

PERSONAL AND ENVIRONMENTAL FACTORS  
WHICH MOTIVATE ADULT STUDENTS  
IN BUSINESS AT OKLAHOMA  
STATE UNIVERSITY

By

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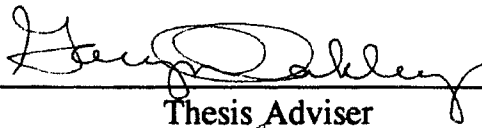
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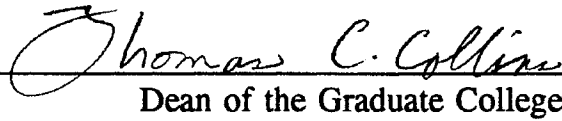
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## CHAPTER I

### INTRODUCTION

#### General

There is an abundance of research conducted on motivational factors of adult students, but little exists on specific motivational factors of adult business students. In studies done on motivational factors of adult students by Harris in conjunction with the National Council on Aging (1974) and later by Harris in conjunction with the National Center for Education Statistics (1981), it was discovered that participation motivators included personal interest and acquisition of job skills. Cross's study (1979) stated the main reasons for not taking courses are, lack of interest, age, poor health, and lack of time. It was recommended in Cross's (1979) study that future research needs to address the motivational issues that affect adult students in order for adult educators to better meet the needs of adult students (Ventura & Worthy, 1982). Church's study (1990), done on high school students, found that motivation and the affective domain are interdependent. The affective domain deals with how something affects us emotionally. An example of this interdependence is an uncomfortably warm classroom which causes students to be drowsy and results in a lack of motivation and inability to focus on their studies. Outside influences which affect students' motivation were found to be, drug, alcohol or sexual abuse, poor nutrition,



or insufficient amounts of sleep. Teachers are unable to control these outside influences. Students could be motivated, however, through their affective domain. An illustration of this is allowing students to role play real life situations, such as a store clerk versus an angry customer. Placing students in these situations results in their desire to take responsibility for their own learning, self-discipline, self-control, and self-confidence (Church, 1990).

### Statement of Problem

The faculty in the College of Business at Oklahoma State University (OSU) want to increase the motivation levels of their adult evening students in their programs. However, they are not aware of those factors which contribute to their motivational levels. No previous research has explicitly identified the motivating factors of their students.

### Purpose of the Study

The purpose of this study was to determine the factors that contribute to the motivation of adult students in their study of business at Oklahoma State University.

### Objectives

The objectives of this study were:

- (1) to determine what personal factors motivate adult students in their study of business related subjects in the College of Business at OSU.
- (2) to determine what environmental factors motivate adult students in their

study of business related subjects in the College of Business at OSU.

(3) to determine if there is a difference between males and females in their choices of personal and environmental motivating factors.

#### Assumptions and Limitations

This study was conducted under the following assumptions:

- (1) The study has been limited to only those respondents working towards a degree in business at OSU in Stillwater, Oklahoma and University Center at Tulsa (UCT) in Tulsa, Oklahoma.
- (2) The researcher assumes all respondents answered truthfully and to the best of their abilities.

#### Definitions

For the purposes of this study the following definitions were used:

*Adult Students:* Students aged 25 and older.

*Business Subjects:* Those classes in the College of Business which include: accounting, marketing, finance, economics, business administration, and business law.

*Motivational Factors:* Those factors which contributed to the adult students' pursuit of their degree in business.

*Personal Motivational Factors:* May be either intrinsic or extrinsic. Intrinsic factors, those originating from within the individual, include the inner-self, exercise, meditation, and religious affiliation. Extrinsic factors, those originating outside the individual, include spouse, children, relatives, income, and community involvement.

*Environmental Motivational Factors:* May be either intrinsic or extrinsic. Intrinsic factors, those originating from within the individual, include home living conditions, neighborhood living conditions, and college surroundings. Extrinsic factors, those originating from outside the individual, include geographical region, weather conditions, and political climate.

## CHAPTER II

### REVIEW OF LITERATURE

#### General

There has been a considerable amount of research conducted on motivational factors of adult students in general. This review of literature focuses on demographics, adult learning theories, overall motivational factors, and specific motivational factors of adult students.

#### Demographics

Demographics indicate that for the next decade of the 1990's continuing education will be a major growth area in adult education. In 1983 there were more people over the age of sixty-five in America than there were teenagers (Viehnichi, Bohlin, & Milheim, 1990). It was predicted that by 1992 half of all college students would be over twenty-five and only twenty-five percent would be over thirty-five. American culture has encouraged adults to enroll in schooling. Former President Bush stated that Americans increasingly will change not just their jobs, but their occupations and will need regular retraining to learn new skills (Viechnichi et al., 1990). The need for continuing education was addressed by institutions of higher education, business and industry, and community agencies. In order for continuing

education to be effective, those who design the delivery systems need to know what instructional strategies will benefit and motivate adult learners (Viechnichi et al., 1990).

Researchers have also shown that the decrease in the traditional age populations of students will be offset by increases in the enrollment of older students (Iovacchini, Hall, & Hengstler, 1985). Due to this increase, a concentrated effort must be made to understand the needs of the adult population and how they differ from the traditional student (Iovacchini et al., 1985).

Cross (1981) showed that adult students seeking a degree tend to come from working-class backgrounds and are primarily first-generation college students whose parents did not attend college (Iovacchini et al., 1985). A study by Shipp and McKenzie (1981) reported that the parents of traditional college students are usually better educated; however, the adult students tend to be better educated and hold better jobs than their peers in the general population (Iovacchini et al., 1985). The research also shows that adult students usually seek different areas of curricula than traditional students. According to Iovacchini et al. (1981) twenty percent of nondegree-seeking students often make the fine arts as their area of concentration, compared to five or six percent of the degree-seeking students (Iovacchini et al., 1985). Also, nondegree-seeking students and adult degree-seeking students tend to express a greater interest in computer science than their younger counterparts. Furthermore, adult students tend to express greater interest in the humanities and psychology than the other two groups. The traditional students more often seek social sciences, mathematics, engineering, and business as their areas of concentration than the nondegree-seeking students (Iovacchini et al., 1985).

## Theories of Adult Motivational Factors

There are several theories concerning the motivational factors of adults seeking higher education. One motivational model, proposed by Miller in 1967, emphasizes both the positive and negative factors in the adult decision to participate in higher education. Miller's theory argues adult participation is dependent on the degree of congruence or conflict between the adult's individual needs, and the perceived strength of the social and situational factors in their decision (Spanard, 1990). Positive factors include setting goals which are to be obtained through completion of a college degree, while the negative factors are costs and barriers involved.

A second motivational theory is Catalano's motivation-retention model (Spanard, 1990). His model, developed in 1985, is similar to Miller's in explaining motivation and retention. Catalano's model is based upon motivational theories as conceptualized by Maslow (1943) and later Herzberg, Mausner and Snyderman (1959). Catalano's theory helps to define and organize the complexity of adult students' choices to attend and/or remain in college (Spanard, 1990).

Catalano's model combines the concept of cost/benefit (or barrier/goal) with the recognition that college education is one of the many decision issues in an adult's life that isn't considered alone but is ranked in terms of priority of needs (Spanard, 1990). It is explained as follows: The motivation-retention model demonstrates what draws students toward college completion (what Catalano calls a centripetal force) or what draws students away (a centrifugal force). The model can be viewed as a way of thinking, planning, and problem-solving in relation to the retention/attrition question.

It provides a method for prioritizing student needs and a framework for action to help students in college (Spanard, 1990).

Although similar to Miller's model, Catalano's model is three-dimensional instead of two-dimensional. Catalano's model considers Maslow's (1943) original hierarchy of needs. Maslow lists these needs as: (1) physiological needs, (2) safety needs, (3) belongingness needs, (4) esteem needs, and (5) self-fulfillment needs. Maslow's theory suggests that the five needs must be met in order (1 through 5) before a human being is satisfied (Spanard, 1990).

Frederick Herzberg's (1966) two-factor theory of motivation argued that two types of factors affect the attitudes and behavior of adults. The first category of factors, which he labels hygiene factors, are the positive values in our lives, jobs, or colleges, that the absence of which keeps us from being satisfied. These include organizational policy and administration, salary, relationships with peers, faculty, supervisors, and subordinates. The motivational role, however, is filled by the second type of factors, termed motivation factors, which include achievement, recognition, advancement, and responsibility. These factors are believed to spur individuals on to greater work efforts (Spanard, 1990).

Catalano combined these two models and proposed that each of these pairs of two factors, those that lead people to a neutral state of not being dissatisfied and those that satisfy and motivate people to progress, are tied to each of Maslow's five steps of need (Spanard, 1990).

According to Catalano's model, adult learners consider the decision to reenter college against the decision to spend their time, energy, and money in other areas.

For example, if attending college to obtain a degree is an activity of the fourth level of needs (gaining the respect and esteem of co-workers and supervisors), then any decisions that respond to needs at levels one, two, or three, would preempt the decision to reenter college for the allocation of resources (Spanard, 1990).

Catalano's model also brought to the fore the concept of opportunity costs, which are those costs which result from a given decision. If an adult seeks to return to college on a full-time basis, the direct costs would include tuition, books, and fees. Opportunity costs would include the money lost from not being able to maintain a current job, the time lost from social activities which would otherwise be spent on studying, and the effort applied to planning and pursuing a degree that could be applied to other areas of life. All of these costs need to be considered in determining whether or not to re-enter college (Spanard, 1990).

Keller and Suzuki (1988) and Keller and Kopp (1987) identified four phases of motivational conditions in learning situations. These are attention, relevance, confidence, and satisfaction. These four stages should be addressed to facilitate continuing motivation. The conditions interact with instructional methods; however, they cannot be manipulated directly by the instructor. It is the methods or strategies of instruction under the instructor's control that produce various instructional consequences; therefore, the instructor promotes motivation by using appropriate strategies (Viechnichi et al., 1990). Keller's model (1983) contains specific methods or strategies that produce desirable motivational outcomes during each of the four motivational conditions.



