

EFFECTIVENESS OF UNDERGRADUATE  
ENTREPRENEURSHIP EDUCATION IN  
THE USA: A STUDY OF  
SATISFACTION  
MEASURES

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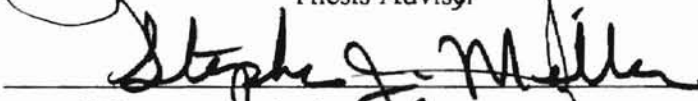
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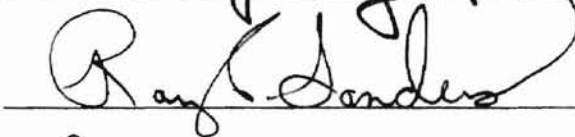
Submitted to the Faculty of the  
Graduate College of the  
Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
DOCTOR OF EDUCATION  
July, 1996

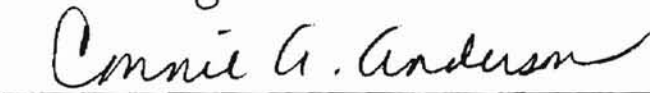
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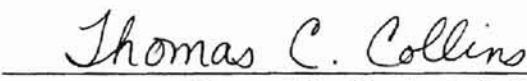
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## ACKNOWLEDGMENTS

A dissertation is executed by one person, but is completed by a host of people. I wish to express my deepest gratitude and appreciation to Dr. William D. Bygrave. Without his intelligent guidance, invaluable assistance, inspiration and friendship throughout my year at Babson College, this dissertation would not have been completed. Additionally, I wish to thank the faculty, students, and staff of Babson College for their assistance and inspiration in the completion of this dissertation. Special thanks to Mrs. Irene McCarthy of Babson College, without her my year at Babson College would not have come to fruition.

Dr. Ray E. Sanders, thank you for your guidance, confidence in my abilities, and friendship throughout my doctoral program. Additionally, I wish to personally thank Dr. James Gregson for his assistance and patience and his leap of faith with this project. Expressions of gratitude are extended to Dr. Connie Anderson and Dr. Stephen Miller for their constructive contributions.

Finally, I would like to thank my parents and friends for their undying support and encouragement throughout this magnum opus. Without your support and indefatigable patience I would not have maneuvered through the labyrinth to completion.

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## CHAPTER I

### INTRODUCTION

The nature of capitalism is Darwinistic in that the elimination of the obsolete and the unadaptable by the new and the adaptable creates a cycle of life with survival going to the fittest. This economic survival, as described by Schumpeter (1942), is the "perennial gale of the creative destruction of capital," which is continuous in nature and instigated by the entrepreneur (p. 84). The act of business creation by the entrepreneur functions as a catalyst, creating a state of disequilibrium that will continually exist within the business environment as long as entrepreneurs create businesses. Rutherford (1992) described disequilibrium as a state of an economic system whose key variables continue to fluctuate around equilibrium. It is within this state of disequilibrium that the entrepreneur identifies and seizes the opportunity of business creation. Therefore, it is the entrepreneur who creates and maintains this state of disequilibrium.

#### The Entrepreneur

##### Definition of the Entrepreneur

As a result of the evolving nature of the field, a number of definitions exist for the entrepreneur. Schumpeter (1942) suggested that the entrepreneur innovatively combines the factors of production. The innovative combination of the production factors creates

a disequilibrium within an industry that results in the creation of new organizations.

Zeithaml and Rice (1987) suggested limiting the entrepreneur's existence to the

origination of the business. This implies that the entrepreneur, as defined by

Schumpeter, combines resources only at the origination of the firm. Zeithaml and Rice's

definition neglected to explain the innovative combination of resources after the start-up

of the firm.

Schumpeter's definition of the entrepreneur provides the field with the

springboard that subsequent researchers have utilized as they attempt to further define

the entrepreneur. For example, Kent (1990) suggested that the entrepreneur exists only

in terms of technological progress, whereas Gunderson (1990) saw the entrepreneur as

the enhancer of value, which refers to Schumpeter's idea of the entrepreneur as the

combiner of resources. Referring to Zeithaml and Rice's concept of the entrepreneur as

existing only at the initiation of the business, Hofer and Bygrave (1991) offered an

explanation for the entrepreneur creating organizations. They explained that the

entrepreneur perceives opportunity. However, they did not explain why the entrepreneur

reacts to opportunity by creating an organization to pursue it.

In an effort to change the research focus from defining the entrepreneur, Baumol

(1993) and Bull and Willard (1993) offered an inclusive, consensus definition of the

entrepreneur. They defined the entrepreneur as being the organization creator and an

innovator. In contrast to this consensus definition, Morris, Lewis, and Sexton (1994)

defined the entrepreneur by defining entrepreneurship and identified the entrepreneur as

the individual who practices entrepreneurship. They suggested that entrepreneurship is a

process in which entrepreneurship processes inputs and produces specific outputs as results. They identified the results as new enterprises, added value, new products, and profits. Morris, Lewis, and Sexton's definition appears to be an elaboration of Schumpeter's foundational definition in that Morris, Lewis, and Sexton have described the entrepreneurial process rather than the entrepreneur.

As the field has evolved, the definition of the entrepreneur has evolved to the process definition, as presented by Morris, Lewis, and Sexton. This definition, along with the others presented above, has remained within the definitional influence of Schumpeter.

### The Entrepreneurial Process

Bygrave (1989) suggested that no mathematical model exists as yet that describes the discontinuous nature of the entrepreneurial process. Hofer and Bygrave (1991) identified the entrepreneurial process as consisting of nine characteristics: "It is initiated by an act of human volition; it is at the level of the individual firm; it is a change of state; it is a discontinuity; it is a holistic process; it is a dynamic process; it involves numerous antecedent variables; its outcomes are extremely sensitive to initial conditions; it is unique" (p. 17). Reynolds (1992) attributed the entrepreneurial process as existing within the social context of the entrepreneur and insisted that it is within the social context that the entrepreneur locates and seizes opportunities. Herron and Robinson (1993) described the entrepreneurial process as the way in which personality and motivation affected entrepreneurial skill and training. Johannisson and Senneseth (1990)



identified five paradoxes of entrepreneurship: "independence vs. dependence; process vs. personal attributes; revolution vs. evolution; vision vs. action; and social vs. business orientation" (Bull & Willard, 1993, p. 188). Bull and Willard (1993) suggested their theory as a list of four conditions: task-related motivation, expertise and confidence, expectation of self-gain, and a supportive environment.

In contrast to Bull and Willard's list, Baumol (1993) based his model in economics. He suggested that the pursuit of profits is the driving motivation for the entrepreneur. Even though different authors have used different descriptions of the entrepreneurial process, they have actually described the same entity or parts of the same process, the same paradoxical nature, and the same resultant transformation of the entrepreneur.

#### Entrepreneurship and Economic Development

In order to establish the relevancy of entrepreneurship education, there must be a linkage between entrepreneurship education and economic development. Chusimir (1988), Ronstadt (1985), and Clark et al. (1984) established this linkage when they identified the positive relationship between entrepreneurship education and entrepreneurial success. Expanding on the connection, McMullen and Long (1987, 1990), McMullen et al. (1985), and McMullen et al. (1986) established the direct relationship between entrepreneurship education and economic development.

### The Purpose of Entrepreneurship Education

Rabbior (1990) suggested that the primary objective of entrepreneurship education is not necessarily the creation of entrepreneurs. Instead, he suggested that the clients of entrepreneurship education have different options that they wish to pursue. Therefore, it is the client's choice as to the degree of exposure to entrepreneurship they desire. In support of this idea, Kent (1990) identified the central responsibility of entrepreneurship education as "... identifying and nurturing those who desire to be entrepreneurs" (p. 1). Bender et al. (1990) took a more practical approach by suggesting that the purpose of entrepreneurship education was to create entrepreneurs and potential entrepreneurs for the purpose of economic development. Sage (1993) identified another variation of the purpose of entrepreneurship education as a tool the community can provide to create entrepreneurs and potential entrepreneurs for the purpose of economically developing the community.

### Statement of the Problem

Bygrave (1989) suggested that a lack of consensus in the field, brought about by its relative newness, is a key issue. Therefore, uniform measures of effectiveness would encourage the consistent development of the field. According to Vesper (1985), there has been a lack of formal educational research in the field with almost no research treating the subject of performance outcomes in entrepreneurship education. Sexton and Bowman-Upton (1988) acknowledged the limited amount of research in teacher effectiveness of entrepreneurship courses. According to Block and Stumpf (1992), a

uniform method of evaluating the effectiveness of entrepreneurship education should have three measures: 1) the program's impact on student's knowledge base; 2) the program's impact on student attitudes; and 3) student satisfaction. Additionally, the uniform method of evaluation would allow for the comparison between students, faculty, pedagogical methods, and course content of the different institutions. Therefore, the problem within the field of entrepreneurship education is the absence of a set of uniform measures of effectiveness.

#### Purpose of the Study

The purpose of this study is to develop a valid and reliable instrument by which to measure the effectiveness of undergraduate entrepreneurship education programs. A set of student-satisfaction measures will emerge from the data collected by the researcher. These measures will comprise the instrument. Therefore, a collection of student-satisfaction measures will be established by which to measure the effectiveness of entrepreneurship education programs.

#### Significance of the Study

The significance of this study can have implications ranging from affecting a single program to affecting public policy. For the individual undergraduate entrepreneurship program, the institution can create a competitive advantage by continuously revising content to ensure its relevancy.

The collection of student-satisfaction measures can be used to compare students, faculty, pedagogical methods, and course content of the different institutions. These comparisons are the same requirements that Block and Stumpf suggested were necessary for a uniform set of measures. These measures are a framework from which to compare and determine the direction, development, and relevancy of undergraduate entrepreneurship education programs.

According to the suggestion of Bygrave (1989), a uniform set of measures would encourage the consistent development within the field. Therefore, the measures emerging from this study could help toward that goal.

Finally, according to Kasarda (1992), the primary objective to research in the field of entrepreneurship is to affect public policy. Therefore, by having a uniform set of student-satisfaction measures, educational institutions will be able to provide public policy makers with specific information regarding the effectiveness of entrepreneurship education programs.

#### Definition of Terms

Consumer: an individual who purchases or has the capacity to purchase goods and services offered by institutions in order to satisfy personal or household needs, wants, or desires (Walters, 1974, p. 4).

Customer: an individual actively engaged in buying or one who will become an active buyer in the near future (Walters, 1974, p. 5).

Disequilibrium: a state of an economic system whose key variables continue to fluctuate around equilibrium (Rutherford, 1992, p. 124).

Educational effectiveness: the student's utilization of the information transferred from the facilitation of the instructor.

Entrepreneur: "... one who reforms or revolutionizes the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or new outlet for products, by reorganizing an industry and so on" (Schumpeter, p. 132).

Entrepreneurial event: "... involves the creation of a new organization to pursue an opportunity" (Bygrave, 1991, p. 257).

Entrepreneurial process: "... involves all functions, activities, and actions associated with perceiving opportunities and the creation of organizations to pursue them" (Bygrave, 1991, p. 257).

Entrepreneurship: "... a process activity. It generally involves the following inputs: an opportunity; one or more proactive individuals; an organizational context; risk, innovation, and resources. It can produce the following outcomes: a new venture enterprise; value; new products or processes; profit or personal benefit; and growth" (Morris, Lewis, & Sexton, 1994, p. 26).

Entrepreneurship major: any program offering a minimum of four undergraduate courses. This is referred to as an emphasis rather than a major (Robinson & Haynes, 1991).

Equilibrium: "a state of balance such that a set of selected interrelated variables has no inherent tendency to change"(Rutherford, 1992, p. 152).

Learning: "1) knowledge acquired by systematic study; 2) the act or process of acquiring knowledge or skill; 3) the modification of behavior through practice, training, or experience" (Random House Unabridged Dictionary, 1993, p. 1095).

