engagement Style
Undergraduate Management Students (R.P.I.)	70	2.45	Passive
Parttime Management Graduate Students (R.P.I.)	56	2.86	Proactive
Fulltime Management Graduate Students (R.P.I.)	30	2.92	Proactive
Managers (Norton and General Electric)	59	3.52	Proactive



Items 5, 6, and 7 had four possible responses each, while only three options were provided for item 8. The first two responses (a and b) for each item represented avoidance behaviors, while responses c and d were confrontive. As Table 10 reveals, the mean scores for the four test groups were very similar (*i.e.*, undergraduate students 2.69; parttime graduate students 2.68; fulltime graduate students 2.84; managers 2.85).

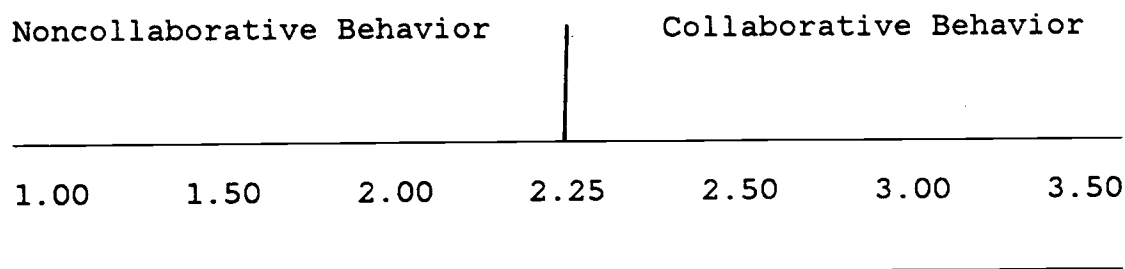
Analysis of the avoidance subscale data suggested that the undergraduate students, fulltime and parttime graduate students, and practicing managers engaged in confrontive behaviors. Results of the avoidance subscale are summarized in Table 12.

#### *Collaboration Subscale*

The collaboration subscale contained a response range from 1.00 (extremely noncollaborative) to 3.50 (extremely collaborative), with a mid-range of 2.25. Group mean scores from 1 to 2.25 were classified as noncollaborative behaviors, while group mean scores from 2.25 to 3.50 were considered collaborative behaviors (refer to Figure 4).

Figure 4

#### Magnitude of Differences Within the Collaborative Subscale



**Table 12**  
**Subgroup Differences by Avoidance Subscale**

Group Label	N	Group Means	Engagement Style
Undergraduate Management Students (R.P.I.)	70	2.69	Confrontive
Parttime Management Graduate Students (R.P.I.)	56	2.68	Confrontive
Fulltime Management Graduate Students (R.P.I.)	30	2.84	Confrontive
Managers (Norton and General Electric)	59	2.85	Confrontive

Items 9 and 10 had three possible responses each, while four options were provided for items 11 and 12. The first two responses (a and b) for each item represented noncollaborative behaviors while responses c and d were collaborative. As Table 10 reveals, the mean scores for the four groups were dispersed over the range (*i.e.*, fulltime graduate students 2.19; undergraduate students 2.22; parttime graduate students 2.24; managers 2.65).

Analysis of the collaboration subscale data (Table 10) provided the following conclusions:

1. The undergraduate management students, fulltime graduate students, and parttime graduate students engaged in noncollaborative behaviors.
2. The practicing managers engaged in collaborative behaviors.

Results of the collaboration subscale are summarized in Table 13.

### *Summary*

The Engagement Style subscales provided a useful method for interpreting the differences between management students and managers. Analysis of the data revealed that undergraduate management students engaged in passive behaviors while the graduate management students (fulltime and parttime) and the practicing managers engaged in proactive behaviors. It was worth noting that the graduate students were closer to the middle point of the passivity scale than the practicing managers and that significant differences were found between parttime graduate students and

**Table 13**  
**Subgroup Differences by Collaboration Subscale**

Group Label	N	Group Means	Engagement Style
Fulltime Management Graduate Students (R.P.I.)	30	2.19	Non-Collaborative
Undergraduate Management Students (R.P.I.)	70	2.22	Non-Collaborative
Parttime Management Graduate Students (R.P.I.)	56	2.24	Non-Collaborative
Managers (Norton and General Electric)	59	2.65	Collaborative

mangers on three of the four passivity items. The data indicated that all four groups engaged in confrontive behaviors; however avoidance behavior was not supported by the validity study. On the collaboration subscale, the student groups (undergraduate, fulltime graduate students, and parttime graduate students) recorded noncollaborative behaviors while the practicing managers engaged in collaborataive behaviors. Results of the Engagement Style subscales are summarized in Table 14.

**Table 14**  
**Summary of Results of Engagement Style Subscales**

Subgroups	Engagement Style
Managers (Norton and General Electric)	Proactive/Confrontive/Collaborative
Parttime Management Graduate Students	Proactive/Confrontive/Non-Collaborative
Fulltime Management Graduate Students (R.P.I.)	Proactive/Confrontive/Non-Collaborative
Undergraduate Management Students (R.P.I.)	Passive/Confrontive/Non-Collaborative

## V. CONCLUSIONS

Inability to engage effectively with the human systems of the organization (*i.e.*, superiors, peers, subordinates, political system, and network) has been highlighted in the review of literature as a major factor contributing to disillusionment and apathy among college graduates as well as contributing to human ineffectiveness, high turnover, and an unhealthy organizational climate. Several studies (Bigelow, 1980; Dill, 1962; Livingston, 1971; Schein, 1966; Siegel, 1973) suggested that many of the problems encountered by new recruits stem from the learning of inappropriate engagement styles in universities. In particular, these authors indicated that the university style of engagement, though adaptive to university settings, is inappropriate when applied to business settings.

In response to the above concerns, this study explored the extent to which the engagement style of management students differed from that of practicing managers. A one way analysis of variance and MANOVA test revealed that significant differences existed between all the student groups and practicing managers. Significant differences were found between students and managers for eight of the twelve items at the .01 level; and for nine of the twelve items at the .05 level of significance. A *post hoc* test (Newman-Keuls) was used to locate and determine the nature of the significant differences. The Newman-Keuls test procedures at the .01 level produced the following observations:

1. That significant differences existed between the engagement styles of undergraduate management students and practicing managers on eight of the twelve items.
2. That significant differences existed between the engagement styles of parttime graduate management students and practicing managers on six of the twelve items.
3. That significant differences existed between the engagement styles of fulltime graduate management students and practicing managers on five of the twelve items.