Keller (1983) stated there are four strategies for motivating instruction. The first strategy is to gain and maintain the learner's attention. This can be achieved through several procedures which are aimed at increasing one's curiosity through humor, paradoxes, or inquiry.

The second strategy is that the learner must perceive that the instruction meets significant personal needs. Once attention is aroused, the learner evaluates the environmental relevance before becoming highly motivated. This relevance can be facilitated by matching instruction to the learner's goals using metaphors and establishing a cooperative atmosphere (Viechnichi et al., 1990).

The third strategy to motivate learner confidence is related to the learner's attitude toward success or failure, with this attitude influencing later performance. Confidence can be cultivated by clearly indicating the requirements for success, allowing learner control, and using learning organizers (Viechnichi et al., 1990).

The fourth strategy is to maintain individual satisfaction for sustained motivation. The learner needs to perceive the rewards gained as both appropriate and consistent with his/her expectations. Learner satisfaction is enhanced by providing appropriate recognition for success, giving regular informative and corrective feedback, and supporting intrinsic motivation (Viechnichi et al., 1990).

Authors which include Knowles (1980), Cross (1981), and Zemke and Zemke (1981) maintain adult learners have different instructional needs than their younger counterparts and must be treated differently if they are to be motivated. Knowles says that in order for adults to learn they must be interested in a subject or issue and it must grab their attention. Knowles also maintains that adult learners who are

prepared to take responsibility for making their own choices about learning want to negotiate individual courses of study which they believe are relevant to their own needs, and seek learning because they need the knowledge or skill being taught. They view learning as a means to an end and not an end in itself (Viechnichi et al., 1990).

Knowles states that adults must feel competent, exhibit confidence during learning, and feel at ease in the learning environment (Knowles, 1980). He also states their confidence is built through self-evaluation, by comparing performance skills before and after the learning experience. The result is a re-diagnosis of learning needs (Viechnichi et al., 1990).

Zemke and Zemke report that when adult learners are asked to risk new behavior in front of peers and cohorts, their self-esteem and ego are on the line (Zemke & Zemke, 1981). Adult students must feel confident before they can perform in these situations. They further state adults seek to increase or maintain their sense of self-esteem and pleasure which results in a feeling of satisfaction (Viechnichi et al., 1990).

Heddesheimer's (1976) model states adults return to college for many different reasons (Dean, Eriksen, & Lindamood, 1987). One reason is a mid-career change. Two factors of motivation for mid-career change are pressures from the environment and pressures originating within the individual. Environmental pressures are those which include changes in an existing job, family, or social and economic changes. Intrinsic pressures (those coming from within the individual) are linked to adult developmental stages and the search for self-satisfaction (Dean et al., 1987).

His model includes four categories of motivation for mid-career change. The groups include: (1) self-determined career changes which result when the adult

learner seeks new opportunities because it meets an internal need, (2) situational determined career changes, which include adult learners who are not prepared for a career change and are not motivated to seek out resources or to engage in activities that will prepare them for a career change, (3) self-directed accommodation career changes are those adult learners who have been forced to seek a new career because of environmental pressures such as job lay-off or health problems. They have decided to take advantage of their situation to seek new opportunities or to renew old dreams, and (4) the no career change group are those adults who have no personal or environmental motivation (Dean et al., 1987).

Campbell's (1979) theory on adult motivation includes four stages of career development which focus on the process an adult goes through once the initial decision is made to make a career change (Dean et al., 1987). The first stage, preparation, is to prepare and obtain a position in the work force. The major tasks of this stage are self-assessment, learning about options in the world of work, making career decisions, implementing career plans (i.e. working toward a good academic performance in college) and obtaining a position in the chosen occupation (Dean et al., 1987).

The next stage, the establishment stage, focuses on a primary goal to demonstrate one's ability to function effectively in an occupation and organization (Dean et al., 1987). Major tasks of this stage are to become oriented to the organization, to demonstrate satisfactory performance in the position, and to explore plans for the future (Dean et al., 1987).

The third stage, termed maintenance, is more age related because it implies a long-term commitment to an occupation and/or organization (Dean et al., 1987). The goal is to maintain a desired level of functioning in an established position. Tasks are to assess oneself in terms of status within one's present occupation, position or organizational setting, to decide upon and implement a master plan, to adjust to changing personal and organizational events, and to maintain a satisfactory position performance (Dean et al., 1987).

Retirement, the last stage, is associated with leaving the work force. The primary goal is to maximize options in retirement (Dean et al., 1987). The tasks are to decide if the retirement should be full-time or part-time, to explore options for part-time retirement, to assess interpersonal relationships and to develop and maintain a retirement plan (Dean et al., 1987).

Bridge's (1980) theory involves a three-step process which determines why adults are motivated to make a career change (Dean et al., 1987). The three-steps are endings, neutral zone, and beginnings (Dean et al., 1987).

The endings stage is characterized by disengagement, disidentification, disenchantment, and disorientation. It brings to an end the previous period in an adult's life (Dean et al., 1987). Examples are divorce from a spouse or loss of an occupation. One may no longer see themselves as a plumber, a sales representative, or a teacher, etc. (Dean et al., 1987).

The neutral zone is a time of emptiness where nothing feels solid; the old self image gives way to a new one and it is characterized by a death and rebirth process (Dean et al., 1987). This stage is often characterized by the person's need to spend

time alone and to reassess one's life. Following the pain and conflict of the ending phase, the neutral zone allows the person an opportunity to gather necessary energy and resources to start again (Dean et al., 1987).

Bridges' final phase, the beginning, does not arise as a result of changes in one's environment or in any external influence (Dean et al., 1987). Beginnings are characterized as coming from within the person. The person begins to plan for the future and take action. They identify with a new role in life. If a person is making a career change, this is the time when one stops imagining what it might be like to be a nurse, a researcher, or a dancer, and starts to feel as such (Dean et al., 1987).

#### Overall Adult Motivation Factors

The review of literature shows the overall adult motivational factors in adult women over the age of 25 are: (1) social relationships (the need to develop personal relationships and friendships), (2) external expectations (to participate because of outside pressure), (3) social welfare (to provide service for their community), and (4) professional advancement (to secure professional or job advancement), (5) escape/stimulations (to get relief from routine or boredom), and (6) cognitive interest (to seek knowledge for the sake of learning) (Rountree & Lambert, 1992). The awareness of these motives can assist educational leaders in planning programs and courses for the increasing number of adult women returning to college (Rountree & Lambert, 1992).

The research shows two job-related factors influence adults to return to college. These are (1) learning to improve performance in one's job or (2) to change careers.

This is consistent with Mohrmann's research (1984) that job-related factors are more important than social contact or self-improvement. In the sample, adults were shown to be more motivated by a career change than by enhancement of present job skills. Adults motivated by career or job changes may be exploring new fields before deciding what new career to pursue. Therefore, the classes they select may be unrelated to their present job (Rogers, Gilleland, & Dixon, 1988).

McCannon's (1981) study compared adult motivational learning experience within formal educational programs in rural areas with those in urban areas (McCannon, 1981). The study focused on the phenomenon of adult learning in rural settings by analyzing participation rates, needs assessment data, interest inventories, program evaluations, and research studies of postsecondary continuing education programs (McCannon, 1981). The findings were that motivational factors for adults in urban areas tend to be for personal advancement, while motivational factors for adults in rural areas tend to be more for personal development and self-improvement (McCannon, 1981).

#### Specific Adult Motivation Factors

Questionnaire data were collected by means of face-to-face, structured interviews of a large random sample of learners (N=323) currently enrolled in Adult Basic Education Programs in the state of Iowa (Beder & Valentine, 1990). The findings revealed ten dimensions which contribute to the motivation of these students to further their education. The ten dimensions are: (1) self-improvement, (2) family responsibilities, (3) diversion, (4) literacy development, (5) community/church

involvement, (6) job advancement, (7) launching a new career, (8) economic need, (9) educational advancement, and (10) urging of others (Beder & Valentine, 1990).

Most of the literature on participation theory of adult students assumes that adult education is a voluntary activity in which learners engage to meet needs and goals. Critical to such theories is the concept of motivation which needs to be implicitly defined as the basic reason which led adult learners to participate (Beder & Valentine, 1990). This work was built upon Houle's (1961) seminal research which suggests that participants can be divided into three broad groups, the goal oriented, the activity oriented, and the learning oriented. Later work by Boshier (1971, 1976), Morstain and Smart (1974), Boshier and Collins (1985), and Clayton and Smith (1987) employed quantitative survey methods which attempted to establish the generalizability of a motivational framework and to discover the relationship between motivational orientations and various socio-demographic variables (Beder & Valentine, 1990). The importance of this pursuit was in understanding participation behavior. It is reasonable to expect different sub-groups within any broad instructional population to exhibit different configurations of motivations, depending on their personal circumstances and life situations (Beder & Valentine, 1990). Other researchers suggest that there are three principal reasons (motivational factors) which lead adults to return to higher education (Clark, 1989). The most common reason is pragmatic: People return because they need to gain skills, knowledge, and information to compete successfully in their work. The second motive is self-improvement.

The third motive is a desire to learn more, especially in politics or voluntary organizations, in order to participate more effectively in the communities where they

work and raise their families. The research shows that while traditional college students are oriented toward defining a future for themselves, adult learners are motivated to improve their present lives (Clark, 1989). This research showed that the returning adult student is more pragmatic than an eighteen year old freshman because he or she has significantly more life experience and has spent more time to think about interests and purposes (Clark, 1989).

The literature shows that those adults who choose to get an education late in life do so for many complex reasons (Wolf, 1985). They arise from personal needs, feelings from long-ago ambitions, attitudes, rituals, and pressures from early life in the family or school (Wolf, 1985). Older learners are often living out the conclusions to their life histories that had been written 60 years ago, but are embellishing those histories with continued growth and change (Wolf, 1985). Many seem to validate developmental theories which claim that it is in the last stage of life that we can integrate our experience and achieve a sense of continuity of ourselves and the world (Wolf, 1985). Growing old and seeking challenges can go hand in hand. One's experience of the classroom can be old and new at the same time (Wolf, 1985).