Learning objective: the behavioral or cognitive goal, as established by the student and/or faculty, that manifests itself as the mastery or understanding of a particular concept(s) or skill(s).

### Research Questions

This study will attempt to answer the following questions:

1. What are the measures of effectiveness for undergraduate entrepreneurship programs as reflected by the literature?
2. Within the contextual domains of fellow students, faculty, course content, and content delivery, what are the behaviors promoting student satisfaction and dissatisfaction within the undergraduate entrepreneurship programs?

### Assumptions

The following assumptions will guide the execution and interpretation of this study:

1. This study accepts Roger's idea of the relationship between student and faculty in which the student is the client. This idea implies a model in which the

institution delivers its "product," a quality education, to the student in the most effective and efficient manner possible. In other words, the process of education is an economic transaction between the student and the educational institution, whereby the process is executed by the student on the consuming side of the transaction and the faculty and staff, as agents for the institution, on the service or product side of the transaction. This further implies that the institution should, therefore, be responsive to the specific needs of the client/customer as expressed by the client/customer. Further, there is a unique symbiotic relationship of mutual respect and equality between the client and the institution. This assumption is supported by the comments of Drucker (1994), Naisbitt (1994), and Wirth (1992) of the coming knowledge worker, who will be the student, the worker, and the entrepreneur.

2. Education as an economic transaction changes the philosophical view of the student from the present Classical view to the Pragmatic view, wherein the learner is a co- learner with the faculty. This implies that the faculty learns from the student and the student learns from the faculty.

3. There are measures of effectiveness that link the desired results of the educational programs to the content, practices, and opportunities offered and developed by these programs.

4. The current demand for the entrepreneurship programs will continue at its current capacity.

5. The course content of entrepreneurship programs offered at the colleges and universities is similar.

6. There are different audiences for entrepreneurship education. This implies a continuum of entrepreneurship interest, which ranges from the entrepreneur, who definitely wishes to start a business, to the sympathizer of the entrepreneur, who wishes only to observe the entrepreneurs from afar. Even though, this continuum exists, this study will focus only on individuals desiring to be entrepreneurs as indicated by their declaration of entrepreneurship as their undergraduate major.

7. The learning objectives for those students desiring to be entrepreneurs, according to Stumpf and Block (1992), are:

1. Acquiring knowledge and understanding of the concepts of business management, including finding opportunities and acquiring resources.
2. Gaining skills in the use of analytical and management techniques, including the ability to analyze a business situation and synthesize an action plan.
3. Identifying and stimulating existing entrepreneurial drive, talent, and skills (p. 31).

8. The tools of entrepreneurship can be taught.

### Limitations

The following limitations will act as parameters for this study and thus affect the interpretation of the results of this study.

1. The nature of this study is preliminary research which the purpose is to identify future areas of research under the specific research questions and design of the study.

2. As a result of the purposive sampling approach, there will be limited generalizability to only that population from which the samples are directly drawn.



Further limitations to generalizability exist due to the utilization of the same institutions for the samples used in the first and second phases.

3. The stipulations and constraints contained in the previous studies used in the literature review will further limit this study.

4. The confidentiality agreement between the researcher and the three participating institutions prohibits the comparison between institutions and students and alumni from the participating institutions.

### Organization of the Study

This study is divided into five chapters. Chapter I contains the sections: Introduction, Statement of the Problem, Significance of the Study, Definition of Terms, Research Questions, Assumptions, Limitations, and the Organization of the Study. Chapter II, "Review of the Literature," contains a description of the entrepreneurial environment, a description of the entrepreneurial process, and the identification of the relationship between entrepreneurship and economic development. Additionally, Chapter II includes the identification of the purpose of entrepreneurship education that contains the description of entrepreneurship effectiveness measures, the use of customer satisfaction questionnaires, and the unique educational role of the entrepreneurship student. Chapter III, "Methodology," identifies the study as consisting of a combination of qualitative and quantitative research methodologies. This chapter includes a description of the sampling techniques, data collection, and a summary of the data from each of the three phases. The Sample section describes the parameters of the student

and alumni groups utilized as the samples. The Data Collection section describes the collection techniques and the collection timetable. Chapter IV includes the Data Analysis and Findings of each of the three phases of this study. Chapter V begins with a summary of the study, followed by the conclusions derived from data that resulted from this study. The chapter concludes with the researcher's recommendations for further research.

## CHAPTER II

### REVIEW OF LITERATURE

#### Introduction

The purpose of this literature review is to establish the theoretical base from which to derive an instrument to measure the effectiveness of undergraduate entrepreneurship education programs. There are two primary divisions to this literature review: the entrepreneur and entrepreneurship education.

The first division includes the underlying literature that defines the entrepreneur, describes the entrepreneurial process, and establishes the relationship between entrepreneurship and economic development. The second division identifies the purpose of entrepreneurship education, the effectiveness measures, the entrepreneurship student, and finally, the entrepreneurship student as the prime educational facilitator. In addition, this segment establishes the use of customer-satisfaction questionnaires as a formative evaluation technique and briefly defines the concept of educational effectiveness as it pertains to entrepreneurship education.

## The Entrepreneur

### Definition of the Entrepreneur

Schumpeter (1942) defined the entrepreneur as one who "... reforms or revolutionizes the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or new outlet for products, by reorganizing an industry and so on" (p.132). Zeithaml and Rice (1987) differentiated the concepts of entrepreneurship and management by describing entrepreneurship as the starting up of the organization and management as the operating of an existing company. This is reminiscent of Schumpeter's original idea of entrepreneurship as the innovative combining of the resources of production. As implied by Schumpeter's (1942) definition, the entrepreneur continues the creative innovation throughout the existence of the organization.

However, Kent (1990) defined the entrepreneur as an individual who brings about technological change, and Gunderson (1990) established the entrepreneur as an individual who draws upon a range of skills to create wealth. In the same focus, Hofer and Bygrave (1991) identified the entrepreneur as someone who perceives an opportunity and creates an organization to pursue it. Baumol (1993) and Bull and Willard (1993) suggested a consensus definition of the entrepreneur as an individual who creates new combinations, thereby causing disequilibrium. This definition is similar to the one suggested by Schumpeter. Baumol (1993) added to the consensus definition the

dimension of the entrepreneur as an innovator. Therefore, the consensus definition identified two types of entrepreneurs: the entrepreneur as the creator of an organization and the entrepreneur as innovator.

Finding this definition unacceptable, Morris, Lewis, and Sexton (1994) suggested a synthesis definition: "Entrepreneurship is a process activity. It generally involves the following inputs: an opportunity; one or more proactive individuals; an organizational context; risk, innovation, and resources. It can produce the following outcomes: a new venture enterprise, value, new products or processes, profit or personal benefit, and growth" (p. 26). In summary, Schumpeter's definition remains the foundational basis to which the definitional elaborations are bound.

#### Characteristics of the Entrepreneur

The literature reveals that the approach that deals with sociological and psychological traits of the entrepreneur has questionable contributory value toward the development of the entrepreneur. The basis of this controversy lies in the discussion of whether or not entrepreneurship is unique and therefore unteachable. Timmons (1994) suggested that entrepreneurs accumulate the relevant skills, knowledge, experiences, and contacts over a period of years. Timmons (1994) further suggested "... that the creativity that occurs in the pursuit of an opportunity is the result of years of experience, planning, dreaming, and learning" (p. 23). The studies of Garnier and Gasse (1990), Sexton and Bowman-Upton (1987), DeCarlo and Lyons (1981), and Webber (1981) supported Timmons's idea of the entrepreneur being made and not born. These studies

indicated that students start businesses as a result of being exposed to entrepreneurship education. However, the exact causal relationship between entrepreneurship education and those students starting businesses is not known.

Nevertheless, this area of research has been so prominent in the literature that it is necessary to include it in order to gain a greater appreciation of the entrepreneur. Gartner (1988) attempted to identify the major pieces of entrepreneurship literature that identified traits and characteristics of the entrepreneur. The traits, as identified by Gartner, can be classified as either sociological or psychological in nature. There are several predominant subclassifications, such as demographics, family relations, self-concept, and motivation. The sociological and psychological traits appearing below indicate the depth and breadth of the traits found in the research.

Gartner's list begins with McClelland's 1961 book, in which he suggested that the defining trait for the entrepreneur is the high need for achievement. Schrage (1965) and Wainer and Rubin (1969) added the high need for affiliation and power to the list. Contrasting the achievement, affiliation, and power trait arguments, Davids (1963) identified demographic traits, including the entrepreneur's educational level and number of children. DeCarlo and Lyons (1979) contributed the demographic traits of age, marriage rate, and educational level. Collins and Moore (1970) and Gomolka (1977) added sex, age, ethnicity, parents' profession, and social background.

Litzinger (1965), Brockhaus (1980), and Hull, Basely, and Udall (1980) introduced psychological traits, such as risk preference and/or risk propensity. Hull, Basely, and Udall (1980) also recommended the trait of locus of control. DeCarlo and

Lyons (1979) added autonomy, aggression, support, and conformity to the list. Finally, Hornaday and Bunker (1970) suggested the tolerance of ambiguity.

Gartner (1988) pointed out that the findings of the empirical research performed by Brockhaus (1980), Brockhaus and Nord (1979), and Sexton and Kent (1981) do not support the concept of the entrepreneur's sociological and psychological traits. In addition, Gartner (1988) suggested, based on the empirical findings of Brockhaus (1980), Brockhaus and Nord (1979), and Sexton and Kent (1981), "... that the traits and/or characteristics of entrepreneurs are not significantly different from the traits/characteristics of managers or the general population" (p. 21), thereby reducing the importance of the idea that entrepreneurs have a unique personality or genetic makeup that provides them with the necessary perseverance, knowledge, or mystic insightfulness that allows the entrepreneur to identify a seemingly profitable opportunity.

### The Entrepreneurial Process

As Bygrave (1989) suggested, there are no mathematical models as of yet to describe the entrepreneurial process, due to its discontinuous nature. Hofer and Bygrave (1991), however, described the entrepreneurial process as having nine characteristics: "It is initiated by an act of human volition; it is at the level of the individual firm; it is a change of state; it is a discontinuity; it is a holistic process; it is a dynamic process; it involves numerous antecedent variables; its outcomes are extremely sensitive to initial conditions; it is unique" (p. 17).

In contrast to Hofer and Bygrave's suggested description, Reynolds (1992) suggested that the entrepreneurial process is derived from the social context in which the entrepreneur exists. Reynolds suggested that it is within this social context that the entrepreneur locates opportunities and gains the inspiration to seize those opportunities. This implies that the entrepreneurial processes create a continuous disequilibrium, which continuously creates opportunities for entrepreneurs within that society. Therefore, the entrepreneurial process is dependent upon the social context in order to continue the disequilibrium through opportunity selection and execution by the entrepreneur.

Herron and Robinson (1993) suggested a model that describes the entrepreneurial process as a combination of personality and motivation that creates entrepreneurial skill and training, which results in a new business. Johannisson and Senneseth (1990), however, characterized their view of the process as a series of five paradoxes: "... independence vs. dependence; process vs. personal attributes; revolution vs. evolution; vision vs. action; and social vs. business orientation" (Bull & Willard, 1993, p. 188). Bull and Willard's (1993) description of the entrepreneurial process has four conditions in which entrepreneurship occurs:

1. Task-related motivation (a vision or social value embedded in the basic task that motivates the initiator to act)
2. Expertise (know-how plus confidence to be able to obtain know-how needed in the future)
3. Expectation of gain for self (economic and psychic benefits)
4. A supportive environment (conditions that either provide comfort and support to the new endeavor or reduce discomfort from a previous endeavor) (p. 188).

Nevertheless, Baumol (1993), basing his description of the entrepreneurial process on economic theory, suggested that the driving force of the entrepreneur is the



pursuit of profits. Considering the profit motivation of the entrepreneur, Baumol identified three primary relationships: "the effects of innovation upon profit, the effects of innovation on activities of imitators, and the effects of the profit behavior on innovation activities of the entrepreneur" (p. 202).