A review of the data (analysis of variance and Newman-Keuls) revealed a high degree of consistency of item responses for the three groups. The analysis of variance revealed that significant differences existed at the .01 level between the engagement styles of students and practicing managers on eight of the twelve items (i.e., 1, 2, 3, 4, 7, 9, 10, and 12). The Newman-Keuls test procedure - which enabled statistical comparison of the four subgroups in one setting - revealed a high degree of item response consistency.

The eight items in which significant differences were found between all the student groups and practicing managers (analysis of variance test) were the same eight items in which significant differences were found at the .01 level between undergraduate management students and practicing managers. The Newman-Keuls test procedure revealed that for the parttime graduate management students six of the eight items mentioned above (i.e., 1, 2, 3, 9, 10, and 12) were significant when



compared with the practicing managers. Furthermore, of the six items in which significant differences existed between parttime graduate management students and practicing managers, five of the items (*i.e.*, 1, 3, 9, 10 and 12) displayed significant differences between fulltime graduate management students and practicing managers.

The above discussion can be summarized by listing the item responses in which significant differences existed between student groups and practicing managers (refer to Table 15). The data from the Pearson Correlation Coefficients presented results which were particularly worth highlighting. The results of this study (research questions four and five) pointed out that the engagement styles of managers were not significantly affected by independent variables of the managers. In particular, the correlation between work experience, years of fulltime employment, and the item responses of managers were not significant. It appeared that as managers obtained additional work experience their engagement styles did not alter significantly. Therefore it was concluded that the length of fulltime employment did not represent developmental years in terms of the engagement styles of managers.

In contrast to the fulltime employment years, the college period represents a developmental stage. As reported in the results of this study, a positive and significant correlation existed between the students' year in college and their responses on five of the items. While only two items were significant with respect to the managers' years of fulltime employment, five items were significant for the students' years in college. Though additional

Table 15

Consistency of Item Responses: Items in which Significant  
Differences Exist Between Groups

Group	Prodecure ( 0.01 level)	Items
1. All Student Groups	Analysis of Variance	1, 2, 3, 4, 7, 9, 10, 12
2. Undergraduate Students	Newman-Keuls	1, 2, 3, 4, 7, 9, 10, 12
3. Parttime Graduate Students	Newman-Keuls	1, 2, 3, 9, 10, 12
4. Fulltime Graduate Students	Newman-Keuls	1, 3, 9, 10, 12

studies are needed to determine the specific nature of the relationship, we were able to conclude:

1. That work experience represented a period of relative stability in the formation of managers' engagement styles. After entering the work force, there appeared to be little change in the engagement style of managers. Or at least there was little difference between how much experience a manager had and his/her response to the items. Also, age, sex, number of employees in unit, and level within the organization had little impact on the managers' engagement style.
2. On the contrary, significant differences were found between the students' year in college and their item responses. Furthermore, it was noted that the relationship between year in college and item responses represented a positive correlation, which suggested that the engagement style of upperclassmen more closely paralleled practicing managers than the engagement style of underclassmen. The college years were viewed as critical years in the development of the future manager's engagement style. The results of this study were consistent with earlier findings (Astin, 1978; Feldman & Newcomb, 1979) and provided further support that the college period represents a developmental stage and a unique opportunity for potential intervention. Management programs which take into account the noncognitive needs of students can have a major impact on the development of the future managers' engagement style.

Based upon the results of this study, the following conclusions were made:

1. *Undergraduate Students.* The Engagement Style of undergraduate management students enrolled at Rensselaer Polytechnic Institute, differed significantly from the Engagement Style of practicing managers. Undergraduate management students engaged in passive and noncollaborative behaviors, while practicing managers engaged in proactive and collaborative behaviors.
2. *Graduate Students.* The Engagement Style of fulltime and parttime graduate students enrolled at Rensselaer Polytechnic Institute, differed significantly from the Engagement Style of practicing managers. Graduate students engaged in noncollaborative behaviors, while practicing managers engaged in collaborative behaviors.
3. *Reliability Study.* The "Engagement Style Survey" was found to be a reliable instrument. The average test-retest reliability coefficient across subjects was .80, which was viewed as an acceptable level of consistency.
4. *Validity Study.* Factor analysis did not support the existence of three constructs (subscales). Examination of the interpretability and meaningfulness of the rotated factor matrices led to the final selection of the two factor solution (Passivity, and Collaboration) accounting for 30% of the obtained variance.
5. *Independent Variables.* The independent variables (sex, years of fulltime employment, age, number of employees with department, type

of position within the organization, and level of position within the organization) had no significant impact on the Engagement Style of managers. However, year in college, years of fulltime employment, and age did have a significant impact on the Engagement Style of management students. The students' sex and current employment status had no significant impact upon their engagement style.

6. *Work Experience.* A modest relationship was found between work experience and the Engagement Style of students and managers. After removing the effects of age, only a small amount of variance in item responses can be attributed to experience. However, due to the high degree of overlap between age and work experience, controlling for age resulted in a very restricted range and thus a high degree of error.

## VI. DISCUSSION

### *Impact of University Experience on Student Development*

The major finding of this study was that undergraduate management students engaged in passive and noncollaborative behaviors, while practicing managers engaged in proactive and collaborative behaviors. This finding lent credence to the premise that the engagement style of students, though adaptive to university settings, will create problems when applied to business settings. Graduates who interact with their supervisors and coworkers in the same style in which they engaged with their instructors and classmates will find their approach ineffective. Though graduates may have the technical tools required for business, they do not possess the noncognitive skills essential for establishing effective careers in business. Inability to engage effectively with the human systems of the organization is viewed as a major factor contributing to disillusionment and apathy among college graduates as well as contributing to human ineffectiveness, voluntary turnover, and an unhealthy organizational climate.