### The Delphi Method

The Delphi Method was developed by Dalkey and his associates at the Rand Corporation (Delbecq, Van de Ven, & Gustafson, 1975). This method does not require face to face contact and allows for anonymity of the participants (Delbecq et al., 1975). There are five objectives which can be achieved by its using the Delphi Method. They are as follows:



- (1) To determine or develop a range of possible program alternatives.
- (2) To explore or expose underlying assumptions or information leading to different judgments.
- (3) To seek out information which may generate a consensus on the part of the respondent group.
- (4) To correlate informed judgments on a topic spanning a wide range of disciplines.
- (5) To educate the respondent group as to the diverse and interrelated aspects of the topic (Delbecq et al., pp.11-12, 1975).

The Delphi Method is essentially a series of questionnaires which are mailed to the participants in the study to elicit feedback and accomplish one or more of the preceding objectives (Delbecq et al., 1975). Each questionnaire mailing is termed a round (Delbecq et al., 1975). The number of Delphi questionnaire rounds may vary from three to five depending on the degree of agreement and amount of additional information being sought or obtained (Delbecq et al., p.103, 1975). Brooks (1979) states three questionnaire rounds are usually sufficient to achieve the level of consensus desired (Stahl & Stahl, 1991). Three questionnaire rounds were used in this study because a final vote was needed for consensus, and to accomplish the study's objectives. Dalkey and his associates recommend the questionnaire for each round should be pre-tested by a pilot test of a smaller sample which is representative of the main participants (Delbecq et al., 1975).

Typically, according to Dalkey and his associates, a staff group of professionals develops each questionnaire for each round. The questionnaire for the first round consists of broad general questions.

This questionnaire allows for the following:

- (1) Adequate time for thinking and reflection.
- (2) Avoidance of undue focusing on a particular idea.
- (3) Avoidance of competition, status pressures, and conformity issues.
- (4) The benefit of remaining problem-centered and avoidance of choosing between ideas prematurely (Delbecq et al., 1975).

Dalkey and his associates recommend that the questionnaire of round one be mailed to the participants and upon return the responses are to be analyzed by the staff group as follows: The responses are summarized and a list is made of the items identified and the comments made by each member of the staff group. This list should reflect the initial opinions of the participants concerning the key variables. The staff group discusses and modifies each single list and agrees upon a final list. The reason for this list is to establish a mutually exclusive but exhaustive set of categories which will be the content items for the questionnaire of the second round (Delbecq et al., 1975).

The format for the questionnaire of the second round should accomplish four things:

- (1) It should be easy to identify and understand the items taken from the questionnaire of the first round.
- (2) It should be easy to add comments of agreement, disagreement, or clarification.
- (3) It should have clear and simple voting instructions, and
- (4) It should be short enough to complete in twenty to thirty minutes (Delbecq et al., 1975).

The questionnaire of the second round asks the respondents to do three things: (1) to review the list of items and comment on them, (2) to vote for the most important items, and (3) to return the questionnaire by a particular date (Delbecq et al., 1975).

Dalkey and his associate's staff group mails the questionnaire of the second round and upon return analyzes the responses as follows: The votes are tallied for the items listed and the comments made about the items are summarized in a form that is both thought-provoking and easy to understand (Delbecq et al., 1975).

A vote tally sheet, constructed by the staff group, shows the total votes received by each item and also how the participants differed in their votes (Delbecq et al., 1975). The vote tally sheet is beneficial because the votes are displayed in a manner which permits the staff group to view not only the total vote, but also the number of people voting for an item, and the diversity of ratings assigned to an item (Delbecq et al., 1975). This information allows a staff member to contact a participant who voted for an item which received no other votes to obtain an explanation which will be used for the questionnaire of the third round as to why they felt the item was important (Delbecq et al., 1975).

The total vote for each item is obtained by adding individual votes assigned to each item. For example, if item number one received votes of 10-9-10-9-6-9-10 (10 being the most important and 1 being the least important) the total vote would be 63. It is important that the participants rate the item with the highest priority with the highest vote, in this case 10, because it clearly indicates those items which will eventually lead to consensus by the participants (Delbecq et al., 1975).

Dalkey and his associates' staff group uses the final tally votes, beginning with 63 in this case, to develop the questionnaire for the third round. The participants

comments are summarized on this questionnaire and they are asked to review their prior responses and express individual judgments as to the importance of each item (Delbecq et al., 1975).

The votes of the questionnaire for the third round are analyzed by tallying votes for the items and preparing a final statement of the results to summarize the goals and procedures which were implemented (Delbecq et al., 1975).

The benefits of the questionnaire for the third round are threefold:

- (1) it provides closure for the study.
- (2) it suggests areas where diversity of judgment exists, but allows for the aggregation of judgments and,
- (3) it provides guidelines for future research and planning (Delbecq et al., 1975).

#### Reliability

The reliability of the Delphi Method was established in a study done by the Northern California Community Colleges Research Group (1972). The objective of the study was to determine the most successful vocational education programs on 16 community college campuses (Dagenais, 1974). The design of the research provided for a reliability check on the Delphi Method through the use of two independent panels on each campus (Dagenais, 1974). The study required only two rounds of the Delphi Method.

The panels were labeled Panel A and Panel B. Panel A collectively identified 20 out of 32 programs as successful and Panel B identified 21 out of 32 as being successful in the first round. During round two Panel A and Panel B identified 6 and

8 successful programs respectively (Dagenais, 1974). The probability of such joint identification was less than one in one hundred (Dagenais, 1974). The probability of joint identification programs by the independent Delphi panels in eleven of the colleges was  $< .05$ . The probability of joint identification in six of these colleges was  $< .001$  (Dagenais, 1974). It was concluded that there was a good degree of confidence in the reliability of two Delphi panels (Dagenais, 1974).

### Summary

The preceding review of literature has shown several different motivational aspects of adult students in general. There will be an increasing number of adults motivated to continue in higher education currently and in the future. Their educational goals will differ from traditional students (Viechnichi et al., 1990). It is evident from the adult motivational learning theories that adult students are motivated to seek higher education for a variety of reasons. Adult students tend to be more motivated by personal needs and goals. They may be dissatisfied with current lifestyles, occupations, and/or social status and are focused on continuing education to improve and enhance their lives. Life experiences might have enabled and prepared them to make financial, career, and family sacrifices to pursue educational goals.

This review of literature has also shown different instructional strategies are required to meet the specific needs of adult students. Adult educators need to be aware of their motivational factors to be prepared to devise instructional strategies which enable adult students to fulfill their personal and academic goals.

Although the review of literature has shown adult students are motivated differently than traditional students, it was evident that further research would be

needed to explicitly identify the motivating factors of adult business students at Oklahoma State University.

## CHAPTER III

### METHODOLOGY

#### Introduction

The purpose of this research was to determine those factors that contribute to the motivation of adult students in their study of business at Oklahoma State University. This chapter explains the methods used to collect the information for this study. Also included is a discussion of the participants and scope of the study, a description of the instrument used, the procedures, and the statistical analysis.

#### Participants

The participants in this study consisted of thirty Oklahoma State University (OSU) adult students in the College of Business. Thirty students were chosen because research has shown that, when using the Delphi Method, few new ideas are generated within a homogeneous group once the size exceeds thirty (Delbecq et al., 1975). The Delphi Method was used because consensus was being sought as to what personal and environmental factors contribute to the study of adult business students in the College of Business at Oklahoma State University. The students in the College of Business at Oklahoma State University and at the University Center at Tulsa, in Tulsa, Oklahoma were chosen because they were considered to be the knowledgeable participants for

this Delphi study. They were selected according to their enrollment in upper division business courses at Oklahoma State University. These courses included marketing, accounting, finance, economics, and business administration. Professors of Oklahoma State University's College of Business Administration assisted in identifying the number of adult students who could participate in this study.

### Scope of the Study

The data for the study were collected in the fall 1993 semester at Oklahoma State University's (OSU) College of Business in Stillwater, Oklahoma and at the University Center at Tulsa (UCT), in Tulsa, Oklahoma. Professors of OSU's College of Business were contacted in the fall semester of 1993 and agreed to participate and distribute the study to their adult students.

### Procedures

The objectives for this study were to determine what personal and environmental factors contribute to the motivation of adult students in their study of business at Oklahoma State University, and if a difference existed in these factors according to gender. The method selected to accomplish these objectives was the Delphi method. Three rounds of questionnaires and a statistical data base were chosen to conduct the study and to accomplish its objectives.



### Development of Instrument for First Round

The questionnaire for the first round was developed with the assistance of a professor in the College of Business at Oklahoma State University. The questionnaire consisted of two broad questions which asked: What personal and what environmental factors contribute to your motivation in your study of business at Oklahoma State University? This questionnaire was pilot tested in April 1993 with 10 adult students at Oklahoma State University. The pilot study was considered to be successful in that the questionnaires were returned in one week and the students stated that the questions were clearly understood and required no longer than thirty minutes to respond.

The questionnaire and cover letter for the first round were hand distributed to 80 adult students in the College of Business at OSU and UCT to compensate for attrition and help ensure a minimum of thirty students would participate in the Delphi study. The adult students were allowed seven days to return their responses by campus mail (See Appendix A). Due to a low return rate, it was necessary to write a letter of reminder to the participants for the return of the remaining questionnaires of the first round (See Appendix B).

### Development of Instrument for Second Round

The Office of University Testing at Oklahoma State University assisted in the development of the questionnaire for the second round. The respondents were provided with a computerized answer sheet which allowed them to rate their

responses on a Likert Scale of 0 to 5 (0 being the least important to 5 being the most important) to begin formulating consensus on the responses.