### Entrepreneurship and Economic Development

It is the entrepreneur, through incremental innovation to the utilization of the production function, who has throughout history pushed the economic development of society (Schumpeter, 1942). Beyres et al. (1987) suggested education as a key factor in economic development. Thus, education contributes to the quality and quantity of entrepreneurs and potential entrepreneurs in a given society. Chusimir (1988), Ronstadt (1985), and Clark et al. (1984) established the positive relationship between entrepreneurship education and entrepreneurial success. Supporting this idea, McMullen and Long (1987, 1990), McMullen et al. (1986), and McMullen et al. (1985) established the positive relationship between entrepreneurship education and economic development, thereby establishing that education can affect the entrepreneurs and the potential entrepreneurs in a society. It is the entrepreneur, according to Schumpeter, who will economically develop a given society by creating businesses.

## Entrepreneurship Education

### The Purpose

Rabbior (1990) suggested that it is equally important to understand that the entrepreneurial event is not a compulsory outcome of an entrepreneurship education program. Additional benefits may be gained from entrepreneurship education other than the creation of businesses. This is consistent with the implications of the four audiences established by Block and Stumpf (1992) and the two markets identified by Solomon and Fernald (1991). The primary objective of entrepreneurship education does not have to be the creation of entrepreneurs and, thus, the creation of businesses. Instead, some students have different learning objectives and require different degrees of exposure to entrepreneurship. The learning objectives are arranged on a continuum, with the serious entrepreneur on one end and the individual wanting only the entrepreneurial spirit on the other end.

In support of Rabbior (1990), Kent (1990) identified the central responsibility of entrepreneurship education as "... identifying and nurturing those who desire to be entrepreneurs" (p. 1). According to Block and Stumpf (1992), the ultimate goal of entrepreneurship education is "... the comprehensive cultivation of the student's aspirations of career success, increased capacity for future learning, and personal fulfillment" (p. 28). Bender et al. (1990) took a more practical approach to entrepreneurship education when they suggested that the purpose of entrepreneurship education is to create entrepreneurs and potential entrepreneurs for the purpose of

economic development. Along with Bender et al. (1990), Sage (1993) identified entrepreneurship education as a tool that a community can use to create entrepreneurs to economically develop the community

### Entrepreneurship Effectiveness Measures

A key issue within entrepreneurship education is the relative newness of the field. Bygrave (1989) suggested that because of this relative newness, a consensus regarding the primary objectives and purposes for entrepreneurship education cannot be reached. For example, no single definition of the entrepreneur or entrepreneurship exists, and the field does not have a theory of entrepreneurship (Bull & Willard, 1993). However, the field has rapidly evolved, as Kasarda (1992), Clouse (1990), and Vesper and McMullen (1988) have indicated, based on the increased number of course offerings.

According to Vesper (1985), the field lacks formal educational research, with almost no research treating the subject of performance outcomes in entrepreneurship education. Block and Stumpf (1992) suggested that the field needs a uniform method of evaluating the effectiveness of entrepreneurship education. According to Block and Stumpf (1992), an effective method of evaluation must compare students, faculty, pedagogical methods, course content, and other variables not only within the program, but also between institutions as well. Rabbior (1990) agreed that a set of uniform measures must be created and suggested that the recipient of the education be the primary source of information in acquiring these measures.

Block and Stumpf (1992) further suggested that the uniform measure be divided into three specific categories: the program's impact on student's knowledge base, its impact on student attitudes, and student satisfaction. Vesper (1982) identified that "... no single measure could suggest course effectiveness, but that student comments, alumni comments, enrollment demand, formal student ratings, and the number of start-ups should be included in the effectiveness measures" (p. 327). Terenzini (1989) identified four categories of effectiveness measurement: knowledge outcomes, skill outcomes, attitudes and values outcomes, and behavioral outcomes that agreed with those suggested by Block and Stumpf. Terenzini (1989) further suggested that using students and alumni in the assessment process would provide valuable insight and information regarding the assessment of a particular undergraduate program.

According to Hayes (1992), customer-satisfaction questionnaires can provide the type of criteria comparison that Block and Stumpf, Vesper, and Terenzini suggested. Zemke and Rossett (1988) stated that "instruments, like questionnaires, are tools ... that systematically gather data about individuals, groups, or entire organizations" (p. 3). Thus, if the institutions offering these programs adopt the customer-satisfaction approach, they will be able to gain the informational insight necessary to remain relevant and competitive.

Supporting the customer-satisfaction approach, Terenzini (1989) and Worthen and Sanders (1987) suggested that using students as the primary source of information lies within the formative evaluation model. Formative evaluation, according to Worthen and Sanders (1987), leads to program development inclusive of program modifications

and revisions. Worthen and Sanders (1987) also suggested using students to obtain the necessary feedback. Broder and Dorfman (1994) concurred with using students as the source of information in the assessment process of faculty and programs. The literature favors employing the student as the primary source of assessment information within the formative evaluation model, which will develop effective teaching strategies, faculty recruitment, and curriculum reform. In addition, the literature and the formative evaluation model support the use of the customer-satisfaction questionnaires because they can include the evaluation criteria as suggested by Block and Stumpf and Terenzini.

#### Profile of the Entrepreneurship Student

Scanlan et al. (1980) suggested that the content and structure of entrepreneurship education programs identify the student as an initiator; therefore, they placed the responsibility of the student's learning on the student, thus establishing the learning experience as student-centered and predominantly self-directed, and as the facilitation of individualized learning experiences appropriate for the entrepreneurship student.

The personality traits of the entrepreneurship students, as suggested by Scanlan et al. (1980), include self-reliance, initiative, action-orientation, high motivation, and individuality in their needs. Even though Sexton and Bowman-Upton's (1988) profile of the entrepreneurship student was of greater depth than the one suggested by Scanlan et al. (1980), it remains consistent with the earlier profile. Sexton and Bowman-Upton (1988) described the entrepreneurship student as "being autonomous, possessing a high degree of self-reliance and self-determination." They further described the student as

more, "rebellious and unmanageable" (p. 13). Sexton and Bowman-Upton (1988) suggested that the rebellious and unmanageable nature of the entrepreneurship student is dependent on the amount of restrictions present in the program. Additional descriptions of the entrepreneurship student include:

They welcome change and new experiences, they are both flexible and unpredictable. When faced with routine situations they may behave inconsistently. They tend to be energetic and capable of intense work over long periods of time. They prefer impersonal relationships and are often perceived as emotionally aloof. However, they may be seen as unresponsive and having difficulty relating with others. Conflicting with this idea is that they could be seen as manipulating when persuading others to achieve a particular goal. They appear to tolerate ambiguity well and feel little anxiety when faced with uncertainty (p. 14).

#### The Entrepreneurship Student as Primary Educator

Scanlan et al. (1980) and Sexton and Bowman-Upton (1988) suggested that the personality traits of the entrepreneurship student encourage the faculty to give the responsibility of learning to the students. Likewise, the students, because of their personality traits, are more willing to accept the responsibility of their own learning. The Sexton and Bowman-Upton (1988) study also supported the findings of Scanlan et al. (1980) in their identification of the entrepreneurship student. The findings of both studies identified the entrepreneurship student as being more self-reliant, self-determined, and independent than the other undergraduate business students.

Duffy (1983) ascertained that the case study method of teaching entrepreneurship is consistent with the general orientation of the entrepreneurial student: action-oriented, self-determined, and self-reliant. Duffy (1983) further indicated that the nature of the

entrepreneurship student, the teaching methodology, and the content are interwoven to such a critical degree that the success of these programs is therefore dependent on the students. Therefore, due to the unique relationship between the student and the methodology of these programs, it stands to reason that measures of effectiveness should include a student-satisfaction measure.

### Summary

The literature review is divided into two primary focuses: the entrepreneur and entrepreneurship education. The definition of the entrepreneur has evolved only slightly from Schumpeter's original idea. Thus, the definitions appearing in the literature remain fundamentally bound to Schumpeter's original concept.

A significant portion of the entrepreneurship literature includes the various sociological and psychological characteristics of the entrepreneur. Empirical research performed in the 1980s pointed out that these same sociological and psychological characteristics of the entrepreneur are no different from those of the managers or the general population.

The importance of educating entrepreneurs is established by two linkages: 1) the link between education and entrepreneurial success; and 2) the link between entrepreneurship education and economic development. However, the purpose of entrepreneurship education, as suggested by Rabbior (1990), is to create benefits other than the most obvious one: the creation of businesses.

There are four primary audiences of entrepreneurship education, and each audience has a specific set of learning objectives. Because of the four audiences, two schools of thought are created: 1) to educate all individuals interested in entrepreneurship; and 2) to educate only those individuals desiring to create businesses. Both schools create entrepreneurs and potential entrepreneurs; however, only the first school creates a supporting infrastructure for entrepreneurship.

The literature identified the measures of effectiveness as being divided into three primary areas: 1) the impact on the student's knowledge base, 2) the impact on the attitudes of the students; and 3) student satisfaction. These measures of effectiveness must be able to compare students, faculty, course content, and pedagogy within the institution as well as between institutions. The literature suggested that customer-satisfaction questionnaires can include the necessary requirements, as determined by the literature, to be an effective tool for measuring effectiveness.

The entrepreneurship student, as identified in the literature, takes responsibility for his or her own learning experiences, in part because of his or her unique personality traits. The unique relationship between the entrepreneurship student and the educational methodology further supports the use of the student as the primary facilitator. It also supports the idea of the student as the primary source of information for evaluating undergraduate entrepreneurship programs.



## CHAPTER III

### RESEARCH METHOD

#### The Qualitative and Quantitative Approaches

In light of the preliminary nature of this research topic, this study used both qualitative and quantitative research methodologies. According to Rockhill (1982), these two approaches can be used to complement one another. By gathering the initial data through focus group discussions, a qualitative method, the researcher was provided with an understanding of the participants' world. Phases two and three used the quantitative techniques of frequency and percentage distributions and the measures of central tendency to analyze the data obtained in the focus group discussions.

Qualitative and quantitative research methodologies are fundamentally different. This fundamental difference is exhibited in the different ways of viewing the phenomena being researched. The qualitative perspective seeks to create hypotheses. This statement refers to the qualitative approach of seeking an understanding and explanation of human behavior from the perspective of the participants within the phenomena. The concern for the participant within the phenomena evolved from the group of philosophies known as the idealistic philosophies. The roots of qualitative research are based on these philosophies and an explicit concern for the human consciousness and experience.

The subjective experience of the phenomena is the basis of qualitative research. Rockhill (1982) suggested that the subjectivity, which acts as the basis of the qualitative research method is also the basis of the validity in qualitative research. Rockhill (1982) further suggested that the consistency and relationship between the researcher's explanation and the explanations as expressed by the participants are the essence of validity in qualitative research. Rockhill (1988) explained that it is the consistency and the preservation of the meaning and reality as created by the participants that influences validity.

In contrast to qualitative research, quantitative research seeks to confirm hypotheses in an "objective, scientific" manner. In other words, quantitative research seeks to explain human behavior and conditions from an objective observer's point of view, a point of view from outside the phenomena. Thus, this view seeks to explain human behavior in terms of uniformities and regularities. If human behavior and conditions are compared in terms of conforming in a uniform and regular pattern, then the behaviors are measurable and therefore predictable.

By establishing the uniformities and regularities of the phenomena through the unaffected observer, the researcher imposes definitions and explanations on the phenomena, then seeks to support these explanations through objective observation. Thus, the issues of reliability and validity have become verification procedures. By stressing the consistency and replicability of the research procedures, the researcher confirms the objectivity of the research.

The quantitative analysis should provide the researcher with a set of statistically reliable analytical results. The subjectively valid data of qualitative research provides the quantitatively derived results with a meaning that resides within the contextual parameters of the study. Therefore, by combining the two research approaches, the researcher received results that are richer in meaning and more reliable in terms of data analysis.