The nature and structure of educational institutions in America produce attitudes and atmospheres that affect student engagement styles. Throughout their entire education, from grammar school through graduate school, students are in authoritarian situations where they possess little, if any, power. They learn to be unobtrusive, to melt in with the crowd (so as

not to be called upon in class), and to take irrelevancies seriously. They are treated as minors rather than as adults, which fosters a low sense of responsibility. Since they exist in situations which have been externally structured, they often depend upon others for a sense of structure. Since they are constantly in competition for grades, they tend to work individually rather than in cooperation with others.

On the other hand, the teachers' attitudes also affect the development of styles of engagement in students. Teachers tend to emphasize theoretical and factual learning rather than noncognitive skills because these are the areas that can be measured quantitatively. They also place great emphasis on individual achievement rather than on group effort. The teacher occupies a superior position in the hierarchy since he/she is the authority (in both senses: the authority in the sense that his/her knowledge of the subject matter is greater and authoritarian in the sense that he/she possesses power).

Finally, the institutional structure of American education affects the development of students' engagement style. Extracurricular activities tend to be structured and supervised by representatives of the institution (usually either teachers or "student personnel specialists"). Services are provided for the student rather than by the student. A whole series of supportive services exists to smooth the way for students rather than permit them to confront and resolve their own conflicts. The administrations of the institutions also impose authoritarian restrictions on students, resulting in both a sense of powerlessness and a diminished sense of responsibility.

In summary, all aspects of the students' academic experience take place in the context of the school and the teacher viewing themselves, and being perceived as, acting in *loco parentis*. This perpetuation of the status of the minor, in turn, tends to make the student feel powerless, dependent upon others, obedient, passive, lacking in initiative, subservient, and oriented toward achieving high grades rather than substantive results. Thus overwhelmed by both teacher and institution, the student's only recourse to assert his/her self-respect is to attempt to circumvent the system by perfecting the art of gamesmanship, manipulation, and Machiavellian machinations. The critical question is whether or not these qualities, inculcated over many years of experience in the educational system, are the most appropriate or most desirable qualities for managers or prospective managers.

The results of this study led the writer to the conclusion that management students are not learning appropriate engagement styles through their university experience. Both universities and companies are social systems which indoctrinate or "socialize" their new members to their values, norms, and behavior patterns. However, as Figure 5 indicates, the engagement style which students learn in universities is in direct conflict with the engagement style essential for business. Despite heavy emphasis on orientation programs by companies, the process of unlearning an engagement style which has been developed through sixteen years of experience with educational institutions is difficult and expensive.



Figure 5

## Implications for Management Education and Student Services

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### I. School Environment

#### A. Classroom Management

#### B. University at Large (Student Services)

1. Student Government
2. Clubs and Societies
3. College Union
4. Living Units
5. Athletics
6. University Committees

University  
Engagement  
Styles

conflicts and  
problems, "high  
turnover, apathy,  
human ineffectiveness,  
unhealthy organization  
climate"

Implications

Business  
Engagement  
Style

### II. Business Environment

1. Student Services  
"Learning by Doing"
2. Business Education  
"Experiential  
courses"

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### *Attributes of University Experiences*

The results of this study suggested that a relationship exists between attributes of university experiences and student development (refer to Table 16). There are two broad areas in which attributes of the university can have a direct impact on the engagement style of students and thus influence the student's overall development: (1) classroom activities, and (2) out-of-classroom activities.

The traditional mode of university instruction has been heavily influenced by the necessity to educate large numbers of students with limited resources in a brief period of time. In addition, the necessity for a quantifiable grading system which can be computed quickly and defended easily has also influenced the traditional mode of university instruction. In response to these constraints and resource limitations, several authors (Bigelow, 1980; Livingston, 1971; Schein, 1966, 1968; Webber, 1976) indicate that educators have developed course curricula and classroom activities which are characterized by:

1. High instructor control.
2. Development of "response behavior," rather than "operant behavior."
3. High emphasis on rational and technical learning and little concern for the development of noncognitive skills.
4. Development of passive and avoidance behaviors, rather than encouragement of proactive and confrontive behaviors.
5. Low student interdependence, rather than encouraging collaborative behaviors.

Table 16  
Impact of University Experiences on Student Development

Attributes of University Experiences	Impacts on Student's Engagement Style	Problems in the Real World
	<u>Passive Behavior</u>	<u>Problems with Larger Organization</u>
1. Highly structured classes	Dependence on others	Identifying and entering
2. Highly structured activities-administrators control events	Low feelings of personal power	Establishing relations with superiors
3. Treated as minors	Insensitivity to political environment	Dealing with organizational politics
4. Services provided for rather than by students	Inability to deal with ambiguity, stress	Apathy and complacency
5. Response rather than operant behaviors	Inadequate probing of environment	Inability to find problems initiate action and follow through
	<u>Avoidance Behavior</u>	<u>Problems with Peers</u>
6. Emphasis on technical skills	Rational rather than situational perspective	Unable to work with or use skills of others
7. Emphasis on rational learning	Avoidance of conflicts	Persuasion
8. Over "zestful" counselors student personnel specialists	Rely on others to resolve conflict	Communication skills
9. Learn to "beat the system"		Interpersonal skills Improving work group effectiveness Conflict management
	<u>Noncollaborative Behavior</u>	<u>Problems with Subordinates</u>
10. Emphasis on knowledge and individual skills	Over-individualistic	Leadership
11. Individual rather than group work	Low collaborative inclinations	Exercise of power and authority
12. Emphasis on grades	Gamesmanship	Motivate others
13. Left out of decision making	Manipulation	
14. Authoritarian approach	Machiavellian	

6. High emphasis on knowledge, skills, and techniques, and low emphasis on faith and trust in others.

Through engagement with the university-at-large students learn to "beat the system" by circumventing regulations. Students are not encouraged to serve as equal partners in their own education process, but are misled into passivity. They are treated as minors not adults; services are provided for them rather than by them and they are left out of critical decision making. The out-of-classroom activities of students are also characterized by a heavy emphasis on authority figures, highly structured social life and an over-abundance of individuals ready to solve every student problem.

#### *Impact on Student Engagement Styles*

Attributes of the university experience (classroom and out-of-classroom activities) impart an engagement style which is characterized by passive, avoidance, and noncollaborative behaviors. Students develop low feelings of personal power, a high dependence on others for structure, and an insensitivity to political realities. They do not "probe" their environment and are unable to deal with stress and ambiguity. Students would rather avoid conflict than confront the issues and they develop low collaborative inclinations. Students also develop Machiavellian and manipulative styles which are more in keeping with the orientation of faculty and administrators than practicing managers.