The cover letter and questionnaire for the second round were hand distributed to 43 adult students, or 54% of the 80, who participated in the first round. They were allowed them one week to return this questionnaire by campus mail (See Appendix D). It was necessary, due to a low return rate, to write a letter of reminder to the participants to return this questionnaire (See Appendix E).

#### Development of Instrument for Third and Final Round

The questionnaire for the third and final round in this Delphi method was developed with the assistance of the Office of University Testing of Oklahoma State University. The responses to the questionnaire of the second round were listed with their corresponding average rating. The respondents were provided with a computerized answer sheet and were asked to rate each item on a Likert Scale of 0 to 5 (0 being the least important to 5 being the most important) for final rating on each item (See Appendix F). This was done to obtain final consensus in this Delphi Study.

The cover letter and questionnaire for the third and final round were hand distributed to 20, or 50% of the 43 adult business students who participated in the second round. They were requested to return this questionnaire in one week by campus mail (See Appendix F).

Since, only 60%, or 12 of the 20 distributed questionnaires were returned for this third and final round of the Delphi study, it was necessary to write and hand

distribute a letter of reminder to the participants to return the questionnaires (See Appendix G).

### Statistical Analysis

Descriptive statistics were used to analyze the results of the data. The final ratings for each item were summed and averaged to determine their means. Those items which resulted in the highest means were used to determine the final consensus of the Delphi method. Standard deviations and frequencies of each item were also determined. A comparison of differences between genders was calculated using a Chi-Square Contingency Table Analysis at an alpha level of  $p=0.05$ .

## CHAPTER IV

### FINDINGS

#### General

The purpose of this study was to determine those factors which contribute to the motivation of adult students in their study of business at Oklahoma State University. The Delphi method was used to determine what personal and environmental factors contribute to the motivation of adult students in their study of business, and to determine if there was a significant difference in their responses according to gender.

Three rounds of questionnaires were used in this Delphi Method to gain consensus in responses from the adult students. This chapter presents the findings for each round in this study.

#### Findings from the First Round

Forty three, or 54% of the 80 questionnaires distributed, were received from the first round. An original list of responses were compiled from this questionnaire. This list was narrowed down to a mutually exhaustive list of categories which were used as the instrument for the questionnaire of the second round (See Appendix C).

### Findings from the Second Round

Twenty, or 47% of the 43 students who participated in the first round, responded to the questionnaire of the second round. The Office of University Testing Service assisted in analyzing the results of the questionnaire for the second round by the use of a spreadsheet which averaged the respondents' ratings for each item. Tables 1 and 2 show the means of the responses to the questionnaire of the second round.

TABLE 1

PERSONAL FACTORS WHICH CONTRIBUTE TO THE MOTIVATION  
OF ADULT STUDENTS IN THEIR STUDY OF BUSINESS  
RELATED SUBJECTS AT OKLAHOMA  
STATE UNIVERSITY  
N=20

	Averaged Rating/Per Response
Personal goals	4.3
Feeling of self-fulfillment	4.2
Increased standard of living	4.0
Grades	3.7
Job advancement	3.7
Spouse, significant other	3.7
Degree	3.4
The process of learning itself	3.3
Time constraints, deadlines	3.3
Feeling of confidence	3.2
Family (Immediate and Extended)	3.2
Fear of failure	2.8
Desire to function well in a group	2.4
Friends/group peers	2.2

TABLE 2

ENVIRONMENTAL FACTORS WHICH CONTRIBUTE TO THE  
MOTIVATION OF ADULT STUDENTS IN THEIR STUDY  
OF BUSINESS RELATED SUBJECTS AT  
OKLAHOMA STATE UNIVERSITY  
N=20

	Averaged Rating/Per Response
Good Teachers	3.9
Competitive environment	3.5
Lack of outside distractions (personal & professional)	3.5
Quiet atmosphere (i.e., library)	3.4
Employer support	3.3
Darkness	3.3
Scholarships	3.0
Colleagues of similar intellectual interests	2.8
Large blocks of time	2.7
Stillwater community	2.6
Frequent breaks (i.e., T.V., coffee)	2.5
Economic environment (i.e., inflation & cost of living)	2.4
Certain types of weather or season	2.4
Studying outdoors	2.2

### Findings from the Third Round

Twelve, or 60% of the 20 questionnaires distributed in the second round, were returned for the third and final round. These questionnaires were analyzed by the use of a statistical package which determined the highest averages from the ratings of each item and a chi square analysis was done to determine if there was a difference in responses according to the respondents' gender. These items were summarized and used to report the consensus from the third and final round in this Delphi study.

### Demographics

The adult students in this study were aged 25 and older, and consisted of 9 males and 2 females. One student did not indicate their gender. Table 3 shows the frequencies and percentages of males to females.

TABLE 3  
FREQUENCIES AND PERCENTAGES OF MALES TO FEMALE

Sex	Frequency	Percentage
Males	9	81.8
Females	2	18.2



## Results of Ratings for the Personal

### Factors' Category

The first research question was: What personal factors contribute to your motivation in your study of business related subjects at Oklahoma State University? The responses were rated on a Likert Type Scale of 0 to 5 (0 being the lowest to 5 being the highest). The results for the personal factors category are shown in Table 4. Table 4 lists the responses, from highest to lowest, along with their ratings' frequencies and percentages. The means and standard deviations are also given. The following is a discussion of the items shown in Table 4. The overall ratings in the personal factors' category ranged from 4.7 to 2.4.

TABLE 4

**PERSONAL MOTIVATING FACTORS  
MEANS AND STANDARD DEVIATIONS**

<u>Personal Factors</u>	<u>Ratings</u>	<u>Frequency</u>	<u>%f</u>	<u>Mean</u>	<u>Standard Deviations</u>
Personal goals	3	1	8.3	4.7	.65
	4	2	16.7		
	5	9	75.0		
Feeling of self-fulfillment	3	1	8.3	4.3	.62
	4	7	58.3		
	5	4	33.3		
Degree	2	1	8.3	3.9	.79
	3	1	8.3		
	4	8	66.7		
	5	2	16.7		
Increased Standard of Living	2	1	8.3	3.8	.87
	3	3	25.0		
	4	6	50.0		
	5	2	16.7		
Feeling of Confidence	3	6	50.0	3.8	.87
	4	3	25.0		
	5	3	25.0		
Time constraint, deadlines	3	5	41.7	3.7	.65
	4	6	50.0		
	5	1	8.3		
Job advancement	1	1	8.3	3.3	1.07
	2	1	8.3		
	3	4	33.3		
	4	5	41.7		
	5	1	8.3		
The Process of Learning Itself	2	1	8.3	3.3	.65
	3	6	50.0		
	4	5	41.7		
Grades	1	2	16.7	3.2	1.34
	2	1	8.3		
	3	4	33.3		
	4	3	25.0		
	5	2	16.7		
Family (Immediate & extended)	0	1	8.3	3.1	1.14
	1	1	8.3		
	2	2	16.7		
	3	4	33.3		
	4	3	25.0		
	5	1	8.3		

TABLE 4 (CONTINUED)  
 PERSONAL MOTIVATING FACTORS  
 MEANS AND STANDARD DEVIATIONS

Personal Factors	<u>Ratings</u>	<u>Frequency</u>	<u>%f</u>	<u>Means</u>	<u>Standard Deviations</u>
Spouse (significant other)	0	1	8.3	2.9	1.45
	1	3	25.0		
	2	1	8.3		
	3	2	16.7		
	4	4	33.3		
	5	1	8.3		
Fear of failure	0	1	8.3	2.6	1.12
	1	2	16.7		
	2	3	25.0		
	3	3	25.0		
	4	3	25.0		
Desire to function well in a group	1	1	8.3	2.5	.80
	2	5	41.7		
	3	5	41.7		
	4	1	8.3		
Friends/group peers	1	2	16.7	2.4	1.00
	2	5	41.7		
	3	3	25.0		
	4	2	16.7		

The highest consensus was obtained on *personal goals, feeling of self-fulfillment, and degree*. *Personal goals* had a mean of 4.7 and a standard deviation of .65. *Feeling of self-fulfillment* had a mean of 3.8 and a standard deviation of .87. *Degree* had an overall mean rating of 3.9 with a standard deviation of .79.

The mean score for *Increased standard of living* was 3.8 with a standard deviation of .87. The mean score for *Grades* was 3.2 with a standard deviation of 1.34. The overall mean rating for *Feeling of confidence* was 3.8 with a standard deviation of .87.

*Family, immediate and extended* had an overall mean rating of 3.2, with a standard deviation of 1.14. *Spouse and significant other's* overall mean rating was 2.9 with a standard deviation of 1.45.

There were slight changes in the last three responses in this category. *Fear of failure* had a mean of 2.6 and a standard deviation of 1.12. *Desire to function well in a group* had a mean of 2.5 and a standard deviation of .80. *Friends/group peers* had a mean of 2.4 and a standard deviation of 1.0. Table 4 shows the dispersion in their ratings.

#### Results of Ratings for the Environmental Factors' Category

The results of the ratings for the research question of "What environmental factors contribute to your motivation in the study of business related subjects at Oklahoma State University?" are shown in Table 5. The following is a discussion concerning the data shown in Table 5.

The overall mean ratings in the environmental factor's category ranged from 3.9 to 1.8. The response for *good teachers* obtained consensus as being the highest motivating factor for the environmental category. Its overall mean rating was 3.9 with a standard deviation of .79.

*Quiet atmosphere's* overall mean rating was 3.8. with a standard deviation of 1.06. *Lack of outside distractions'* overall mean rating was 3.6 with a standard deviation of 1.16.

*Large blocks of time's* overall mean rating was 3.1 with a standard deviation of 1.31. *Competitive environment's* overall mean rating was 3.1 with a standard deviation of 1.08.