The purpose of this chapter is to describe the project and the means used to execute this study. There are four major sections to this chapter: the project scope and sampling method, phase one, phase two, and phase three. Each section discusses the phases and contains a description of the significant aspects of the study's data-gathering process.

#### The Scope and Sampling Methods of the Study

The scope of this study involved three different institutions of higher education. All three institutions were chosen based on their 1995 rankings by U.S. News and World Report. These institutions were ranked in the top five higher educational institutions in the United States offering undergraduate entrepreneurship education programs. The three institutions were geographically diverse and representative of undergraduate entrepreneurship majors and of the academic activity of the entrepreneurship faculties.

Once the institutions were identified and their participation affirmed, the individual subjects were selected. There were two groups of subjects: students and alumni. Each of the three phases had a new subject sample. Although the total number

of subjects for each phase was different, every sample had an equal number of students and alumni. Equal numbers of students and alumni were used in order to increase the propensity of equally weighting the participant responses.

Each phase of this study utilized a sampling technique referred to as judgmental sampling. According to Bellenger and Greenberg (1978), it was a sampling selection process in which the subjects were selected by an individual who was not only knowledgeable of the specific area being studied, but was also familiar with the study being performed. Therefore, one faculty member from each institution was selected to oversee the sample selection for that institution. Dr. William D. Bygrave assisted with recruiting one faculty representative from each of the three participating institutions. Each faculty representative assisted in this study in three ways: 1) provided for the distribution of the instruments; 2) assisted in enhancing the rate of return of the instruments; and 3) assisted in the recruitment of the sample subjects.

This particular sampling method was necessary because of the researcher's inability to access the institutions and the populations being studied. Therefore, the faculty representatives, acting as agent for the researcher, were necessary due to their access to the population being studied and campus facilities.

During the sample selection process, the researcher provided the faculty representatives with the general descriptions of the student and alumni samples. The descriptions, as provided by the researcher, are:

Students: They were to be undergraduate students, classified as juniors or seniors, and declared entrepreneurship majors. Any entrepreneurship student less than a junior was presumed to lack the experience with their particular program to sufficiently evaluate their experiences.

Alumni: The basis for including the alumni in this study was the unique perspective they possessed. They have completed their respective programs and have had the opportunity to reflect upon their experiences within the context of the work force. The sample consisted of only those alumni who were declared entrepreneurship majors who had graduated between 1990 and 1995. It was determined by the researcher and the participating institutions that any alumni graduating earlier than 1990 did not have enough experience with the current faculty and/or program to provide sufficient input.

A member of the faculty representative's staff at each institution selected the alumni sample with a step-by-step selection procedure provided by the researcher. The first step was to identify the alumni who were within close proximity to the institution, thereby increasing the alumni's propensity to physically participate in a focus group discussion. The second step was to invite the alumni's participation by contacting them via telephone, e-mail, or personal contact. The third and final step was to gain confirmation from the alumni of their participation in this study. The alumni participants for each institution were selected on a first-confirmed, first-selected basis. The researcher desired a maximum of five subjects from each institution. The researcher encouraged the faculty representatives to reveal very little about the subject matter of the project in order to keep the advanced preparation of the subjects to a minimum.

The following four-step sampling technique was used at all three institutions to capture the student samples.

- Step 1: The faculty representative and the researcher discussed the specifics of the selection process. This discussion included the number of subjects to be selected, the available incentives, and the context in which the request would be issued.
- Step 2: The faculty representative issued the request for student volunteers, identifying as little as possible about the purpose of the study. At the same time, the faculty representative issued an incentive to boost student volunteers.

Step 3: The student volunteers were selected on a first-confirmed, first-selected basis.

Step 4: The student volunteers were informed of the date and time of the focus group discussions.

The incentives offered by each institution to encourage student volunteers differed slightly between institutions. The incentives included "helping to improve the program," an extra point and pizza, or a three-day delay in a project presentation. The maximum number of students per institution for the first phase of this study was five. As in the alumni selection process, the researcher requested that the faculty representative and staff of each institution reveal as little as possible about the subject matter of the focus group discussion. The researcher made this request to keep the advance preparation to a minimum.

The actual number of subjects who participated in the focus group discussions totaled 15 students and 14 alumni. The 15 students were all entrepreneurship majors and had at least a junior classification to ensure enough course exposure to evaluate their own experiences. The 14 alumni comprised the second group of subjects and had graduated no earlier than 1990 from a program as an entrepreneurship major.

At the beginning of the second phase of this study, the researcher requested the cooperation of the faculty representative to seek 10 students to volunteer to complete and return the preliminary questionnaire. The volunteer-recruitment process occurred during class in which the researcher requested that the students fill out the questionnaire on their own time outside of class. The student samples of all three institutions were selected in this manner. The student questionnaires were UPS-expressed on January 18, 1996.

Even though the second phase sampling process for students remained relatively the same, the alumni sampling process for the second phase had changed. The researcher requested that the staff member at each institution provide a randomly selected list of 20 names and addresses. After the 20 alumni names and addresses were received, the researcher selected only 10 alumni to send preliminary questionnaires. The selection was based on two criteria: 1) the elimination of any alumni who participated in the focus group discussions; and 2) the proximity of the alumni's address to the participating institution. The purpose of the second selection criteria was to reduce the mailing time of the questionnaires. The result was a selection of 10 alumni in close proximity to the participating institution who had not participated in the focus group. The researcher began mailing the alumni preliminary questionnaires on January 22, 1996, and by February 1, 1996, all the preliminary questionnaires were tendered.

In order to encourage the completion and return of the questionnaires, a cover letter from each of the participating institutions was included in each of the alumni questionnaire packets. A copy of the cover letter accompanying the questionnaires is included in Appendix A.

Unlike phases one and two, phase three used a single institution from which to select the subject sample. Institution A was selected for the third phase. The underlying reasons for this selection were based on the request of the institution, the particular ranking of the undergraduate entrepreneurship program, and the proximity of the institution to the researcher.



The judgmental sampling technique utilized in the first two phases was continued into the third phase. However, the role of the faculty representative in this phase was slightly different than in the first two phases. In the third phase, the faculty representative acted as the liaison between the alumni office and the researcher when selecting the alumni to participate. At the request of the researcher, the alumni office provided a list of 195 names and addresses of alumni fitting the description of the alumni sample utilized throughout this study. One hundred alumni were randomly selected to receive the final questionnaire.

The selection of the student sample was performed in a similar fashion to the sample selection process in the first two phases. The researcher gained permission and support from the faculty to enter their classrooms to solicit 100 volunteers. The researcher instructed the volunteers to fill out the questionnaire on their own time and return it to the researcher. Over the following two weeks, the researcher periodically returned to the classrooms to enhance the return rate.

In summary, the judgmental sampling method was used in all three phases of this study. It provided the researcher with the guiding procedures by which to collect the necessary sample of students and alumni. Even though there were slight deviations in the sampling procedures between the institutions, the procedures established a consistent set of sample subjects for each of the three phases.

The two issues that shaped this study were confidentiality and participation. In terms of participation, the researcher negotiated with the three institutions to gain their participation with this study. In the end, the institutions requested and received



anonymity, elimination of the comparisons between the participating institutions, and a guarantee of the confidentiality of their students and alumni. The researcher took four steps to enhance the maintenance of confidentiality. The first was to keep no records of the names and addresses of the participants. Secondly, the researcher was requested by the participating institutions not to tape, audio or video, the focus group discussions. The third was to guarantee the participants that the raw data would not be presented to the participating institutions. Finally, the researcher, at the request of the institutions, agreed to keep the identity of the participating institutions from the contents of the dissertation.

### Phase One

In the first phase of this study the initial questionnaire was developed that comprised the measures that the customers of entrepreneurship education programs value as important to their satisfaction or dissatisfaction. The establishment of the satisfaction measures had to occur prior to the creation of the instrument. These measures were established by the participants, first in raw form as satisfaction/dissatisfaction experiences, then refined as questionnaire items.

This section describes the process and procedures that the researcher utilized to collect the raw data. This process began with the focus group sessions, whereby the researcher continued the process by utilizing the contextual guideline questionnaire and subject dimensions to focus the participant discussions. The last portion of this section describes the collection of the raw data and the influence that the negotiated confidentiality safeguards had on the procedures for collecting the raw data.

### Focus Group Process

According to Morgan (1988), the focus group discussion is the most cost-effective method by which the researcher can acquire a profound insight into the participants' view of the subject under study. Greenbaum (1988) suggested that there are three primary reasons that researchers use focus groups:

1. Most people feel more comfortable talking about almost any subject when they are involved in a discussion as part of a group.
2. The interaction among the members of a group will result in the participants being more talkative due to the stimulation generated by the feelings of others.
3. The group dynamics provide insights into how peer pressures play a role in the degree of overall acceptance of a concept, product, or idea being presented (p.18-19).

Furthermore, Greenbaum (1988) indicated that the focus group participants should share at least one common characteristic. The subjects of the focus groups shared their entrepreneurship education. Therefore, this study used the focus group process as the point of departure from which the initial raw data was gathered.

There were six focus group sessions in total, two sessions on each of the campuses: one for the students and one for the alumni. The researcher began each focus group session with the following five-step introduction:

1. After the researcher introduced himself and explained the project, he asked, "What have you been told about this focus group or the purpose of this study?" Then the researcher requested that the participants read the instructions on the Contextual Guideline Questionnaire.
2. After the participants finished reading the instructions, the researcher asked them to read each of the eight questions.
3. The researcher advised the group that the questions were only guides to focus their comments. They were free to say or comment on anything, but the

primary focus of this discussion was their entrepreneurship education program.

4. The researcher advised the group that the purpose was to improve the program at their institution and that in order to do so, the researcher needed to hear what they liked and disliked about their programs and why.
5. The researcher read the first question aloud and began the discussion by asking the group what they thought about their fellow students.

Usually, in the beginning of the sessions, the researcher had to encourage the participants to enter the discussion. Throughout the focus group process, the researcher intervened in the discussions for only two reasons: 1) when the discussion had become repetitive; and 2) when the information was "rich." When the information was repetitive, the researcher would encourage the group to move on to the next question or subject dimension. If the information was rich and full of depth, the researcher would enter the discussion only to encourage greater response by all members of the group.

Near the end of each session, the researcher had to be encouraging, at times excessively, to overcome the participants' fatigue. This variable was not taken into account when establishing the two-hour length of the focus group sessions. Had the fatigue factor been considered, the researcher would have reduced the time per session and increased the number of sessions. In any case, fatigue became an issue consistently in the last half hour of every session.

### The Contextual Guideline Questionnaire

Morgan (1988) suggested the use of contextual guidelines and subject dimensions to focus discussions, thereby enhancing the depth and quality of the

information that was derived from discussions. The eight context guidelines and subject dimensions used by the researcher are found in Appendix B.

The guideline questionnaire consisted of eight questions with enough "white space" to allow each of the participants to write their responses at anytime during the group discussion. The researcher stressed the purpose of the guideline questionnaire as only a guide for the participants in the ensuing discussions.

The structure of the guideline questionnaire centered on the satisfaction and dissatisfaction of the four categories as first identified by Block and Stumpf (1992). The four categories were fellow students, faculty, delivery of the course content, and course content. The general nature of the categories was maintained to prevent the researcher from influencing the participants to answer in a specific way.

#### The Use of the Guidelines and Dimensions

The primary differences among the focus groups were the individual participants and their relationship to the researcher. According to Greenbaum (1988), one of the weaknesses of the focus-group process is the inconsistent relationship between the researcher and the participants. Since it is a dynamic process, Morgan (1988) suggested that the moderator use contextual guidelines and subject dimensions to maintain consistency among groups, stimulate discussion within the sessions, and reduce moderator interference. The guidelines enabled the participants to be aware of the subject matter and the context that formed the basis of the discussions.