### *Problems in the Real World*

The engagement style which management students develop in response to their university experiences will create problems when applied to the real world of business. New recruits experience difficulty in identifying and entering the social system of the organization and in establishing effective relations with superiors and peers. Though most graduates reported that their college education adequately provided the technical tools required in their new jobs, it had not given them the essential skills for dealing with personal problems or working with people. Understanding the political system of the organization is also a problem for newcomers. While oldtimers have had previous experience with the political system and possess a network of friends and associates to help them interpret situations, college graduates lack experience in coping with the politics of organizations.

Rather than striving to find problems and opportunities, initiating action, and following through to attain desired results, college graduates prefer to respond to specific problems. Preoccupation with problem solving and decision making in formal management education programs tends to overdevelop the students' analytical tools, while leaving underdeveloped his/her ability to take action on the facts available and follow through to get things done.

Inability to persuade and motivate others is another problem of college graduates. High grades in college and an outstanding performance as an engineer may reveal how able and willing a person is to perform tasks

he/she has been assigned. But an outstanding record as an individual performer does not indicate whether that person is able or willing to get other people to excel at the same tasks. In addition, the college experience provides little opportunity for a student to develop leadership abilities.

Inability to enter the social system and develop an effective relationship with superiors and peers creates apathy and complacency among college graduates. Disillusionment not only contributes to high turnover among new recruits and creates an unhealthy organizational climate, it also robs the company of its most valuable resource - the hopes and dreams of newcomers. (Schein, 1968)

### *Suggestions*

If the assertion that a relationship exists between attributes of university experiences and student development is correct, then it follows that if we can change the ways in which students engage in universities to styles more appropriate to business, then the transition from university to business will be less problematic. Several alternatives for changing the ways in which students engage in universities into a style more appropriate to business are suggested by the writer:

#### *1. Classroom Activities*

- a. *Teaching of Organizational Behavior.* Business courses which deal primarily with noncognitive skills should not be taught according to a traditional design. The teaching of organizational behavior lends

itself to an experiential approach which requires active involvement in the learning process by students. Case studies, field trips, and group projects should be encouraged.

- b. *More Effective Use of Groups.* Dr. Bigelow (1980) argues that groups can serve as an effective method to reduce the instructor's workload while at the same time providing valuable experience for students to work with others. However, he points out that the group must have control over how rewards are allocated to members and must have had some prior guidance on how to establish effective workgroups. Allowing the group as a whole to have a major say regarding member's grades introduces other criteria into the grading process. In addition, involvement of group members in the grading process may more accurately reflect evaluations and promotions in the real world of work.
- c. *Delegate Aspects of the Course to Student or Student Groups.* Class sessions, case studies, discussion questions, and field projects can be assigned to students or student groups, as opposed to more traditional approaches of classroom instruction. Each group can explore specific topics and contribute its conclusions to the over-all class.
- d. *Involve Students in Selected Course Design Issues.* Dr. Bigelow (1980) points out that in designing a course there are decisions regarding course design which may be of low importance to the instructor, but of major importance to students (e.g., type and

number of questions on examinations, dates and weighting of examination, and scheduling course topics). Rather than simply making all of these decisions ahead of time, the instructor can allow students the opportunity to have input on various items. Student involvement in course design can create early interest in the course and hopefully ensure that the course meets student needs. In addition, student involvement in course design will develop a greater appreciation on the part of students for participative decision making.

## 2. *Out-of-Classroom Activities*

Extra-curricular activities of colleges and universities, organized or informal, represent a rich and often untapped educational resource. They are rich because they provide a variety of experiences which can enable students to practice what is taught in the classroom, or bring them into contact with new ideas, facts, or concepts which can complement their classroom experiences. These activities are often untapped because many educators have not recognized the potential for learning through extra-curricular activities. The opportunities for engagement in out-of-classroom activities are numerous. For example, students may become involved in student government, clubs and societies, student union activities and management, judicial process, residence hall programs, athletics and intramurals, university committees, and campus events. In addition to organized involvement, numerous opportunities exist for informal engagement with the



university-at-large (e.g., bursar, registrar, financial aid, and dean of students offices). Engagement with the university-at-large provides a unique opportunity for "experiential learning" or "learning by doing." Learning by doing includes, but goes beyond, the premise that there are ideas, facts, or concepts that are important to remember. It assumes that learning occurs when those ideas, facts, or concepts are put to work in real life situations.

A more formal relationship between the university's school of management and student personnel workers should be developed. The management of the campus bookstore, food services, residence halls, and unions should be exploited for their educational advantage. Practicums, class projects, and independent studies which would encourage students to practice what is being taught in the classroom should be developed between student services departments and the school of management. In addition student-run operations (e.g., unions, halls of residence, and sports unions) should be encouraged by the administration. While student-run operations may experience a lack of continuity from year to year, they do provide numerous opportunities for learning by doing which are not usually found in the traditional institution-run services. Student personnel workers should serve as resource individuals and teachers; however, they should not "take over" management of the operations and\* decision making processes which could be handled by students.

Changing the type of engagement students experience in the classroom and out-of-classroom activities of the university, to include responsibility, problem solving, initiative, cooperation with others, and the necessity to perform will probably be beneficial in facilitating the transition from the university environment to the real world of business.

## VII. RECOMMENDATIONS

The review of the literature and the results of this study suggest the following recommendations for future research:

1. Further research should be conducted to examine and strengthen the construct validity of the "Engagement Style Survey" (*i.e.*, with assistance from Dr. Donald Brush and the School of Management, Rensselaer Polytechnic Institute, the writer is conducting a scale refinement study to develop the constructs in greater depth and to make them more homogeneous. A large pool of items has been developed which will be followed up by item analysis to eliminate items which do not fall within a particular scale and retain those which would contribute to its homogeneity and meaningfulness).
2. A criterion validity study should be conducted. Scores from the self report instrument ("Engagement Style Survey") should be correlated to overt behaviors either through simulation or observation of actual behavior. This would add a different and useful dimension of validity to the instrument.
3. This improved instrument could be used as a diagnostic tool. The strengths and weaknesses of the student's engagement style should be assessed and the data used to develop individualized training modules or exercises. Students who were high in passivity, avoidance, or noncollaboration should be put through some educational activities in

order to alter their engagement style to be more congruent with that of managers. For example, professional leadership programs involving, summer work experience, seminars with practicing managers, field trips to companies, special group projects, and internships could be developed.