TABLE 5

ENVIRONMENTAL MOTIVATING FACTORS  
MEANS AND STANDARD DEVIATIONS

<u>Environmental Factors</u>	<u>Ratings</u>	<u>Frequency</u>	<u>%f</u>	<u>Means</u>	<u>Standard Deviations</u>
Good teachers	2	1	8.3	3.9	.79
	3	1	8.3		
	4	8	66.7		
	5	2	16.7		
Quiet atmosphere (i.e., library)	1	1	8.3	3.8	1.06
	3	2	16.7		
	4	7	58.3		
	5	2	16.7		
Lack of outside distraction	1	1	8.3	3.6	1.17
	2	1	8.3		
	3	2	16.7		
	4	6	50.0		
	5	2	16.7		
Competitive environment	1	1	8.3	3.1	1.08
	2	2	16.7		
	3	5	41.7		
	4	3	25.0		
	5	1	8.3		
Large blocks of time	1	1	8.3	3.1	1.31
	2	4	33.3		
	3	2	16.7		
	4	3	25.0		
	5	2	16.7		
Employer support	0	4	33.3	3.0	.76
	2	2	16.7		
	3	4	33.3		
	4	2	16.7		
Economic environment	1	1	8.3	2.8	.94
	2	3	25.0		
	3	5	41.7		
	4	3	25.0		
Colleagues of similar intellectual interests	1	2	16.7	2.6	1.08
	2	4	33.3		
	3	3	25.0		
	4	3	25.0		

TABLE 5 (CONTINUED)

ENVIRONMENTAL FACTORS  
MEANS AND STANDARD DEVIATIONS

<u>Environmental Factors</u>	<u>Ratings</u>	<u>Frequency</u>	<u>%f</u>	<u>Means</u>	<u>Standard Deviations</u>
Scholarships	0	3	25.0	2.4	1.01
	1	2	16.7		
	2	2	16.7		
	3	4	33.3		
	4	1	8.3		
Stillwater community	0	3	25.0	2.4	1.42
	1	3	25.0		
	2	2	16.7		
	3	2	16.7		
	4	1	8.3		
	5	1	8.3		
Certain types of weather or season	0	1	8.3	2.4	1.21
	1	3	25.0		
	2	3	33.3		
	3	1	8.3		
	4	3	25.0		
Studying outdoors	0	6	50.0	2.0	1.27
	1	3	25.0		
	2	1	8.3		
	3	1	8.3		
	4	1	8.3		
Frequent breaks (i.e, t.v., coffee)	1	4	33.3	2.0	.85
	2	4	33.3		
	3	4	33.3		
Darkness	0	3	25.0	1.8	1.09
	1	5	41.7		
	2	2	16.7		
	3	1	8.3		
	4	1	8.3		

*Economic environment's* overall mean rating was 2.8 with a standard deviation of .94. The category *darkness* had an overall mean rating of 1.8 with a standard deviation of 1.09. *Scholarships'* had an overall mean rating of 2.4 with a standard deviation of 1.01.

Consensus was reached on the remaining factors in this category with the lowest ratings. *Colleagues of similar intellectual interests* were given a final overall mean rating of 2.6 and a standard deviation of 1.08. *Stillwater community* had a mean of 2.4 and a standard deviation of 1.42. *Certain types of weather or season* had a final mean of 2.4 and a standard deviation of 1.21. *Studying outdoors* had a mean rating of 2.0 and a standard deviation of 1.27. *Frequent breaks(i.e., T.V.,coffee)* had a mean rating of 2.0 and a standard deviation of .85. The dispersion in their ratings are given in Table 5.

#### Chi Square Analysis

A chi square analysis was performed on each of the responses to determine if there was a significant difference in overall ratings according to gender.

Tables 6 and 7 record the results of the chi square analysis by gender for the personal and environmental factors respectively (See Appendix H). The sample was N=11 because one student did not indicate their gender. The analysis was performed at the p.05 level. Tables 6 and 7 show gender frequency and percentage to each response along with their degrees of freedom (df), critical values, table values, and exact probabilities. The chi square analysis did not indicate any significant differences according to gender.



Males and no females responded to the factors *employer support* and *darkness*. This prevented the chi square analysis from being performed in those cases because there weren't two genders to analyze.

## CHAPTER V

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Summary

The purpose of this study was to determine what personal and environmental factors contribute to the motivation of adult students in their study of business at Oklahoma State University. The Delphi method was the instrument used to gain consensus on these two categories of factors.

#### Personal Factors

The first objective of this study was to determine what personal factors contribute to the motivation of adult business students in their study of business at Oklahoma State University. The motivational model proposed by Miller in 1967 emphasized that a positive personal motivating factor includes setting goals (Spanard, 1990). Keller and Suzuki (1988), and Keller and Kopp (1987) identified confidence and personal satisfaction as primary motivators among adult students in general (Viechnichi, et al., 1990). The highest consensus on personal factors obtained in this study were *personal goals*, *feeling of self-fulfillment*, and *degree*. Consensus was also reached on *feeling of confidence* with an overall rating of 3.8. Knowles states adult students must exhibit confidence during learning (Knowles, 1990). Maslow's (1943)

hierarchy of needs includes self-fulfillment as the final need (Spanard, 1990). This study found that *increased standard of living* was a primary personal motivating factor. This is consistent with findings in the literature that job advancement is a motivational factor (Beder & Valentine, 1990).

*Family, immediate and extended*, was listed as a primary personal motivating factor in this study. *Family responsibilities* was listed in another finding in the literature (Beder & Valentine, 1990). Knowles maintains that adult learners seek learning because they need the knowledge or skill being taught. They view learning as a means to an end and not an end in itself (Viechnichi, et al., 1990). The *process of learning itself* obtained consensus by the adult business students in this study as a primary personal motivating factor. Keller and Suzuki (1988) and Keller and Kopp (1987) stated a strategy to motivate learner confidence is related to the learner's attitude towards success or failure (Viechnichi, et al., 1990). Consensus was reached in this study that *fear of failure* is a personal motivating factor. Frederick Herzberg's (1966) two-factor theory listed relationships with peers, faculty, supervisors, and subordinates as motivating factors (Spanard, 1990). The adult business students in the present study reached consensus on *desire to function well in a group* and *friends/group peers* as personal motivating factors.

#### Environmental Factors

The second objective of this study was to determine what environmental factors contribute to the motivation of adult business students in their study of business related subjects at Oklahoma State University. Keller and Suzuki (1988) and Keller

and Kopp (1987) identified four phases of motivational conditions in learning situations. They include attention, relevance, confidence, and satisfaction and they need to be conditions which interact with instructional methods (Viechnichi, et al., 1990). *Good teachers* received the highest rating by the adult business students in this study as being the primary environmental motivating factor. In contrast, *feeling of confidence*, was listed as a primary personal motivating factor by the adult business students in this study. Heddesheimer's motivational model includes environmental factors such as economic changes (Dean et al., 1987). *Economic factors* were listed as a primary factor in this study.

Consensus was reached on *Stillwater community* as being an environmental factor with an overall rating of 2.4. This placed it as low in importance to adult business students. In contrast Beder and Valentine (1990) in the literature found community and involvement as major motivating factors among adult students in general (Beder & Valentine, 1990). The difference may be due to the fact that adult business students are more concerned with their family responsibilities and obtaining a degree than with community involvement.

*Quiet atmosphere* and *lack of outside distractions* were not found as motivating factors in the literature of adult students in general. They were found to be primary factors in this study. The same applies to *colleagues of similar interests*, *certain types of weather or season*, *studying outdoors*, and *frequent breaks (i.e., T.V., coffee)* which were not found in the literature but were listed in this study. This indicates there are several more environmental factors which contribute to the motivation of adult business students in their study of business than to adult students in general.

## Conclusions

The first objective of this study was to determine what personal factors motivate adult students in their study of business at Oklahoma State University. The findings revealed *personal goals* as the primary personal motivating factor. One can conclude adult business students at OSU are unique because they are motivated by a personal need to accomplish goals they have set for themselves. Adult educators in the College of Business at OSU need to look more closely at their adult students' personal goals.

The motivating factor *feeling of self-fulfillment* final overall mean rating was 4.3. It can be concluded adult business students at OSU are motivated by a desire to fulfill a void in their lives. The study of business related subjects at OSU fulfills the void and results in academic achievement and increase in self-esteem. *Degree's* final overall mean rating was 3.9. One can conclude that the process of completing the requirements for a degree in the College of Business at OSU motivates adult business students to meet a need which perhaps they did not have the opportunity and/or desire to accomplish at an earlier age. This need may originate from current jobs, career, or social status.

*Feeling of confidence's* final overall mean rating was 3.8. It can be concluded positive feedback and results from the completion of assignments, projects, exams, and class discussion increases confidence and motivates adult business students in their study of business related subjects at OSU. *Time constraints and deadlines'* final overall mean rating was 3.8. One can conclude that adult business students are

unique in that structured assignments and projects contribute to their motivation and ability to remain focused in their business related subjects.

*Family, immediate and extended*, with a final overall mean rating of 3.1, was of primary importance to the adult business students in this study. One can conclude they are motivated by a desire to provide a more secure future for their families. It can also be concluded they want to maintain and increase the respect received from spouses, children, and relatives. They are setting an example their children can emulate as future traditional or nontraditional students. *Increased standard of living* was rated high in this category with a final overall mean rating of 3.8. It can be concluded adult business students are focused not on short-term but long-term economic needs. This focus motivates them to meet future needs of a growing family and the ability to provide for their children's academic future.

*Group/friends and peers* had a final overall mean rating of 2.4. One can conclude that group interaction with friends and peers serves as a motivator of adult business students. This indicates their need to study and socialize within groups to further accomplish academic goals. Group interaction allows them to contribute to the learning process for themselves and others. It also serves as a common place to discuss and share concerns which may be deterrents in their success.

*Desire to function well in a group* had a final overall mean rating of 2.5. It can be concluded adult business students have not experienced the opportunity to work and are motivated to learn the advantages and benefits of exchanging ideas, theories, concepts, and problem-solving techniques within a group.