### The Clustering Process

The clustering process is described in more detail in Chapter IV, "Phase One Data Analysis." The purpose of providing a description of the process is to enhance the reader's understanding of the total process of creating the preliminary questionnaire.

The raw data were clustered based on a simplified thematic content analysis. Once the common themes were identified, the participant responses were clustered by theme. The common themes were expressed as customer requirements. A second round of clustering of the customer requirements resulted in the satisfaction items.

A hierarchy of data resulted from the clustering process. The first level, or base level, of the data hierarchy was the responses of the participants or the critical incidents. The second level was the customer requirements. The customer requirements were further clustered, forming the third and final level of the hierarchical grouping, the satisfaction items. The result of this three-step categorization process was a hierarchical grouping of the subjects' comments.

In order to ensure an objective clustering of the data, an outside reviewer was invited to independently cluster the critical incidents to the customer requirements. The quality-assurance rating measured the quality of the clustering process (the agreement between the researcher and the reviewer). The rating was defined as the percentage of those critical incidents that the researcher and reviewer placed in the same customer-requirement categories. For each customer-requirement cluster, there was a quality-assurance rating.

If the quality-assurance rating was below 80 percent, the reviewer and the researcher would seek consensus on a cluster-by-cluster basis. Once the quality-assurance process had provided a rating of 80 percent, the satisfaction-item clusters were placed in the item-selection process for the pilot study instrument. (See Appendix C for a complete copy of the preliminary questionnaire and Appendix D for the resume of the quality-assurance reviewer.)

### Data Collection

Focus-group discussion data is normally collected with video or audio tape or sometimes a hidden observer. However, in this study, the data was collected on the Contextual Guideline Questionnaire. Even though the instructions provided an example format, the participants were advised that they could write their comments in any form they wished. The purpose was to retrieve data from the participants based on the focus-group discussion. The researcher chose this method of data retrieval in light of the confidentiality requirement requested by the institutions involved.

### Phase One Summary

The purpose of the first phase of this study was to develop the initial questionnaire. The data, as derived from the focus-group discussions, became the preliminary questionnaire. The data was composed of the satisfaction/dissatisfaction experiences as expressed by the participants. This section described the researcher's use

of the contextual guideline questionnaire and the subject dimensions to gain the data necessary to form the preliminary questionnaire.

### Phase Two

The purpose of pilot testing the preliminary questionnaire was to gain the response data necessary to establish the reliability estimate and the content validity. The researcher was able to eliminate the ineffective questionnaire items by a correlational analysis. The reliability, validity, and correlational analysis are explained in greater detail in the Phase Two, Data Analysis section of Chapter IV.

At the end of the critical-incidents clustering process, there were 265 satisfaction items. These satisfaction items were reduced to 40 by using the context guideline questions and the subject dimensions as benchmarks to eliminate the satisfaction items. When the satisfaction items were reduced to 40, the preliminary questionnaire was formed.

Even though the student questionnaires were UPS-Expressed to the appropriate institutions on January 18, 1996, the alumni were mailed in three separate mailings: January 22, 1996; January 24, 1996; and February 1, 1996. The first follow-up contact to the participating institutions was made on February 5, 1996, by e-mail to request that the faculty remind the students to return the questionnaires. The first alumni contact by telephone was scheduled for February 10, 1996. However, due to the above-average return rate, no alumni contact was made. The cut-off date was scheduled for February 19, 1996, at 5 P.M. Eastern standard time, at which point the researcher proceeded to

complete phase two with the number of responses in the researcher's possession at that time.

### Data Collection

This section traces only the data-collection procedures used by the researcher from the time the questionnaires were received to the data input for analysis. As the questionnaires were returned through the U.S. Postal Service, they were left sealed in their envelopes until February 19, 1996. Upon opening the envelopes, the questionnaires were removed from the envelopes, and the envelopes were attached to the questionnaires in order to preserve the postmark date. The date of postmark was referred to as the date of receipt of the returned questionnaire. This coding was utilized only for clerical purposes and has no bearing on the data contained on the questionnaire.

An Excel spreadsheet was configured for the strict purpose of data analysis. The horizontal axis on the spreadsheet contained the specific questionnaire item number. The vertical axis identified the number of the returned questionnaire in order of its receipt.

The next step was transferring the data from the questionnaires to the spreadsheet. Once all the data was transferred to the spreadsheet, a data audit was performed by the researcher. Corrections to the data were made at this time. A second data audit was performed by a nontraditional undergraduate student who was unfamiliar with the study. Again, corrections were made where necessary. A third data audit was performed by the researcher, and no errors were found.



The questionnaires were combined to create a total return rate of 75 percent. The proposal of the study required only a 35 percent return rate due to the size of the populations of students and alumni of the three institutions.

### Phase Two Summary

The second phase of this study was the pilot test of the preliminary instrument. The purpose of phase two was to establish the reliability estimate and the validity of the questionnaire. Upon receipt of the questionnaires, the researcher collected the data and transferred it to a spreadsheet specifically configured to analyze the data for the reliability estimate and the correlational analysis. Upon completion of the data entry, three data audits were performed by the researcher and a volunteer student to ensure that the data was entered correctly

### Phase Three

The purpose of the third phase was to use the final questionnaire to identify measures of satisfaction by utilizing a larger sample group from a single institution. Therefore, the sample selection process was slightly different from the other two previous phases as described previously. The following paragraphs described the questionnaire distribution and the data-collection process.

As of March 5, 1996, all the questionnaires had been mailed or submitted to the entire 200 subjects in the sample. The cutoff date of March 26, 1996, was scheduled. The time prior to the cutoff date provided one week for the questionnaire to arrive at the alumni's address, one week for the alumni to fill it out, and one week for the

questionnaire to be returned to the researcher. At the cutoff date, the researcher proceeded to complete the remainder of the third phase of this study with the questionnaires received.

### Data Collection

The same data-collection procedures utilized in the second phase of this study were used in phase three. Those questionnaires received prior to the cutoff date were left sealed in their envelopes until March 26, 1996, 5 P.M. Eastern standard time. At that time, the envelopes were opened, the questionnaires were removed from the envelopes, and the envelopes were attached to the questionnaires to ensure that the postmark date would be preserved. The postmark on the return envelopes was used as the date of receipt. Each questionnaire was numbered based on the date of receipt. This numbering was used only for order number assignment.

A spreadsheet was specifically configured for the data from the questionnaires. The horizontal axis contained the item number as reflected on the questionnaire. The vertical axis contained the number assigned to the questionnaire that indicated the order of receipt.

The next step was to transfer the data from the questionnaires to the spreadsheet. A series of three data audits were performed by the researcher and an undergraduate nontraditional, nonentrepreneurship major. All corrections were made at the end of each audit. Even though the actual rate of return for the final questionnaire was 48 percent, only a 35 percent return rate was deemed necessary.

### Phase Three Summary

The final questionnaire was directly derived from the raw data retrieved from the focus-group discussions of the first phase. According to Rockhill (1982), the meaning of the data, as analyzed in Chapter IV, was established by the participants in their responses in the focus-group discussions. By analyzing these qualitative responses with the analytical tools of frequency and percentage distributions and the measures of central tendency, the statistical reliability of the study was enhanced due to the replicability of the statistical processes.

The data of this study served two purposes: to establish the structural parameters of the study and to gain an understanding of the nature of satisfaction and dissatisfaction of the students of entrepreneurship education.

## CHAPTER IV

### PHASE ONE

The purpose of the first phase of this study was to attain the raw data from which to construct the preliminary questionnaire. The data was obtained through a series of focus-group discussions with alumni and students from each of the three participating institutions.

#### Data Summary

This section was divided into eight categories: the satisfaction and/or dissatisfaction of each of the four context categories--fellow students, faculty, delivery of content, and course content. The raw data was separated into each of the eight contexts in order to expedite and facilitate the raw data processing.

#### Dissatisfaction: Fellow Students

The comments identified three primary focal content domains: group projects, attitudes of fellow students, and gender bias. The first group of comments identified general dissatisfaction with group projects as principally derived from the poor attitude and motivation of the assorted team members. For example, one participant stated, "The most displeasing experience from my fellow students had to be the lack of effort from

some group members." All the focus-group participants experienced some uncooperative group members. As the comments described, the lack of recognition for the extra work created the dissatisfaction, not necessarily the group member's uncooperative nature. At one focus-group session, a participant suggested a hire/fire policy by the group in order to eliminate the dead weight.

The second domain consisted of the comments regarding the participants' dissatisfaction with the students who possessed negative attitudes and low motivation. The comments suggested that these attitudes not only had a detrimental effect on the morale but also hindered the other students' learning. One participant suggested, "Each student had different goals to accomplish throughout the course (for example, Susie Q wants to learn the material, but Joey Q could care less)." In addition, the participants expressed concern about the negative effects of the highly competitive programs. The participants blamed the program's competitive nature for the cheating that occurred in their classes. The fellow students who witnessed the cheating became outraged and demoralized.

The issue of gender bias was a consistent issue in every session. The comments from the participants identified the issue as being more than gender. Instead, it encompassed the entire issue of bigotry. This issue, as defined by the participants, embraced the specific bigotry that resulted from the different genders, races, social stratas, and cultures in the programs. However, the participants' comments focused primarily on gender. They specified the verbal abuse experienced in the classroom and group meetings. For example, a female participant faced a situation during a group

discussion in which a male group member stated, " Why don't you shut up and sit there and look pretty; that's all you need to do on this project anyway." Another stated, "The only displeasing experience was the chauvinism of the male students towards women in general."

#### Dissatisfaction: Faculty

This second category identified the dissatisfying experiences with the faculty. The participants focused their responses in three areas: the relationship between research and teaching, faculty attitudes and behaviors, and the level of support for the entrepreneurship program. In the first area, the participants questioned the institutional decision of placing priority on publishing rather than on teaching. The second focus area was the egotistical attitudes and behaviors of the faculty. Finally, the participants were dissatisfied with the lack of respect and support that faculty have for entrepreneurship as an academic discipline.

The participants identified precisely their preference for faculty with teaching experience rather than research credentials. For example, one participant stated, "Good track record or educational background doesn't necessarily make a good professor. Some are just bad communicators." The participants further specified their preference for faculty who could teach, who could actually communicate easily with students. The participants appreciated the accessibility of faculty members.

Not discussed in great depth were the faculty's negative attitudes and comments directed toward the students. However, a large number of examples of this type of

behavior were available. For example, one participant stated, "Some professors (unconsciously) make snotty comments if the answers to their questions are unacceptable. It is a kind of negative stimulus toward participating in the future if the student is embarrassed in front of a class of his/her peers." During the discussions, the participants gave particular attention to the issue of faculty verbally attacking students in class. This poor faculty behavior was considered unforgivable in the eyes of the participants. The participants suggested that these attitudes and comments were an unfortunate behavioral consequence of the position, but still unnecessary for the performance of the job. The participants felt that the poor attitudes and behavior could be avoided.

The general failure of students and faculty to understand the purpose of the entrepreneurship program was a particularly emotional discussion. Derogatory comments by faculty from outside the entrepreneurship discipline were specifically mentioned by the participants as being particularly hurtful and inconsiderate. One participant added, "I was asked by a professor from another discipline why I wanted to be in entrepreneurship; it's full of losers." This was a particularly sensitive issue for the participants, as signaled by the change in their vocal quality and facial expressions.

#### Dissatisfaction: Delivery of Content

The participants' responses to the dissatisfaction of delivery focused on the delivery tools the participants experienced at their institution. The responses focused on three delivery tools: case study, class format, and guest speakers.

The participants' comments were succinct concerning the delivery of the content. The first issue was the need to have closure with each case study. As the participants expressed, their expectations were based on the anticipation of an end to the story. When the end was not presented, the participants felt unfulfilled. One student stated, "Little closure to case study method. Discussions would be guided in a specific direction and then abandoned."