4. A longitudinal study should be conducted to explore in greater detail the impact of the college experience on the engagement style of students. The engagement style of an experimental group of students should be measured at set intervals during their college experience to assess in greater detail changes in the engagement style of students. In addition, follow-up studies measuring changes in the engagement style of individuals after they leave the institution should be conducted. Emphasis should also be given to measuring changes in the engagement style of students who withdraw from the institution.
5. This study should be replicated at other institutions to determine if the engagement style of students differs significantly among institutions. Is there a significant relationship between the engagement style of students and institutional variables such as: size, location, type, and recruitment procedures?
6. Further studies should be conducted to explore in greater detail the relationship between individual attributes of students and their engagement styles. Do significant differences exist between the engagement style of students and their academic major or background factors?

7. The engagement styles of effective versus those of less effective managers should be explored to determine the specific nature of the relationship between the engagement style of managers and their managerial effectiveness.
8. A study should be conducted to determine if significant differences exist between the engagement styles of managers from various departments (*e.g.*, finance, accounting, marketing, and personnel). For example, does the engagement style of managers from the finance department differ significantly from the engagement style of personnel managers?
9. A study should be conducted to determine if a relationship exists between the type of industry (*e.g.*, process, petroleum, sales, and research) or the technological typology of the industry (*i.e.*, long-linked, mediating, and intensive) and the engagement style of the respective managers. For example, do managers from the petroleum industry utilize different engagement styles from managers in process or research industries.

Hopefully, the results of this study will raise additional questions and stimulate further research which will facilitate insight into the relationship between the "real world" and the university experience.

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## IX. APPENDICES

## APPENDIX A

## "WHAT DO YOU DO..." ASSIGNMENT for BA 361

Most of us have been members of a number of groups, and have recurrently experienced certain kinds of group situations. We tend to develop consistent actions in response to these situations, according to our own needs, values, and goals. Below, a series of commonly occurring group situations are described. For each, briefly describe: 1) what you typically do in this situation; 2) why you do it - The needs, goals, and/or values important to you in this situation, and; 3) what you expect the consequences of your actions to be, and how this relates to your needs, goals, and values.

1. You are in a small group just formed, which is to carry out a certain task. You don't know anyone in the group well.
2. You have an idea you would like your group to accept, but are uncertain as to how it will be received.
3. You notice that someone in your group is not contributing. The person sits quietly and is apparently paying attention, but rarely says anything.
4. In your group, two members disagree over a point and begin arguing. It appears that they are not coming closer to an agreement, and the argument may continue for some time.
5. In situation four above, the argument becomes heated: the two are flushed and speaking quite loudly.
6. In four, you are one of the people in the argument. You feel rising irritation at the obstinacy of the other person.
7. Your group must make an important decision, but can't make up its mind. Several alternatives have been suggested, but no one seems enthusiastic about any of them.
8. Your work group has much work to do, but the energy level seems low. A person did not come to the meeting, and people keep wandering from the task and socializing. Two people are sitting off to the side and talking to each other.
9. It is clear that some one person is needed to coordinate one phase of your group task, but no one is stepping forth.
10. Your work group is unhappy with its situation. Members feel that their supervisor is not providing the conditions they need to perform their task effectively.
11. A member has "taken over" your group. While no one seems to want this person as leader, the person is dominating the group, forcing decisions on it, and assigning work.

NOTE: Keep a copy of this paper for your individual paper.

## APPENDIX B

Engagement Style

The items in this survey present a variety of situations typical to most managers. The items do not represent the spectrum of managerial experiences but focus upon specific aspects of interpersonal behavior and group dynamics.

For each of the situations, select the one response which most accurately fits "What You Usually Do?" Remember to indicate "What You Usually Do" and NOT what you "Think You Should Do." After each question, indicate how frequently the situation occurs in your work.

PLEASE CIRCLE THE APPROPRIATE RESPONSE

1. Your supervisor has assigned a project to you and he/she has been very clear on what is expected and how you should proceed. However, you believe that there is a better method to complete the project. "What Do You Do?"
  - a. Complete the project as assigned.
  - b. Discuss with co-workers my ideas about how to complete the project.
  - c. Discuss with the supervisor my ideas about how to complete the project.
  
2. Your supervisor has requested that you complete a project, however, he/she was unclear on minor points. You were informed of the general topic of the project, but he/she was vague regarding specific details. "What Do You Do?"
  - a. Wait and see what develops.
  - b. Discuss the problem with co-workers.
  - c. Discuss the problem at a staff meeting.
  - d. Go ahead with your own plan of action.
  - e. Discuss the problem privately with your supervisor.
  
3. Your supervisor has requested that you complete a project, however, he/she has been unclear on major points. He/she informed you of the project but for the past two weeks you have been given no direction at all and told to "just work on it." You have just been informed that the due date has been advanced and you should have your report completed next week. "What Do You Do?"
  - a. Wait and see what develops.
  - b. Discuss the problem with co-workers.
  - c. Discuss the problem at a staff meeting.
  - d. Discuss the problem privately with your supervisor.

- 2 -

4. You are attending one of your regular staff meetings. Your supervisor makes a statement which you are certain is not correct. "What Do You Do?"
  - a. I would probably do nothing.
  - b. Talk to some of my co-workers about the statement.
  - c. Present my opinion during the staff meeting.
  - d. Present my opinion privately with my supervisor.
  
5. You have been assigned to a work group with the task of completing a report in 3 months. There are important decisions which must be made, but each time the group meets little gets achieved. "What Do You Do?"
  - a. Suggest that someone (besides yourself) serve as chairperson.
  - b. Stress the need for participation in order to complete the project.
  - c. Volunteer to serve as chairperson.
  - d. Do the project myself.
  
6. You have been assigned to a work group with the task of presenting a report in 3 months. The group has met several times and each time you notice that one member is not contributing. Though subtle attempts have been made to get the individual involved he/she rarely contributes anything. "What Do You Do?"
  - a. Request that the person be removed from the group.
  - b. Leave the person alone.
  - c. Continue using subtle techniques to get the person involved.
  - d. Discuss with the person their lack of participation.
  