The second objective of this study was to determine what environmental factors motivate adult students in their study of business education. *Good teachers'* final overall mean rating was 3.9. One can conclude adult business students need highly qualified and knowledgeable instructors in their study of business related subjects at OSU. The faculty must use instructional strategies that communicate theories, principles, and problem-solving techniques which can be understood by adult business students. *Quiet atmosphere's* final overall mean rating was 3.8. It can be concluded adult business students need quiet study areas to enable them to understand theories and problems related to their business subjects. The factor *lack of outside distractions* indicates adult business students are deterred in their motivation by outside distractions. One can conclude they need to study in a solitary place in order to remain focused on their subjects.

It can be concluded by the consensus reached on the factor *colleagues of similar intellectual interests* that adult business students are motivated by the ability to confer and exchange ideas with students on their same intellectual level. The factors *certain types of weather or season* and *studying outdoors* indicates adult business students are primarily affected and motivated by climatic conditions. One can conclude climatic conditions have a profound affect on their motivation and ability to concentrate on their studies. It can be concluded from the motivating factor *frequent breaks (i.e., T.V., coffee)* that adult business students' motivation is enhanced by frequent interruptions which allow them to totally detach from their studies and enables them to remain focused and retain motivation. The factor *employer's support* final overall mean rating was 3.0. One can conclude adult business students are motivated by

outside support but are primarily independently motivated to study business related subjects at OSU.

The third objective of this study was to determine if there is a difference between males and females in their choices for personal and environmental factors. A chi square analysis of the responses indicated no significance according to gender. It cannot be shown, from the data of this study, that males and females differ in their personal and environmental motivating factors. One can conclude choices of personal and environmental motivating factors are not related to the gender of adult business students at Oklahoma State University.

#### Recommendations

The following are recommendations in this study.

First, *personal goals* and *self-fulfillment* were found to be motivating factors in this study. There is a need for college counselors to be trained in a manner that will allow them to better serve the needs of adult business students. College counselors need to request adult business students to list their personal goals and those factors which contribute to their feeling of self-fulfillment and specify what the faculty in the College of Business can do to assist them in these areas.

Second, *groups/friends and peers* were found to be a motivating factor in this study. Social groups need to be formed which would include the involvement and participation of adult business students and their families. This could be accomplished by encouraging the students to organize, nominate officers, and plan



family activities for the groups. This would also serve as an opportunity for adult business students to confer with colleagues and exchange similar interests.

Third, adult business students have a need for a *quiet atmosphere* and *lack of outside distractions* to study effectively. College officials of the library, business college, and student union need to designate certain areas with flexible study hours for adult business students to study without disturbances. These areas could include certain library floor areas and/or rooms, classrooms, not reserved for instructional uses in the College of Business, and rooms in the student union which are isolated from outside disturbances.

Fourth, communities might want to offer support to adult business students by allowing participation in the organization of community activities which are of a business nature. An example of this would be the involvement of the students in planning city-wide business events such as Eskimo Joe's anniversary weekend and/or Stillwater's merchants annual Crazy Daze sales. This would also contribute to the building of self-confidence in adult business students.

Fifth, the adult business students in this study responded *good teachers* contribute to their motivation. A question here is what do they need from faculty to assist them in their motivation? It is recommended that seminars be formed which would allow adult business students to confer with the faculty in the College of Business to determine how class syllabi, projects, assignments, and exams can be designed to better meet the needs of adult business students.

## General Discussion

There are several aspects of this study which need to be addressed. The adult business students in this study did not elaborate on their responses because they were requested to respond in a concise and brief manner. Although consensus was reached that *personal goals*, *feeling of self-fulfillment*, and *degree* were primary motivating factors, there is a need for further research which would allow adult business students more time to elaborate on their responses. Adult educators need to be aware of adult business students' specific personal goals and how to assist them in their feeling of self-fulfillment.

Another aspect to be considered is the high final overall mean ratings of *degree*, *personal goals*, and *feeling of self-fulfillment* which were 3.9, 4.7, and 4.3 respectively. Could it be the personal motivating factors of adult business students are primarily intrinsic or originating from within themselves?

This same aspect applies to the environmental motivating factors category. *Good teachers*, *quiet atmosphere*, *lack of outside distractions*, *large blocks of time*, and *employer support* are extrinsic in nature or originating from outside the individual. Here again, further research needs to be done to determine the specifics of each environmental motivating factor.

Finally, adult business educators need to be more aware of those factors which contribute to the motivation of adult business students. This study has determined adult business students needs differ slightly from adult students in general.

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## APPENDIXES

APPENDIX A

COVER LETTER AND QUESTIONNAIRE FOR  
FIRST ROUND IN DELPHI  
METHOD



Dear Student:

Attached you will find the first in a series of questionnaires designed to seek your assistance in determining what factors contribute to your motivation in your study of business related subjects at Oklahoma State University.

These questionnaires are in accordance with the Delphi Method which is being used as an instrument to assist adult educators in motivating their business students. The Delphi Method will consist of three rounds of questionnaires in this study.

Your answers will be held in strictest confidence and you will remain anonymous throughout the process of the Delphi Method.

Please indicate the last five digits of your social security number on each questionnaire. This will assist me in determining the final consensus of your responses. Please return the questionnaire in one week to your professor, sealed, in the envelope provided. The professor is requested to insert the sealed envelopes in the large envelope provided and route it to Dr. Oakley, room 406 Classroom Building.

Thank you for agreeing to participate in the Delphi Method. Your input is greatly appreciated. My phone number is (405)-377-6711 if you have any questions.

Sincerely,

Joanne Murer

CIRCLE ONE: MALE FEMALE

LAST FIVE DIGITS OF YOUR SOCIAL SECURITY NUMBER: \_ \_ \_ \_ \_

**MOTIVATIONAL FACTORS FOR ADULTS IN BUSINESS  
QUESTIONNAIRE**

I am trying to determine why adult learners like yourself are motivated to study in the courses they take in the College of Business. I would appreciate just a few minutes of your time to answer the following questions. Considering the classes you take in the College of Business:

- 1) What personal factors(i.e., family, spouse, moods, etc.) motivate you to study?
- 2) What environmental factors (i.e., weather, community, etc.) motivate you to study?

APPENDIX B

LETTER OF REMINDER FOR QUESTIONNAIRE  
OF FIRST ROUND IN DELPHI  
METHOD

September 28, 1993

Dear Student:

The purpose of this letter is to remind you, if you have not done so already, to return the questionnaire for the first round in the Delphi Method.

We thank those who have returned the questionnaire for the first round. Your responses and opinions are greatly appreciated and have proven to be valuable in this study.

You return the questionnaire to your professor who forwards them in campus mail to Joanne Murer, c/o Dr. Gary Oakley, 406 Classroom Building.

If you have any questions, please contact me at (405)-377-6711. Thank you again.

Sincerely,

Joanne Murer

APPENDIX C

ORIGINAL AND MUTUALLY EXHAUSTIVE LISTS OF  
PERSONAL AND ENVIRONMENTAL  
CATEGORIES

## RESPONSES TO QUESTIONNAIRE OF ROUND ONE IN DELPHI STUDY

Original List

Personal Factors which contribute to the motivation of adult students in their study of business related subjects at Oklahoma State University.

Spouse, Family, Parents

Desire to succeed & learn

To do a better job in current job & not to be locked in one field

Time Constraints/deadlines

Positive Moods

Discussing, learning, and understanding interesting ideas & concepts.

Significant other

Peers who work equally as well

Organization

Future reward

Personal goals, beliefs, degree (Drive for Completion)

Rest

Tests, grades, g.p.a.

General liking of studying

Increase standard of living

Earning real income again

Group assignments (desire to be prepared)

Self-fulfillment

Feeling of confidence in area of study

Friends

Being single - attaining degree as a result of a divorce

Fear of failure

Mutually exhaustive list of categories derived from original list of personal factors which contribute to the study of adult students in their study of business related subjects at Oklahoma State University. This list will be the basis for the questionnaire of the second round in the Delphi Study.

Spouse, significant other, friends - Family (Immediate & Extended)

To do a better job in current job

Time constraints, deadlines

Positive Moods

Organization

Discussing, learning & understanding class concepts & ideas

Peers (who work equally as well)

Rest

Tests, g.p.a.

Self-fulfillment

Personal goals, success, obtaining a degree in business

Increase standard of living

Group assignments

Fear of failure

Being single - self-sufficiency as a result of a divorce

Feeling of confidence from being able to manipulate charts, graphs, and theory

## ORIGINAL LIST

Environmental factors which contribute to the motivation of adult students in their study of business related subjects at Oklahoma State University.

Inclement weather

Economic factors, i.e., cost of living, inflation

Own Company

Quiet atmosphere, i.e. library

Darkness

Coffee

Nice weather, mild

Moon cycle

Heavy Labor

Time constraints, time pressure, deadlines

No outside distractions, i.e., (family, activities)

Clean house

Studying outdoors

Large blocks of time

None

Certain seasons, (spring, summer or fall)

Competition with Americans

Stillwater - (quiet place)

Peers with same intellectual level

Familiar place (high intellectual level)



## ORIGINAL LIST (CONTINUED)

Original list of environmental factors continued.

Isolation

Group studying

Surroundings (necessary references)

Frequent breaks

T.V.

Good & nice educators

Inexpensive tuition at OSU

Employer support

Own Clientele

Stress

Nighttime

Time constraints, pressure, deadlines

Scholarships, Inexpensive tuition at OSU

None

Competition with Americans

Mutually exhaustive list of categories derived from original list of environmental factors which contribute to the motivation of adult students in their study of business related subjects at Oklahoma State University. This list will be the basis for the questionnaire of round two in the Delphi Study.

Weather (inclement & nice) Certain seasons

Economic factors (i.e., inflation & cost of living)

Own company, clientele - heavy labor

Quiet atmosphere (library) Stillwater - quiet community

clean house

Darkness

Moon cycle

Large blocks of time, Weekdays 8:00-5:00

Studying outdoors

Good & nice educators

Scholarships

Frequent breaks, i.e. T.V, coffee

Lack of outside distractions (personal & activities)

Employer support

Colleagues (group studying) & same intellectual level

**APPENDIX D**

**COVER LETTER, QUESTIONNAIRE AND COMPUTERIZED ANSWER  
SHEET FOR SECOND ROUND IN  
DELPHI METHOD**

Dear Student:

October 5, 1993

Thank you for your prompt response to the questionnaire of the first round in this Delphi Method.