Another issue, as identified by the comments, was the quantity of material covered through the use of case studies. The comments primarily identified that the professors tried to cover too much material with a single case study. A participant suggested, "Need more than just cases." The participants' responses implied an overreliance on the case study. This implication was confirmed by the participants' comments identifying the need to have something more to the course content than case studies. The responses indicated the desire to have the content delivered via a variety of mediums.

A seemingly unified set of comments by the participants identified a second area of focus: the class format. One response stated, "Every professor needs an open discussion type format." Another stated, "Less classlike atmosphere, what I mean is that this class should not be like others in the lectures. Kind of like a discussion section." The quantity of participant comments strongly indicated their preference for a casual atmosphere in which the professor and the class openly discussed the material. The participants recognized that this type of class format would require additional



preparation for both the faculty and the students, but that the results would be worth the extra time and effort.

The third focal area of responses identified the problems of using guest speakers. Many of the comments identified a variety of problems that the participants experienced with the guest speakers. The participants agreed that the single most devastating problem with guest speakers was their lack of preparation and poor communication skills. For example, one participant stated, "Once in a while, material was presented by a speaker which was presented in a way which was confusing and boring; which is a risk you have with guest speakers."

#### Dissatisfaction: Course Content

This section focused on the participants' unfulfilled content expectations. For convenience, the responses were arranged into three groups: consistency of content, new course content, and faculty as motivators.

The first grouping of comments centered on the consistency between the course descriptions, as found in the catalog and syllabus, and the content taught in class. The participants first identified the effects on scheduling that these inconsistencies cause. Secondly, the responses identified dissatisfaction with classes in which the content did not cover what the catalog and syllabus identified. For example: "The class content itself never seemed to match what the course previously stated it was going to be about. Syllabi very rarely met the expectations of what the professors actually taught.

Professors' teaching technique sometimes left and went off on tangents, unrelated to the course."

Within this same set of responses, the participants were mystified as to why there was such inconsistency in the course content between different sections of the same course which were taught by different professors. The discussions revealed a mistrust of the professors, which results from the inconsistencies between the content as identified by the catalog and the content taught by the professor.

A second area of concern, as reflected in the participants' responses, was the amount of how-to knowledge the participants desired. The responses generally favored as much real-world information as possible in the course content. For example, one participant stated, "More hands-on experience-practical issues. To learn outside of the textbook. More real-world learning experiences such as internships." There was another suggestion, such as "More information regarding the tax codes, legal and tax considerations" and "Family issues resulting from the entrepreneurial lifestyle."

The final area suggested that the relationship between the faculty and the students needed improvement. One such suggestion for improvement, as suggested by the participants, was the need for the faculty to be more motivating and inspirational to the students. By the quantity of comments, the participants as a whole felt that the faculty should provide the motivation and inspiration to the students to go out and start a business. For example, one participant stated, "More motivation, everyone should leave feeling completely excited about starting a business."

### Satisfaction: Fellow Students

The comments in this section focused on what pleased or satisfied the participants about their fellow students. The responses identified two seemingly unrelated natures of the entrepreneurship students. The first set of comments was a micro view. It identified the diverse nature of the students. The second group of comments was a macro view. It identified the unifying nature of these students.

The responses identified the source of student diversity as being more than the obvious ethnic and socioeconomic backgrounds. It came from the diversity of specific interests, motivations, and ambitions of the students. For example: "Special frame of mind--business minded--all of the students moved collectively toward the same goal." Other comments suggested that individual enthusiasm and the need for achievement was the source of the student diversity, such as "Noticed a true passion and devotion in most of my classmates."

The second response group focused on the unifying nature of the student. This nature took shape as a community of students who appreciated the contributions that came from the diversity of the individuals in the program. For example, one participant stated, "A sense of community and camaraderie, networking before and after graduation, and having experiences made the experience at this institution very pleasurable." The comments revealed that the unifying force for the students was the underlying diversity and the interest in business in any form. In addition, the participants suggested that the entrepreneurship students had many common interests that manifested themselves in a shared "mutual sense of pride."

### Satisfaction. Faculty

The participants' responses centered on three areas of faculty satisfaction: accessibility; credibility of the professors; and faculty as primary motivators, nurturers, and mentors to the students.

The participants' comments were numerous, beginning with the appreciation of the faculty accessibility and faculty commitment. One participant stated, "The professors seemed to care about the student and how they were learning." The comments further identified the need for professors to be open-minded to new ideas and different methods of accomplishing the same results. Commenting further on the idea of being open-minded, the participants' responses favored professors judging a business plan on the plan's own merits rather than on the professor's preconceived idea. For example, one participant stated, "The reality of the professors is that they were open-minded and not opinionated. They will not 'shoot' a student down if they have an incorrect answer."

A second group of comments focused on the credibility of the professors. The participants defined professor credibility through the professor's particular individual experience. The participants' comments associated the faculty's credibility level with the faculty's level of entrepreneurial experience, such as, "First their credibility is so substantial by seeing what they accomplished." According to one participant, "...real-world experience was more important than academic credentials."

A third group of comments focused on the motivation, nurturing, and mentoring that the participants appreciated receiving from the faculty. According to the comments, the participants wanted the faculty to do more nurturing, mentoring, and motivating.

The comments echoed and re-echoed the importance of mentoring and nurturing. For example, one participant stated, "The encouragement and positive reinforcement provided to young entrepreneurs upon taking their first steps is invaluable." Finally, the participants' comments supported the added value of exposing the students to real entrepreneurs, the fostering of creativity, and the possession of a deep personal commitment to the students.

#### Satisfaction: Delivery of Content

The participants identified three areas the applicable information and motivational effects of the guest speakers, the use of case studies as a delivery system, and the delivery of content through the classroom format.

According to the respondents, guest speakers provided real-life, relevant information that complemented the course content. In addition, according to the respondents, the guest speakers provided motivation for the participants to become entrepreneurs. The comments identified that the variety and the quantity of guest speakers had a definite inspirational and motivational impact on the participants, such as, "Using outside speakers to relate real-life stories really is great because you see the relevance in what you are learning and why it's important."

The participants identified the additional real-life, relevant content that case studies delivered to the students. The case studies, according to the participants, pushed themselves to prepare deeper and participate more in class. The responses confirmed an appreciation for the use of the case study. For example, one participant stated, "I liked

it when they used real life to discuss an issue." Another suggested, "The case studies were relevant, like the real-life examples."

The final discussion of this category focused on lecture delivery. The only negative comments appearing in this section disapproved of the use of Power Point. All the participants enthusiastically embraced the idea to eliminate Power Point from use in their institutions. The remaining comments centered on the open lecture/discussion format. Many of the responses preferred the open-discussion classroom format to the lecture format, such as, "We were allowed to speak our mind." Another commented, "Delivery was in a casual and comfortable manner, a very open atmosphere."

#### Satisfaction: Course Content

Although this category included comments that actually refer to satisfaction resulting from delivery, the majority of the comments focused on the satisfying aspects of the course content. The respondents focused their comments on the appreciation of real-life information, the identification of the material they had learned, and finally the suggested changes and additions to the current course offerings.

The respondents appreciated the use of real-world, relevant, and applicable information. While the participants were supportive of using guest speakers, they were even more desirous for the intuitive real-world knowledge that the speakers possessed. The comments identified the guest speaker as the only avenue available to deliver this unique, intuitive information. For example, one participant stated, "The guest speakers provided intuitive information on owning a business."

A second focal area of the participants' responses was the identification of the material they had learned while participating in their particular programs. The list included economic theory, financial modeling, and writing effective business plans. For example, one participant stated, "I learned what an entrepreneur was and many of the details."

The third area centered on the suggestions for new course content. One participant requested a greater focus on the laws that effect the entrepreneur, such as tax laws, type of corporation, and sexual harassment. Other requests identified the need to have greater focus and depth in management courses. Other content areas aside from the management courses in which the participants desired greater depth and focus were the hiring and firing of employees, the management of conflict on the job, and the balancing of the entrepreneur's family life. Another point of excitement among the participants was the creation of a series of continuing education seminars dealing specifically with current issues in the workplace. As one participant suggested, "I would like to be provided with knowledge of how much to withhold from my employees' paychecks in regards to the mandated government requirements: IRS, federal withholding, social security, state taxation, etc. I would like to have a law course taught within the department that concentrates on entrepreneurial law."

In summary, the participants' responses covered a broad range of subject matter, including group projects, faculty attitudes, and the contributions of guest speakers. The comments encouraged the elimination of Power Point from lectures, encouraged the use of open-discussion class formats, and finally ended with the suggestions of adding new

course content. The data summary provided an overview of the content, depth, and quality of the data the researcher received during the focus-group discussions. The meanings and definitions, as expressed by the participants, provided the parameters of the domain that the questionnaire reflects.

### Raw Data Preparation

Maintaining the data in the eight contextual guideline questions made the data processing easier, which resulted in the construction of the preliminary questionnaire. This section describes the raw data preparation process. The participants were asked to write their responses in the space provided on the Context Guideline Questionnaire. The raw data--the responses of the participants--were transcribed verbatim from the questionnaire. The written comments of all the participants were combined on a question-by-question basis. This process was repeated for all the responses.

The responses ranged from one word to three sentences in some cases. Each question held a different response length. There were no consistent patterns of length either by institution or by subject group. However, the alumni group from Institution B consistently had the highest number of questions left blank on the Context Guideline Questionnaire.

### Transcribing the Data

Every effort was made to transcribe the raw data within 24 hours of the focus-group discussion. The purpose of this time parameter was to force the researcher to



transcribe the responses while the discussion session was new to the researcher's memory. Thus, the researcher's notes would still be meaningful during the transcribing process.

The goal of the transcribing process was to be as accurate as possible with the data. The input process followed on a question-by-question basis. Each participant's responses were transcribed exactly (as nearly as possible depending on the handwriting) as they appeared on the questionnaire. The process continued on a question-by-question basis until all the responses had been transcribed. When the transcription of the participants' responses was completed, the researcher's notes were added to the applicable question with an appropriate heading.

#### Data Preparation

Before clustering the participants' responses, the researcher eliminated any inappropriate comments from the data set. An inappropriate comment was defined as a comment that could be interpreted as a violation of the confidentiality agreement between the three institutions and the researcher. For example, pronouns were substituted for specific names of individuals or institutions. Other responses that were clearly not referring to the entrepreneurship programs or the institution were eliminated from the data set.

#### Data Analysis

The purpose of this segment was to gather the data in a format that would form the preliminary questionnaire. This section describes the steps encompassing the

processing of the data as transcribed from the Context Guideline Questionnaires. The processes described in this section are from the critical incidents model, as suggested by Hayes (1992). The processes included the clustering of the participants' responses, a quality assurance process, and the final process of eliminating questionnaire items to form the preliminary questionnaire.

### Clustering the Data

After data transcription, the data was maintained in the four context categories as identified by the eight context questions. That made the data processing through the clustering process easier. Within each category of context questions, the data was clustered around common themes. Once these clusters were completed, the customer requirement was identified according to the method suggested by Hayes (1992).

The data was clustered by customer requirement and clustered again by satisfaction item, which, according to Hayes (1992), should result in a three-tiered hierarchical continuum.

The last step in clustering the data was to create a satisfaction item for each customer-requirement cluster. The satisfaction item, as described by Hayes (1992), is a summary of the contents of the customer-requirement cluster. As Hayes (1992) suggested, the satisfaction item could be a direct statement of the critical incident. There were many instances in which the satisfaction item was the critical incident as expressed by the participant.

The final step in the clustering process was to combine the similar dissatisfaction and satisfaction categories together. The clustering was performed after the quality assurance adjustments had been made in order to ensure that the appropriate quality assurance rating was maintained. Agreement between the researcher and the quality assurance reviewer must reach the minimum standard of 80 percent, as suggested by Hayes (1992).