7. Your work group has a lot of work to do, but the energy level seems low. One person did not attend the meeting, and people keep wandering from the task and socializing. Two people are sitting off to the side and talking to each other. "What Do You Do?"
  - a. Suggest that tonight's meeting be cancelled and held at a later date.
  - b. Tell the group to stop wasting time and get to work.
  - c. Use various techniques in order to redirect conversation back on the topic.
  - d. Discuss with the group your observations and concerns. .

- 3 -

8. You have been assigned to a work group with the task of presenting a report in 2 months. During the second meeting two members of the group disagree over a point and begin arguing. "What Do You Do?"
  - a. Request that they stop arguing and deal with other items.
  - b. Allow the individuals time to work out their differences.
  - c. Attempt to serve as a mediator of the argument.
  
9. You have just received a very important assignment! The assignment can have a major impact on your 'rating' and promotion prospects within the company. You want to do your very best, however, you have only one week to complete a written report. "What Do You Do?"
  - a. Begin organizing the project; then prepare written report without assistance.
  - b. Begin organizing the project; then approach other employees for their ideas.
  - c. Arrange to meet with co-workers to discuss assignment and share ideas.
  
10. You have just received a project from your supervisor. Your supervisor stated that the report is due within two months and that you should select 2 other individuals from your department to work with you. In order to improve your promotion prospects you want to do as good a job as possible. Though you are familiar with most everyone in the department, two individuals are close friends of your. "What Do You Do?"
  - a. Ask my two friends to work with me on the project.
  - b. Select the most capable members in the department to work with me.
  - c. Approach someone whom I would like to get to know better.
  
11. You have been assigned to a committee with the task of preparing a one year strategic plan. At the first meeting the group is wondering how it should organize itself to accomplish the work. "What Do You Do?"
  - a. Suggest that the work be assigned to individuals, to be put together at a final meeting.
  - b. Suggest few meetings - work done primarily by individual members.
  - c. Suggest periodical meetings - work organized around 2/3 person teams.
  - d. Suggest that all work be done through regular committee meetings.

- 4 -

12. You are attending a management seminar which is sponsored by your department. Though your attendance is not required you believe the seminar will be helpful in terms of your own career development. Two individuals have been dominating most of the discussion. "What Do You Do?"
- Stop attending the seminar.
  - Attend only a few sessions just to keep in touch.
  - Attend sessions, but maintain a very limited involvement in discussions.
  - Become directly involved in the discussion.

GENERAL INFORMATION

Please circle or write in the appropriate response

Sex: Male \_\_\_\_\_ Female \_\_\_\_\_

Age: \_\_\_\_\_ Years of full-time Employment \_\_\_\_\_

What is your position or job title? \_\_\_\_\_

Approximate number of employees in your Unit \_\_\_\_\_

Level of Position: (check appropriate category)

- \_\_\_\_\_ a. Vice President or equivalent
- \_\_\_\_\_ b. Department Manager or equivalent
- \_\_\_\_\_ c. Section manager or equivalent
- \_\_\_\_\_ d. Sub section manager or equivalent
- \_\_\_\_\_ e. Unit manager or equivalent
- \_\_\_\_\_ f. Sub unit manager or equivalent

Type or Position

\_\_\_\_\_ Operating Management \_\_\_\_\_ Staff

Note: The format for the General Information outlined above was requested by the General Electric Corporation

- 4 -

12. You are attending a management seminar which is sponsored by your department. Though your attendance is not required you believe the seminar will be helpful in terms of your own career development. Two individuals have been dominating most of the discussion. "What Do You Do?"
- Stop attending the seminar.
  - Attend only a few sessions just to keep in touch.
  - Attend sessions, but maintain a very limited involvement in discussions.
  - Become directly involved in the discussion.

GENERAL INFORMATION

Please circle or write in the appropriate response

Sex: Male \_\_\_\_\_ Female \_\_\_\_\_

Age: \_\_\_\_\_ Years of full-time Employment \_\_\_\_\_

What is your position or job title? \_\_\_\_\_

Approximate number of employees in your department \_\_\_\_\_

Level of Position: (check appropriate category)

- \_\_\_\_\_ a. First level supervisor or equivalent
- \_\_\_\_\_ b. Manager or equivalent
- \_\_\_\_\_ c. Department Head or equivalent
- \_\_\_\_\_ d. Vice President or equivalent
- \_\_\_\_\_ e. Senior corporate management or equivalent

Note: The format for the General Information as outlined above was requested by the Norton Corporation



## APPENDIX C

Engagement Style

The items in this survey present a variety of situations typical to most students. The items do not represent the spectrum of educational experiences but focus upon specific aspect of the classroom environment.

For each of the situations, select the one response which most accurately fits "What You Usually Do". Remember to indicate, "What You Usually Do" and NOT you "Think You Should Do?"

PLEASE CIRCLE THE APPROPRIATE RESPONSE

1. Your instructor has assigned a project to you and he/she has been very clear on what is expected and how you should proceed. However, you believe that there is a better method to complete the project. "What Do You Do?"
  - a. Complete the project as assigned.
  - b. Discuss with classmates my ideas about how to complete the project.
  - c. Discuss with the instructor my ideas about how to complete the project.
2. Your instructor has requested that you complete a project, however, he/she was unclear on minor points. You were informed of the general topic of the project, but he/she was vague regarding specific details. "What Do You Do?"
  - a. Wait and see what develops.
  - b. Discuss the problem with other classmates or friends.
  - c. Discuss the problem in class.
  - d. Go ahead with your own plan of action.
  - e. Discuss the problem privately with the instructor.
3. Your instructor has requested that you complete a project, however, he/she has been unclear on major points. He/she informed you of the project but for the past two weeks you have been given no direction at all and told to "just work on it". You have just been informed that the due date has been advanced and you should have your report completed next week. "What Do You Do?"
  - a. Wait and see what develops.
  - b. Discuss the problem with other classmates or friends.
  - c. Discuss the problem in class.
  - d. Discuss the problem privately with the instructor.
4. You are attending one of your regular lectures. Your instructor makes a statement which you are certain is not correct. "What Do You Do?"
  - a. I would probably do nothing.
  - b. Talk to some of my classmates about the statement.
  - c. Present my opinion during the class session.
  - d. Present my opinion privately with the instructor.
5. You have been assigned to a work group with the task of completing a report in 3 months. There are important decisions which must be made, but each time the group meets little gets achieved. "What Do You Do?"
  - a. Suggest that someone (besides yourself) serve as chairperson.
  - b. Stress the need for participation in order to complete the project.
  - c. Volunteer to serve as chairperson.
  - d. Do the project myself.