Attached you will find a questionnaire with a computerized answer sheet on which you are asked to rate your responses on a scale of 0 to 5 (0 being the lowest to 5 being the highest) for the second round in this Delphi Method.

Please read and follow the directions carefully. We ask that you place your completed answer sheet in the envelope provided and return it, in one week, to your professor who is to place the envelopes in campus mail addressed to Joanne Murer, c/o Dr. Gary Oakley, 406 Classroom Building.

Please indicate your gender and the last 5 digits of your social security number in the spaces provided.

Your input has contributed greatly in determining those factors which contribute to your motivation in your study of business subjects here at Oklahoma State University. My number is (405)-377-6711, if you have any questions. Thank you again.

Sincerely,

Joanne Murer

**Directions: USING A NO. 2 PENCIL**

1. At the top of the answer sheet shade in the circle for your sex.
2. At the bottom of the answer sheet shade in circles that correspond to the last 5 digits of your Social Security Number.
3. Below, please read each item carefully.
4. Rate each: 0 representing the lowest and 5 representing the highest.
5. Then using a No. 2 pencil, shade in the circle the corresponding number, beginning with number one on your answer sheet.
6. Please answer all items. Do not leave any items blank.

**Personal factors which contribute to the study of adult students in their study of business related subjects at Oklahoma State University.**

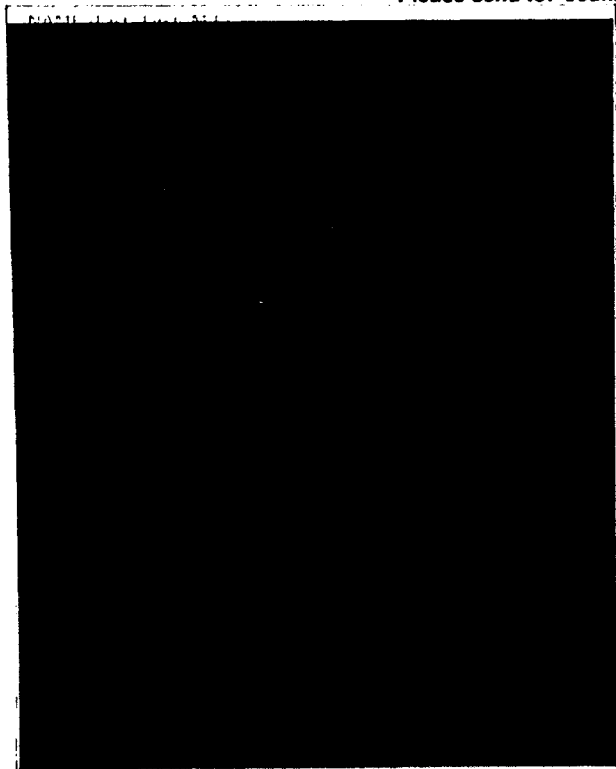
1. Spouse, significant other
2. Family (Immediate & Extended)
3. Job advancement
4. Time constraints, deadlines
5. The process of learning itself
6. Friends/group peers
7. Grades
8. Feeling of self-fulfillment
9. Personal goals
10. Increased standard of living
11. Desire to function well in a group
12. Fear of failure
13. Degree
14. Feeling of confidence

**Environmental factors which contribute to the motivation of adult students in their study of business related subjects at Oklahoma State University.**

15. Certain types of weather or season
16. Economic environment (i.e., inflation & cost of living)
17. Quiet atmosphere (i.e., library)
18. Stillwater community
19. Darkness
20. Lack of outside distractions (personal & professional)
21. Studying outdoors
22. Scholarships
23. Large blocks of time
24. Competitive environment
25. Colleagues of similar intellectual interests
26. Frequent breaks (i.e., T.V., coffee)
27. Good teachers
28. Employer support

Please send to: Joanne Murer c/o Dr. Gary Oakely, 406 Classroom Building

SIDE 1



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**GENERAL PURPOSE - NCS - ANSWER SHEET**  
FOR USE WITH ALL NCS SENTRY OPTICAL MARK READING SYSTEMS  
SEE IMPORTANT MARKING INSTRUCTIONS ON SIDE 2

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**APPENDIX E**

**LETTER OF REMINDER FOR SECOND ROUND  
IN DELPHI METHOD**

Dear Student:

October 26, 1993

The purpose of this letter is to remind you, if you have not done so already, to complete and return the questionnaire for the second round in this Delphi Method.

We thank those of you who have had the opportunity to complete this questionnaire and return it to us. We realize that Fall Break may have delayed your return of this questionnaire.

Your responses are important to us and we are looking forward to your ratings on this questionnaire.

Please place the completed computerized answer sheet in the envelope provided and return it via campus mail to Joanne Murer, c/o Dr. Gary Oakley, 406 Classroom Building. We ask that you return it by Friday, October 29, 1993 to enable us to prepare the questionnaire for the third and final round in this Delphi Method.

Thank you again for participating in this study. If you have any questions, please contact me, at (405) 377-6711.

Sincerely,

Joanne Murer



**APPENDIX F**

**COVER LETTER, QUESTIONNAIRE AND COMPUTERIZED  
ANSWER SHEET FOR THIRD AND FINAL  
ROUND IN DELPHI  
METHOD**

Dear Student:

November 15, 1993

Thank you for your prompt response to the questionnaire of the second round in this Delphi Method.

Attached you will find the questionnaire and computerized answer sheet for the third and final round in this Delphi Method. This questionnaire lists the responses and their corresponding ratings, beginning with the highest rating, and asks you to indicate your final rating to each response on a Likert Type scale of 0 to 5 (0 being the lowest and 5 being the highest).

Please read and follow the directions carefully on the questionnaire. We ask that you return the computerized answer sheet by Wednesday, November 24, 1993, not by campus mail, but in the stamped self-addressed envelope provided, to:

Joanne Murer, 708 W. McElroy, Stillwater, Oklahoma 74075.

Your participation in this Delphi Method has contributed greatly to its success in determining those factors which motivate you to study business related subjects at Oklahoma State University.

We wish you success in all your studies and career. Enjoy a wonderful Thanksgiving and Christmas. If you have any questions please contact me at (405)-377-6711. Thank you again.

Sincerely,

Joanne Murer

**Directions: USING A NO. 2 PENCIL**

1. At the top of the answer sheet shade in the circle for your sex.
2. At the bottom of the answer sheet shade in circles that correspond to the last 5 digits of your Social Security Number.
3. Below, please read each item carefully.
4. Rate each: 0 representing the lowest and 5 representing the highest.
5. Then using a No. 2 pencil, shade in the circle the corresponding number, beginning with number one on your answer sheet.
6. Please answer all items. Do not leave any items blank.

**Personal factors which contribute to the study of adult students in their study of business related subjects at Oklahoma State University.**

	Averaged Rating/Per Response
1. Personal goals	4.3
2. Feeling of self-fulfillment	4.2
3. Increased standard of living	4.0
4. Grades	3.7
5. Job advancement	3.7
6. Spouse, significant other	3.7
7. Degree	3.4
8. The process of learning itself	3.3
9. Time constraints, deadlines	3.3
10. Feeling of confidence	3.2
11. Family (Immediate & Extended)	3.2
12. Fear of failure	2.8
13. Desire to function well in a group	2.4
14. Friends/group peers	2.2

**Environmental factors which contribute to the motivation of adult students in their study of business related subjects at Oklahoma State University.**

	Averaged Rating/Per Response
15. Good teachers	3.9
16. Competitive environment	3.5
17. Lack of outside distractions (personal & professional)	3.5
18. Quiet atmosphere (i.e., library)	3.4
19. Employer support	3.3
20. Darkness	3.3
21. Scholarships	3.0
22. Colleagues of similar intellectual interests	2.8
23. Large blocks of time	2.7
24. Stillwater community	2.6
25. Frequent breaks (i.e., T.V., coffee)	2.5
26. Economic environment (i.e., inflation & cost of living)	2.4
27. Certain types of weather or season	2.4
28. Studying outdoors	2.2

Please send to: Joanne Murer c/o Dr. Gary Oakely, 406 Classroom Building

Side 1

**GENERAL PURPOSE - NCS - ANSWER SHEET**  
FOR USE WITH ALL NCS SECURITY OPTICAL MARK READING SYSTEMS  
SEE IMPORTANT MARKING INSTRUCTIONS ON SIDE 2

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APPENDIX G

LETTER OF REMINDER FOR THIRD AND  
FINAL ROUND IN DELPHI  
METHOD

Dear Student:

December 3, 1993

The purpose of this letter is to remind you, if you have not done so already, to return the questionnaire of the third and final round in this Delphi study.

I realize you are very busy at this time and I do not want to interfere with your progress in your studies this semester. However; I need the remaining computerized answer sheets to complete the work for my Master's thesis. The answer sheet requires approximately 15 minutes or less to complete.

I thank you for the 8 answer sheets I have received to date. There are 12 remaining and I urge you to return them by the end of this semester or shortly thereafter.

I wish you a very successful semester and thank you again for participating in this Delphi study. Good luck on finals and have a Merry Christmas and Happy New Year. If you have any questions please contact me at (405)-377-6711.