#### The Quality Assurance Process

The researcher used this process to assure the quality of the clustering process. The researcher recruited an individual from Institution A's MBA program (see Appendix D) to process the same critical incidents and customer requirements as the researcher previously identified. The underlying premise was that if consensus was reached between the researcher and the quality assurance reviewer (an independent outsider), then the quality of the clustering process was assured.

The data was arranged into two separate files. The first file given to the quality assurance reviewer, contained the critical incidents taken from the data file prior to the initial categorization process. The second file contained the customer requirements. Therefore, the quality assurance reviewer had in her possession two lists: the critical incidents and the customer requirements. According to the instructions, she was to place the appropriate customer-requirement number next to the critical incident that she identified as fitting into that category.

The quality assurance rating, otherwise defined as the percentage of those critical incidents that the researcher and the reviewer placed in the same customer-requirement categories, was determined on a category-by-category basis. The quality assurance index ranged from 0 to 1. The closer the measure was to 1, the greater the agreement between reviewers. According to Hayes (1992), the minimum acceptable quality assurance rating for a single customer-requirement category was 80 percent. For this study, the quality assurance rating was 80 percent or higher. In any case, consensus was reached between the researcher and the quality assurance reviewer.

Once the quality of the customer requirements had been established, these customer requirements and their specific contents were then used as questionnaire items for the pilot-study instrument.

#### Findings from Data Analysis

This section of Chapter IV describes the process of forming the preliminary questionnaire. The previous section, Data Analysis, clustered the data and identified the satisfaction items from which the questionnaire items were created. The following passage described the process in which the final questionnaire was formed. The description included the researchers' use of the Contextual Guideline Questionnaire and the subject dimensions in the formation of the preliminary questionnaire.

## The Questionnaire

This segment includes a description of how the initial questionnaire was formed by combining the clustered data, the questionnaire's instructions, and the separate cover letter that accompanied the alumni questionnaire packets.

The next step was to combine the clustered data as satisfaction items into the satisfaction/dissatisfaction clusters according to the Contextual Guideline Questionnaire. The first four questions covered the dissatisfaction of the contextual categories of fellow students, faculty, delivery of content, and course content. The next four questions focused on this satisfaction of the same categories: students, faculty, delivery of content, and course content. The satisfaction items from each of the questions were merged in the following combinations:

- questions 1 and 5
- questions 2 and 6
- questions 3 and 7
- questions 4 and 8

The next step in the process was to eliminate 225 questionnaire items. Items that were redundant or did not accurately fit within the parameters as designated by the Context Guideline Questionnaire and the subject dimensions were eliminated. The process was continuous in nature and eliminated 225 questionnaire items.

The questionnaire contained 40 items and focused on the four contextual categories applied throughout this study: fellow students, faculty, delivery of content, and course content. The items did not appear in a specific order on the questionnaire. However, the researcher placed potentially sensitive items near the end of the survey in

order to enhance the completion and return rate of the questionnaire. A cover letter from each of the institution's faculty representatives was inserted into the appropriate questionnaire packet further enhancing the return rate. The cover letter, suggested by Dillman (1972), was a tool to enhance the questionnaire's return rate. A complete copy of the cover letters and questionnaire appear in Appendix A.

### Phase Two

The purpose of the second phase of this study was to pilot-test the preliminary questionnaire. The pilot test was necessary in order to secure enough data from the designated sample groups to calculate the reliability estimates, establish the content validity, and perform a correlational analysis. The purpose of the correlational analysis was to increase the effectiveness of the questionnaire by eliminating ineffective questionnaire items.

This segment of Chapter IV was divided into two primary sections. The first section, Data Summary, summarizes the participants' responses on a category-by-category basis. The second section, Data Analysis and Findings, analyzes the data and describes the findings of the data. The format was the four context categories, but the analysis and findings were performed on an item-by-item basis.

### Data Summary

This section summarizes the data based on the questionnaire items as grouped according to context category. The responses of the participants within the context

categories were described on a category-by-category basis. The data description within each of the categories was based on the Frequency Distribution, Percentage Distribution, and Central Tendencies tables. The data from the preliminary questionnaire was organized in this manner to expedite an efficient method of working with the data.

### Fellow Students Category

The focus-group discussions that centered on the behaviors of the entrepreneurship student and his or her peers were included in the questionnaire items in this category in order to attempt to identify the behaviors of peer students that satisfied and dissatisfied the entrepreneurship student. The primary purpose was to identify specific student behaviors that were beneficial or detrimental to the entrepreneurship student. The questionnaire items used to determine these behaviors included:

5. Students are accepting of new and different solutions to problems.
6. Members of group projects have differing levels of commitment to the 'entrepreneurial vision.'
7. There is too much emphasis on group projects.
8. The group members, who compensated for the slackers, feel cheated.
9. The students share a common interest in business.
10. It is demoralizing when students from other majors fail to accept entrepreneurship as a serious discipline.
11. The entrepreneurship student is motivated to achieving a high degree of quality.
12. All students add value to class by sharing their ideas.
13. The students recognize the benefits of networking among themselves and alumni.
19. The competitive nature of the program drives students to cheat.
23. Bigotry in any form cheats fellow students of their opportunity to learn.
37. The level of commitment of the students is indicated by their level of preparedness for class.

These items reflect three behavioral effects: the effects of the actions of the peer students on the entrepreneurship students, the effects of their behavior on themselves, and the effects of other students' (majors other than business) behavior on the entrepreneurship student.

### Data Description

The data presented in the following tables resulted from the frequency and percentage distribution tabulations. It further resulted from the calculations deriving the mean, median, mode, and standard deviation of each questionnaire item in the Fellow Students category. In addition to the individual-items data, a summary column consisting of the frequency and percentage distributions and the measures of central tendency were calculated for the context category. This provided a summary column of the participants' responses as they pertained to this category.

A frequency distribution indicates the number of times a particular response is chosen. By identifying the selection of a particular response in context with the specific questionnaire item, the researcher can evaluate how significant a particular response is.

The questionnaire was designed to create a series of responses based on the five-point Likert scale. The specific Likert scale used by the researcher in this study numbered from 1 to 5 (1: strongly disagree with the questionnaire item; 2: disagree; 3: neither agree or disagree (neutral); 4: agree; and 5: strongly agree). By using this five-point Likert scale, the researcher could identify the degree of agreement or disagreement in the participants' responses.



The Frequency Distribution Table (Table 1) below represents the occurrences of the responses distributed throughout the items found in the Fellow Students category of the preliminary questionnaire. Table 1 contains the distributions of the occurrences with which a particular response was chosen. The vertical axis of the table represents the five-point Likert scale as selected by the researcher. The horizontal axis represents the questionnaire item. The questionnaire item numbers represent the placement of the original questionnaire item on the preliminary questionnaire.

As noted above, the table includes a summary column that represents the summary of the data as derived from the individual items within the Fellow Students category. The column marked with a "G" represents the total frequency distribution of the category. The total participant response from the questionnaire items in the Fellow Students category reflected 35 strongly disagree, 85 disagree, 90 neutral, 175 agree, and 155 strongly agree. For an individual-item data summary, the researcher defers to Table 1. The table suggests that the participants predominately chose the affirmative Likert scale categories. However, there were two exceptions: items 7 and 19. These two items show that the responses, with a greater frequency of negative responses, were counter to the affirmative trends.

The Percentage Distribution Table (Table 2) represents the distribution of the data in terms of the number of a specific response to the total number of questionnaires returned. The horizontal axis represents the questionnaire-item number. This is significant only with regard to the placement of the questionnaire item on the original

Table 1

A Frequency Distribution of the Responses to the Questionnaire Items of the Fellow Students Context Category

<u>Likert Scale</u>	<u>Questionnaire Items</u>												<u>G</u>
	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>19</u>	<u>23</u>	<u>37</u>	
1	0	0	6	3	1	3	0	1	0	18	3	0	35
2	0	0	20	6	4	9	1	5	11	19	2	8	85
3	9	2	13	8	5	12	5	6	6	6	14	4	90
4	24	13	6	18	24	7	22	18	11	2	8	22	175
5	12	30	0	10	11	14	17	15	17	0	18	11	155
Totals	45	45	45	45	45	45	45	45	45	45	45	45	540

Table 2

A Percentage Distribution of the Responses to the Questionnaire Items in the Fellow Students Context Category

<u>Likert Scale</u>	<u>Questionnaire Items</u>												<u>G</u>
	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>19</u>	<u>23</u>	<u>37</u>	
1	0%	0%	13%	7%	2%	7%	0%	2%	0%	40%	7%	0%	6%
2	0%	0%	44%	13%	9%	20%	2%	11%	24%	42%	4%	18%	16%
3	20%	4%	29%	18%	11%	27%	11%	13%	13%	13%	31%	9%	17%
4	53%	29%	13%	40%	53%	16%	49%	40%	24%	4%	18%	49%	32%
5	27%	67%	0%	22%	24%	31%	38%	33%	38%	0%	40%	24%	29%

preliminary questionnaire. The vertical axis represents the five-point Likert scale that the researcher used on the questionnaire.

Although Table 2 reflects the same information found in the Frequency Distribution Table (Table 1), the information is expressed in percentage terms. This table confirms the Frequency Distribution Table. The total participant response was 6% strongly disagree, 16% disagree, 17% neutral, 32% agree, and 29% strongly agree. As noted previously, the trend in participant responses was predominately affirmative. However, with items 7 and 19, the trend was reversed. In item 7, 44% of the responses were negative, followed by 29% neutral. Item 19 received predominately negative responses, with 40% strongly disagreeing and 42% disagreeing. As reflected by the Frequency Distribution and Percentage Distribution tables, the trend was predominately affirmative, except for items 7 and 19.

The measures of central tendency are the mean, the median, and the mode. The standard deviation was included in this measurement group because of the confirmatory nature of this measurement to the measures of central tendency. The mean indicates the average response per item within this Fellow Students category as based on the five-point Likert scale. The median represents the numeric value in which an equal number of responses exists above and below. The mode represents the most frequently used response by the participants for a particular item. The standard deviation represents the variability of the responses. A low standard deviation indicates little variation, while a high standard deviation represents a greater degree of variation in the participants' responses.

The Measures of Central Tendencies Table (Table 3) represents the measures of central tendency for the Fellow Students category. The horizontal axis represents the item numbers. The only significance of these numbers was the order of placement of the items on the preliminary questionnaire. The vertical axis identifies the calculations for the particular row: Mean, Median, Mode, and Standard Deviation.

The final column, identified with a "G," contains the central tendency summary information for the Fellow Students category. This information reflected a mean of 3.64, a median of 4, a mode of 4, and a standard deviation of .93. The general trend of this table reflects little variation in the participants' responses. However, there are four exceptions to this trend, identified by a standard deviation greater than 1. The range of these deviations was from 1.06 to 1.31. The items were no. 8 (standard deviation of 1.24), no. 10 (standard deviation of 1.31), no. 12 (standard deviation of 1.06), and no. 13 (standard deviation of 1.21).

In comparing the means of these items to their medians and modes, two of the four items with standard deviations greater than 1 (items 10 and 13) reflect agreement between the means and medians. These same items, however, reflect differences between the medians and modes. Items 8 and 12, however, reflect agreement between the mean, median, and mode.

#### Faculty Category

The Faculty category consisted of the items on the preliminary questionnaire that were intended to elicit participant responses concerning the faculty they experienced.

Table 3

The Measures of Central Tendency and Standard Deviation for the Responses to the Questionnaire Items in the Fellow Students Context Category

Questionnaire Items													
<u>Measures</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>19</u>	<u>23</u>	<u>37</u>	<u>G</u>
Mean	4.1	4.6	2.4	3.6	3.9	3.4	4.2	3.9	3.8	1.8	3.8	3.8	3.6
Median	4	5	2	4	4	3	4	4	4	2	4	4	4
Mode	4	5	2	4	4	5	4	4	5	2	5	4	4
Stand Dev	.69	.58	.89	1.2	.96	1.3	.74	1.1	1.2	.83	1.2	1	1

The principle intent was to attempt to identify those behaviors exhibited by faculty that were satisfying or dissatisfying to the participants. The questionnaire items included:

14. The faculty have an open mind when it came to the business plans of students.
16. The faculty always make time for the student.
17. The faculty are a resource for students.
18. Negative comments by faculty impede their effectiveness as teachers.
20. The faculty are sensitive to the different learning objectives of the students.
21. Faculty are always fully prepared for class.
22. The faculty want to teach.
24. The faculty and students learn from each other.
25. The credibility of faculty is determined by their previous real-world experience.
26. Faculty mentoring gives students a psychological edge.
27. The faculty are effective communicators.