- 2 -

6. You have been assigned to a work group with the task of presenting a report in 3 months. The group has met several times and each time you notice that one member is not contributing. Though subtle attempts have been made to get the individual involved he/she rarely contributes anything "What Do You Do?"
  - a. Request that the person be removed from the group.
  - b. Leave the person alone.
  - c. Continue using subtle techniques to get the person involved.
  - d. Discuss with the person their lack of participation.
7. Your work group has a lot of work to do, but the energy level seems low. One person did not attend the meeting, and people keep wandering from the task and socializing. Two people are sitting off to the side and talking to each other. "What Do You Do?"
  - a. Suggest that tonight's meeting be cancelled and held at a later date.
  - b. Tell the group to stop wasting time and get to work.
  - c. Use various techniques to redirect conversation back on the topic.
  - d. Discuss with the group your observations and concerns.
8. You have been assigned to a work group with the task of presenting a report in 2 months. During the second meeting two members of the group disagree over a point and begin arguing. "What Do You Do?"
  - a. Request that they stop arguing and deal with other items.
  - b. Allow the individuals time to work out their differences.
  - c. Attempt to serve as a mediator of the argument.
9. You have just received a very important assignment! The assignment can have a major impact on your grade in the course. You want to do your very best, however, you have only one week to complete a written report. "What Do You Do?"
  - a. Begin organizing the project; then prepare written report without assistance.
  - b. Begin organizing the project; then approach other classmates for their ideas.
  - c. Arrange to meet with classmates to discuss assignment and share ideas.
10. You have just received a project from your instructor. Your instructor stated that the report is due within two months and that you should select 2 other individuals from the class to work with you. In order to improve your grade you want to do as good a job as possible. Though you are familiar with almost everyone in the class, two individuals are close friends of yours. "What Do You Do?"
  - a. Ask my two friends to work with me on the project.
  - b. Select the most capable members in the class to work with me.
  - c. Approach someone who I would like to get to know better.
11. You have been assigned to a committee with the task of preparing a one year strategic plan. At the first meeting the group is wondering how it should organize itself to accomplish the work. "What Do You Do?"
  - a. Suggest that the work be assigned to individuals; to be put together at a final meeting.
  - b. Suggest few meetings - work done primarily by individual members.
  - c. Suggest periodical meetings - work organized around 2/3 person teams.
  - d. Suggest that all work be done through regular committee meetings.

- 3 -

12. You are attending a management seminar which is sponsored by your department. Though your attendance is not required you believe the seminar will be helpful in terms of your own career development. Two individuals have been dominating most of the discussions "What Do You Do?"
- Stop attending the seminar.
  - Attend only a few sessions just to keep in touch.
  - Attend sessions, but maintain a very limited involvement in discussions.
  - Become directly involved in the discussion.

GENERAL INFORMATION

Please check or write in the appropriate response.

Sex                      1. ☐ Male                      2. ☐ Female

Year in School

- |                                       |                                    |  |
|---------------------------------------|------------------------------------|--|
| 1. <input type="checkbox"/> Freshman  | 3. <input type="checkbox"/> Junior | 5. <input type="checkbox"/> Graduate Student Part-time |
| 2. <input type="checkbox"/> Sophomore | 4. <input type="checkbox"/> Senior | 6. <input type="checkbox"/> Graduate Student Full-time |
|                                       |                                    | 7. <input type="checkbox"/> Other (or not applicable)  |

School or College enrolled in at R.P.I. \_\_\_\_\_

Major or Area of Concentration \_\_\_\_\_

Years of full-time employment (not including summer work) \_\_\_\_\_

Are you currently employed full-time? Yes ☐ No ☐

Age \_\_\_\_\_

## APPENDIX D

Engagement Style

The items in this survey present a variety of situations typical to most managers. The items do not represent the spectrum of managerial experiences but focus upon specific aspects of interpersonal behavior and group dynamics.

For each of the situations, select the one response which most accurately fits "What You Usually Do?" Remember to indicate "What You Usually Do" and NOT what you "Think You Should Do." After each question, indicate how frequently the situation occurs in your work.

PLEASE CIRCLE THE APPROPRIATE RESPONSE

1. Your supervisor has assigned a project to you and he/she has been very clear on what is expected and how you should proceed. However, you believe that there is a better method to complete the project. "What Do You Do?"
  - a. Complete the project as assigned.
  - b. Discuss with co-workers my ideas about how to complete the project.
  - c. Discuss with the supervisor my ideas about how to complete the project.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

2. Your supervisor has requested that you complete a project, however, he/she was unclear on minor points. You were informed of the general topic of the project, but he/she was vague regarding specific details. "What Do You Do?"
  - a. Wait and see what develops.
  - b. Discuss the problem with co-workers.
  - c. Discuss the problem at a staff meeting.
  - d. Go ahead with your own plan of action.
  - e. Discuss the problem privately with your supervisor.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

3. Your supervisor has requested that you complete a project, however, he/she has been unclear on major points. He/she informed you of the project but for the past two weeks you have been given no direction at all and told to "just work on it." You have just been informed that the due date has been advanced and you should have your report completed next week. "What Do You Do?"
  - a. Wait and see what develops.
  - b. Discuss the problem with co-workers.
  - c. Discuss the problem at a staff meeting.
  - d. Discuss the problem privately with you supervisor.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

- 2 -

4. You are attending one of your regular staff meetings. Your supervisor makes a statement which you are certain is not correct. "What Do You Do?"
- I would probably do nothing.
  - Talk to some of my co-workers about the statement.
  - Present my opinion during the staff meeting.
  - Present my opinion privately with my supervisor.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

5. You have been assigned to a work group with the task of completing a report in 3 months. There are important decisions which must be made, but each time the group meets little gets achieved. "What Do You Do?"
- Suggest that someone (besides yourself) serve as chairperson.
  - Stress the need for participation in order to complete the project.
  - Volunteer to serve as chairperson.
  - Do the project myself.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