Sincerely,

Joanne Murer

**APPENDIX H**

**CHI SQUARE ANALYSIS OF GENDER (ENVIRONMENTAL FACTORS)**

**CHI SQUARE ANALYSIS OF GENDER (PERSONAL FACTORS)**

**TABLES 6 AND 7**

TABLE 6

CHI SQUARE ANALYSIS OF GENDER (PERSONAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df			Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Personal Goals</b>								
<u>Ratings</u>		<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>
<u>Response</u>	<u>Sex</u>							
f	1	0	2	7				
%f		0.00	18.18	63.64				
f	2	1	0	1				
%f		9.09	0.00	9.09				
					2	5.118	5.991	0.077
<b>Feeling of Self-Fulfillment</b>								
<u>Ratings</u>		<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>
<u>Response</u>	<u>Sex</u>							
f	1	0	6	3				
%f		0.00	54.55	27.27				
f	2	1	0	1				
%f		9.09	0.00	9.09				
					2	5.958	5.991	0.051



TABLE 6 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (PERSONAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df					Critical Value = cv Table Value = TV	Exact Probability = p		
<b>Degree Ratings</b>		<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>	
<b>Response</b>	<u>Sex</u>									
f	1	1	1	6	1					
%f		9.09	9.09	54.55	9.09					
f	2	0	0	2	0					
%f		0.00	0.00	18.18	0.00					
						3	0.917	7.815	0.821	
<b>Increased Standard of Living Ratings</b>		<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>	
<b>Response</b>	<u>Sex</u>									
f	1	0	2	6	1					
%f		0.00	18.18	54.55	9.09					
f	2	1	0	0	1					
%f		9.09	0.00	0.00	9.09					
						3	7.639	7.815	0.054	

TABLE 6 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (PERSONAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df				Critical Value = cv Table Value = TV	Exact Probability = p	
<b>Feeling of Confidence</b>								
<u>Ratings</u>		<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>
	<u>Sex</u>							
<u>Response</u>								
f	1	5	2	2				
%f		45.45	18.18	18.18				
f	2	1	0	1				
%f		9.09	0.00	9.09				
					2	0.917	5.991	0.632
<b>Time Constraints, Deadlines</b>								
<u>Ratings</u>		<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>
	<u>Sex</u>							
<u>Response</u>								
f	1	4	4	1				
%f		36.36	36.36	9.09				
f	2	1	1	0				
%f		9.09	9.09	0.00				
					2	0.244	5.991	0.885

TABLE 6 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (PERSONAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df					Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Job Advancement Ratings</b>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>	<u>Sex</u>									
f	1	1	1	2	4	1				
%f		9.09	9.09	18.18	36.36	9.09				
f	2	0	0	2	0	0				
%f		0.00	0.00	18.18	0.00	0.00				
							4	4.278	9.488	0.370
<b>Feeling of Confidence Ratings</b>		<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>		
<u>Response</u>	<u>Sex</u>									
f	1	1	5	3						
%f		9.09	45.45	27.27						
f	2	0	1	1						
%f		0.00	9.09	9.09						
					2	0.356	5.991	0.837		

TABLE 6 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (PERSONAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df					Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Grades</b>										
<u>Ratings</u>	<u>Sex</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>										
f	1	2	1	3	2	1				
%f		18.18	9.09	27.27	18.18	9.09				
f	2	0	0	1	0	1				
%f		0.00	0.00	9.09	0.00	9.09				
							4	2.597	9.488	0.627
<b>Family (immediate and extended)</b>										
<u>Ratings</u>	<u>Sex</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>										
f	1	1	2	3	1	1				
%f		10.00	20.00	30.00	10.00	10.00				
f	2	0	0	0	2	0				
%f		0.00	0.00	0.00	20.00	0.00				
							4	5.833	9.488	0.212

TABLE 6 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (PERSONAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df					Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Spouse (significant other)</b>										
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
	<u>Sex</u>									
<u>Response</u>										
f	1	3	1	2	1	1				
%f		30.00	10.00	20.00	10.00	10.00				
f	2	0	0	0	2	0				
%f		0.00	0.00	0.00	20.00	0.00				
							4	5.833	9.488	0.212
<b>Fear of Failure</b>										
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>	
	<u>Sex</u>									
<u>Response</u>										
f	1	2	2	2	2					
%f		20.00	20.00	20.00	20.00					
f	2	0	1	1	0					
%f		0.00	10.00	10.00	0.00					
							3	1.667	7.815	0.644

TABLE 6 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (PERSONAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df					Critical Value = cv Table Value = TV	Exact Probability = p		
<b>Desire to Function Well in a Group</b>										
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>	
	<u>Sex</u>									
<u>Response</u>										
f	1	1	3	4	1					
%f		9.09	27.27	36.36	9.09					
f	2	0	2	0	0					
%f		0.00	18.18	0.00	0.00					
						3	2.933	7.815	0.402	
<b>Friends/Group Peers</b>										
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>	
	<u>Sex</u>									
<u>Response</u>										
f	1	2	3	2	2					
%f		18.18	27.27	18.18	18.18					
f	2	0	2	0	0					
%f		0.00	18.18	0.00	0.00					
						3	2.933	7.815	0.402	

TABLE 7

CHI SQUARE ANALYSIS OF GENDER (ENVIRONMENTAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df				Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Good Teachers</b>									
<u>Ratings</u>		<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>
<u>Response</u>	<u>Sex</u>								
f	1	0	1	6	2				
%f		0.00	9.09	54.55	18.18				
f	2	0	0	2	0				
%f		0.00	0.00	18.18	0.00				
						2	0.917	5.991	0.632
<b>Quiet Atmosphere (i.e., library)</b>									
<u>Ratings</u>		<u>1</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>
<u>Response</u>	<u>Sex</u>								
f	1	1	2	5	1				
%f		9.09	18.18	45.45	9.09				
f	2	0	0	1	1				
%f		0.00	0.00	9.09	9.09				
						3	2.037	7.815	0.565

TABLE 7 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (ENVIRONMENTAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df					Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Lack of outside distractions (personal and professional)</b>										
<u>Ratings</u>	<u>Sex</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>										
f	1	1	1	2	4	1				
%f		9.09	9.09	18.18	36.36	9.09				
f	2	0	0	0	1	1				
%f		0.00	0.00	0.00	9.09	9.09	4	2.261	9.488	0.688
<b>Competitive Environment</b>										
<u>Ratings</u>	<u>Sex</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>										
f	1	1	1	4	3	0				
%f		9.09	9.09	36.36	27.27	0.00				
f	2	0	1	0	0	1				
%f		0.00	9.09	0.00	0.00	9.09	4	7.639	9.488	0.106



TABLE 7 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (ENVIRONMENTAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df					Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Large Blocks of Time</b>										
<u>Ratings</u>	<u>Sex</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>										
f	1	1	4	1	2	1				
%f		9.09	36.36	9.09	18.18	9.09				
f	2	0	0	1	0	1				
%f		0.00	0.00	9.09	0.00	9.09				
							4	4.278	9.488	0.370
<b>Employer Support</b>										
<u>Ratings</u>	<u>Sex</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>		
<u>Response</u>										
f	1	1	4	2						
%f		14.29	57.14	28.57						
f	2	0	0	0						
%f		0.00	0.00	0.00						
					0	0.00	0.00	0.00	0.00	

TABLE 7 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (ENVIRONMENTAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df				Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Economic Environment (i.e., inflation and cost of living)</b>									
<u>Ratings</u>	<u>Sex</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>									
f	1	1	1	5	2				
%f		9.09	9.09	45.45	18.18				
f	2	0	1	0	1				
%f		0.00	9.09	0.00	9.09				
						3	3.157	7.815	0.368
<b>Colleagues of Similar Intellectual Interests</b>									
<u>Ratings</u>	<u>Sex</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>									
f	1	1	3	2	3				
%f		9.09	27.27	18.18	27.27				
f	2	1	1	0	0				
%f		9.09	9.09	0.00	0.00				
						3	2.597	7.815	0.458

TABLE 7 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (ENVIRONMENTAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df				Critical Value = cv Table Value = TV		Exact Probability = p		
<b>Scholarships</b>										
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>	
<u>Response</u>	<u>Sex</u>									
f	1	1	2	3	1					
%f		12.50	25.00	37.50	12.50					
f	2	0	0	1	0					
%f		0.00	0.00	12.50	0.00					
						3	1.143	7.815	0.767	
<b>Stillwater Community</b>										
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>	<u>Sex</u>									
f	1	3	1	1	1	0				
%f		37.50	12.50	12.50	12.50	0.00				
f	2	0	0	1	0	1				
%f		0.00	0.00	12.50	0.00	12.50				
							4	5.333	9.488	0.255

TABLE 7 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (ENVIRONMENTAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df				Critical Value = cv Table Value = TV		Exact Probability = p	
<b>Certain Types of Weather or Season</b>									
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
	<u>Sex</u>								
<u>Response</u>									
f	1	3	3	1	1				
%f		30.00	30.00	10.00	10.00				
f	2	0	0	0	2				
%f		0.00	0.00	0.00	20.00				
						3	5.833	7.815	0.120
<b>Studying Outdoors</b>									
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
	<u>Sex</u>								
<u>Response</u>									
f	1	3	1	1	0				
%f		50.00	16.67	16.67	0.00				
f	2	0	0	0	1				
%f		0.00	0.00	0.00	16.67				
						3	6.000	7.815	0.112

TABLE 7 (CONTINUED)

CHI SQUARE ANALYSIS OF GENDER (ENVIRONMENTAL FACTORS)

Male = 1 Female = 2		Frequency = f % Frequency = %f Degrees of Freedom = df			Critical Value = cv Table Value = TV		Exact Probability = p		
<b>Frequent Breaks (i.e., T.V., coffee)</b>									
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>df</u>	<u>CV</u>	<u>TV</u>	<u>p</u>	
<u>Response</u>	<u>Sex</u>								
f	1	4	3	2					
%f		36.36	27.27	18.18					
f	2	0	1	1					
%f		0.00	9.09	9.09					
					2	1.477	5.991	0.478	
<b>Darkness</b>									
<u>Ratings</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>df</u>	<u>cv</u>	<u>TV</u>	<u>p</u>
<u>Response</u>	<u>Sex</u>								
f	1	4	2	1	1				
%f		50.00	25.00	12.50	12.50				
f	2	0	0	0	0				
%f		0.00	0.00	0.00	0.00				
						0	0.000	0.000	0.000

## VITA

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Master of Science

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