6. You have been assigned to a work group with the task of presenting a report in 3 months. The group has met several times and each time you notice that one member is not contributing. Though subtle attempts have been made to get the individual involved he/she rarely contributes anything. "What Do You Do?"
- Request that the person be removed from the group.
  - Leave the person alone.
  - Continue using subtle techniques to get the person involved.
  - Discuss with the person their lack of participation.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

7. Your work group has a lot of work to do, but the energy level seems low. One person did not attend the meeting, and people keep wandering from the task and socializing. Two people are sitting off to the side and talking to each other. "What Do You Do?"
- Suggest that tonight's meeting be cancelled and held at a later date.
  - Tell the group to stop wasting time and get to work.
  - Use various techniques in order to redirect conversation back on the topic.
  - Discuss with the group your observations and concerns.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

- 3 -

8. You have been assigned to a work group with the task of presenting a report in 2 months. During the second meeting two members of the group disagree over a point and begin arguing. "What Do You Do?"
- Request that they stop arguing and deal with other items.
  - Allow the individuals time to work out their differences.
  - Attempt to serve as a mediator of the argument.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

9. You have just received a very important assignment! The assignment can have a major impact on your 'rating' and promotion prospects within the company. You want to do your very best, however, you have only one week to complete a written report. "What Do You Do?"
- Begin organizing the project; then prepare written report without assistance.
  - Begin organizing the project; then approach other employees for their ideas.
  - Arrange to meet with co-workers to discuss assignment and share ideas.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

10. You have just received a project from your supervisor. Your supervisor stated that the report is due within two months and that you should select 2 other individuals from your department to work with you. In order to improve your promotion prospects you want to do as good a job as possible. Though you are familiar with most everyone in the department, two individuals are close friends of your. "What Do You Do?"
- Ask my two friends to work with me on the project.
  - Select the most capable members in the department to work with me.
  - Approach someone whom I would like to get to know better.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

11. You have been assigned to a committee with the task of preparing a one year strategic plan. At the first meeting the group is wondering how it should organize itself to accomplish the work. "What Do You Do?"
- Suggest that the work be assigned to individuals, to be put together at a final meeting.
  - Suggest few meetings - work done primarily by individual members.
  - Suggest periodical meetings - work organized around 2/3 person teams.
  - Suggest that all work be done through regular committee meetings.

Frequency of Occurrence

Never	Seldom	Sometime	Frequently
1	2	3	4

- 4 -

12. You are attending a management seminar which is sponsored by your department. Though your attendance is not required you believe the seminar will be helpful in terms of your own career development. Two individuals have been dominating most of the discussion. "What Do You Do?"
- Stop attending the seminar.
  - Attend only a few sessions just to keep in touch.
  - Attend sessions, but maintain a very limited involvement in discussions.
  - Become directly involved in the discussion.

Frequency of Occurrence

Never Seldom Sometime Frequently  
 1 2 3 4

GENERAL INFORMATION

Please circle or write in the appropriate response

Sex: Male \_\_\_\_\_ Female \_\_\_\_\_

Age: \_\_\_\_\_ Years of full-time Employment \_\_\_\_\_

What is your position or job title? \_\_\_\_\_

Approximate number of employees in your department \_\_\_\_\_

Level of Position: (check appropriate category)

- \_\_\_\_\_ a. First level supervisor or equivalent
- \_\_\_\_\_ b. Manager or equivalent
- \_\_\_\_\_ c. Department Head or equivalent
- \_\_\_\_\_ d. Vice President or equivalent
- \_\_\_\_\_ e. Senior corporate management or equivalent

# ENGAGEMENT STYLES

Situations-Interaction with Authority	Passive Orientation	Pro-active Orientation
<ol style="list-style-type: none"> <li>1. If authority is clear on points, but you feel there is a better way.</li> <li>2. If authority is unclear on <u>minor</u> points.</li> <li>3. If authority is unclear on <u>major</u> points.</li> <li>4. If authority makes an error.</li> </ol>	<ol style="list-style-type: none"> <li>1. Complete the project as assigned.</li> <li>2. Discuss the problem with classmates or co-workers.</li> <li>3. Discuss the problem in class or at a staff meeting.</li> <li>4. Talk to classmates or co-workers and/or discuss the problem in class or at a staff meeting.</li> </ol>	<ol style="list-style-type: none"> <li>1. Discuss your ideas with your instructor or supervisor.</li> <li>2. Clarify details with instructor/supervisor.</li> <li>3. Clarify details with instructor/supervisor.</li> <li>4. Discuss statement with you instructor/supervisor.</li> </ol>
Situations-Conflict Resolution	Avoidance Orientation	Confrontive Orientation
<ol style="list-style-type: none"> <li>5. If a leader is required.</li> <li>6. If someone is not participating.</li> <li>7. If the groups' energy level is low.</li> <li>8. If people become emotional.</li> </ol>	<ol style="list-style-type: none"> <li>5. Let someone else assume leadership</li> <li>6. Use subtle techniques to get the person involved.</li> <li>7. Suggest that the meeting be cancelled.</li> <li>8. Request that they stop arguing.</li> </ol>	<ol style="list-style-type: none"> <li>5. Assume the leadership.</li> <li>6. Discuss with the individual their lack of participation.</li> <li>7. Discuss with the group your observations and concerns.</li> <li>8. Serve as a mediator</li> </ol>
Situations-Interdependency	Non-collaborative Orientation	Collaborative Orientation
<ol style="list-style-type: none"> <li>9. If you are not required to work in a group.</li> <li>10. If you must participate in a work group.</li> <li>11. If the groups is having difficulty knowing how to proceed.</li> <li>12. If it is not necessary to participate.</li> </ol>	<ol style="list-style-type: none"> <li>9. Do not share your information with others.</li> <li>10. Join up with people you know.</li> <li>11. Break task into individual duties.</li> <li>12. Maintain limited involvement.</li> </ol>	<ol style="list-style-type: none"> <li>9. Discuss exam or project with others.</li> <li>10. Select the most capable individuals.</li> <li>11. Suggest that a chairman be appointed.</li> <li>12. Become directly involved.</li> </ol>