The questionnaire items above centered on the professional behaviors of the unique service providers and their relationship with the customer.

### Data Description

The responses received from the participants of the second phase of this study are reflected in the three tables below. The tables created for this section are identified as Tables 4, 5, and 6. The tables were formed from frequency distribution and percentage distribution tabulations as well as the calculations of the measures of central tendency for the questionnaire items in the Faculty category.

The horizontal axis represents the numeric order of the questionnaire items as they appeared on the preliminary questionnaire. The vertical axis represents the five-point Likert scale. This description for the horizontal and vertical axes is consistent for both the Frequency Distribution and the Percentage Distribution tables that follow.

The "G" column represents the data summary of the category. This column indicates the occurrence of the responses over the 11 category questionnaire items. This reveals that the participants strongly disagreed only 6 times, disagreed 37 times, were neutral 80 times, agreed 190 times, and strongly agreed 182 times. This illustrated a trend to the affirmative side of the response continuum. Item 18, in addition to being contrary to the affirmative trend, received a large number of neutral responses (11). Other items with large neutral responses were items 14, 20, 26, and 27.

The general affirmative trend that was indicated in Table 4 was confirmed by the Percentage Distribution Table (Table 5). The column identified with the "G" represents the category summary of the distribution. Only 1% of the total 495 responses were strongly disagree, 7% were disagree, 16% were neutral, 38% were agree, and 37% were strongly agree. The item with responses contrary to this trend was item 18 with 16 negative responses, or 36% of the total responses for the item. In addition, there were five items reflecting large neutral responses: item 14 (24%), item 18 (24%), item 20 (42%), item 26 (24%), and item 27 (24%).

The last table for this category (Table 6) reflects the measures of central tendency. The last column marked with a "G" contains the summary of the descriptive data for the category. The mean response of the participants to the category items was 3.72 with a median response of 4, a mode of 4, and a standard deviation of .88. The two items with standard deviations greater than 1 were items 20 and 26. Each item had a standard deviation of 1.2. The unique feature of these two items, which was also true

Table 4

A Frequency Distribution of the Responses to the Questionnaire Items in the FacultyContext Category

<u>Likert Scale</u>	<u>Questionnaire Items</u>											<u>G</u>
	<u>14</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	
1	0	1	0	4	0	0	0	1	0	0	0	6
2	3	2	0	16	7	3	0	2	2	1	1	37
3	11	4	1	11	19	7	2	2	1	11	11	80
4	17	21	16	8	12	23	28	23	16	13	13	190
5	14	17	28	6	7	12	15	17	26	20	20	182
Totals	45	45	45	45	45	45	45	45	45	45	45	495

Table 5

A Percentage Distribution of the Responses to the Questionnaire Items in the FacultyContext Category

	<u>Questionnaire Items</u>											<u>G</u>
	<u>14</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	
1	0%	2%	0%	9%	0%	0%	0%	2%	0%	0%	0%	1%
2	7%	4%	0%	36%	16%	7%	0%	4%	4%	2%	2%	7%
3	24%	9%	2%	24%	42%	16%	4%	4%	2%	24%	24%	16%
4	38%	47%	36%	18%	27%	51%	62%	51%	36%	29%	29%	38%
5	31%	38%	62%	13%	16%	27%	33%	38%	58%	44%	44%	37%



Table 6

The Measures of Central Tendency and Standard Deviation for the Responses to the Questionnaire Items in the Faculty Context Category

Measure	Questionnaire Items											G
	14	16	17	18	20	21	22	24	25	26	27	
Mean	3.9	4.1	4.6	2.9	3.4	4	4.3	4.2	4.5	4.2	4.1	4
Median	4	4	5	3	3	4	4	4	5	4	4	4
Mode	4	4	5	2	3	4	4	4	5	5	4	4
Stand Dev	.9	.9	.5	1.2	.9	.8	.5	.9	.8	.9	.7	.8

for two items in the Fellow Students category, was the consistency between the mean and the median and the inconsistency between the median and the mode.

Delivery of Content Category

The Delivery of Content category consisted of the items from the preliminary questionnaire that focused on eliciting satisfaction/dissatisfaction responses from the participants. These items were directly derived from the focus-group discussions held at each of the three participating institutions. The principle intent was to attempt to identify those delivery methods used by current faculty that were satisfying or

dissatisfying to the entrepreneurship students. This delivery mechanism was either beneficial or detrimental, as perceived by the entrepreneurship student.

The following questionnaire items focused on faculty preparation, the consistency between course descriptions and the actual content taught, and the methods and mediums used by the faculty with the specific consumer reaction. The following questionnaire items made up the delivery category:

28. Faculty rely too much on case studies to deliver course content.
29. Power Point presentations are boring.
30. Lectures contain real-world knowledge.
32. Guest speakers provide students with real-life solutions for real-life problems.
34. Guest speakers motivate the students to be entrepreneurs.
35. Case study analysis is relevant.
36. Varying the delivery mediums makes the content more interesting.

The questionnaire items for this category focused on faculty behavior concerning the delivery of the course content. The areas of focus were the use of case studies, the lackluster performance of Power Point presentations, and the potential of guest speakers.

### Data Description

The participants' responses within this category are presented in the following three tables. The data included in these tables is the frequency distribution of the participants' responses, a percentage distribution of the same responses, and a table of data representing the measures of central tendency. Each table contains a column on the far right of the table marked "G," which contains summary data of the entire category. In addition, the horizontal axis on each of the tables contains the numeric position of the items on the preliminary questionnaire. The vertical axis on the Frequency and

Percentage Distribution tables identifies the five-point Likert scale used throughout this study. The vertical axis on the Measures of Central Tendencies Table identifies the specific measures.

In Table 7, the strongly disagree responses numbered 12; the disagree responses, 28; and the neutral, 46. The affirmative responses, as compared to the negative responses, were significantly greater. The agree responses numbered 120, while the strongly agree numbered 109. There were 315 responses total in this category. This equaled 45 responses for each of the seven questionnaire items in this category. The overall trend, as represented by Table 7, indicates that the affirmative responses were significantly higher than the negative and neutral responses on a per-item basis. However, two items differed from the trend: items 28 and 29. Item 28 had the highest number of neutral responses with an equal number of disagree and agree responses. Item 29 had the highest number of disagree responses and a slightly lower number of neutral responses.

The percentage distribution confirms the frequency distribution of this category. The distribution of the data from the summary column reflected responses of 4% strongly disagree; 9% disagree; and 15% neutral. The agree and strongly agree responses were the strongest with 38% and 35% respectively. These responses remained consistent with the data as exhibited by Table 8.

Since the Percentage Distribution Table (Table 8) is only the representation of the data in the percentage format, it should therefore mirror the results of the Frequency Distribution Table. Returning to items 28 and 29, the Percentage Distribution Table

Table 7

A Frequency Distribution of the Responses to the Questionnaire Items in the DeliveryContext Category

Questionnaire Items								
<u>Likert Scale</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>32</u>	<u>34</u>	<u>35</u>	<u>36</u>	<u>G</u>
1	5	2	1	1	1	1	1	12
2	11	14	1	0	1	1	0	28
3	15	13	7	2	6	2	1	46
4	11	7	23	14	17	29	19	120
5	3	9	13	28	20	12	24	109
Totals	45	45	45	45	45	45	45	315

Table 8

A Percentage Distribution of the Responses to the Questionnaire Items in the DeliveryContext Category

Questionnaire Items								
<u>Likert Scale</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>32</u>	<u>34</u>	<u>35</u>	<u>36</u>	<u>G</u>
1	11%	4%	2%	2%	2%	2%	2%	4%
2	24%	31%	2%	0%	2%	2%	0%	9%
3	33%	29%	16%	4%	13%	4%	2%	15%
4	24%	16%	51%	31%	38%	64%	42%	38%
5	7%	20%	29%	62%	44%	27%	53%	35%

reflected item 28 having 24% disagree responses, 33% neutral, and 24% agree. Item 29 revealed 31% disagree responses, 29% neutral, and 16% agree.

The table of data derived from the measures of central tendency represents the mean, median, mode, and standard deviation for each of the items in this category. Like the other tables, the "G" column represents the summary data for the entire category. In Table 9, the mean of the participants' responses is 3.9; the median, 4; the mode, 5; and the standard deviation, .93.

Two items had a standard deviation greater than 1: items 28 and 29. Even though item 28 had a standard deviation greater than 1, the mean, median, and mode are approximately equal. However, Item 29, had a standard deviation greater than 1, but the mean and the median were not approximately due to the variation in the participants' responses.

#### Course Content Category

The items in this category were formulated from the focus-group discussions that revealed the satisfying and dissatisfying experiences of the participants. The primary intent was to attempt to identify the kind of content currently in use that was satisfying or dissatisfying to the participants. With this intent in place, the participants identified their appreciation of the real-world information as delivered by the faculty and the guest speakers. In addition, the participants suggested not only additional content in current courses but also a series of continuing education seminars focusing on current "hot"

Table 9

The Measures of Central Tendency and Standard Deviation for the Responses to the Questionnaire Items in the Course Content Context Category

Questionnaire Items								
<u>Likert Scale</u>	<u>28</u>	<u>29</u>	<u>30</u>	<u>32</u>	<u>34</u>	<u>35</u>	<u>36</u>	<u>G</u>
Mean	2.9	3.2	4	4.5	4.2	4.1	4.4	3.9
Median	3	3	4	5	4	4	5	4
Mode	3	2	4	5	5	4	5	5
Stand Dev	1.1	1.2	.9	.8	.9	.8	.9	.9

topics of the workplace. The questionnaire items of this category included:

1. I am satisfied with the education I received from this program.
2. Case studies make the content cohesive.
3. The course content provides real-world business knowledge.
4. I would like to see more internships.
15. There is consistency between the syllabus and the catalog descriptions of courses.
38. There is consistency between the syllabus and the content covered in class.
39. I would like to see a series of seminars focusing on current workplace issues.
40. I desire closure to the program.
41. The course content provides the steps needed for start-up
42. The management courses have the proper focus and depth.

The questionnaire items were summarized into four primary issues: global issue of student satisfaction, consistency between course descriptions as they were found in the catalog and syllabi and the product/service provided, desire for program closure, and the adapting of the current course content to include suggested subjects and/or the creation of new courses to focus on the current topics of the workplace.

### Data Description

The following data tables represent the participants' responses to the questionnaire items contained in this category. The data is divided into three tables: a Frequency Distribution, a Percentage Distribution, and a Measures of Central Tendency. Each of these tables has a column labeled "G." The data contained in this column represents a summary of the participants' responses to the items found in this category. The column is located on the far right side of each of the following three tables.

The first table, Table 10, represents the frequency with which a particular response was chosen by the participants. The "G" column of this frequency distribution indicates a total of 450 responses to the items in this category. The frequency distribution of the responses were 12 strongly disagree, 18 disagree, and 81 neutral. The affirmative responses, agree and strongly agree, were chosen 189 and 150 times respectively. The frequency distribution of the responses, as reflected by Table 10, indicate that there was a greater number of affirmative responses in the items of this category. However, for items 40, 41, and 42, the frequency distribution changed to reflect a decrease in the selection of the affirmative responses and an increase in the use of the neutral responses.

The shift in the increased use of the neutral response began with item 15 and continued through to item 40, where the shift was completed. With items 41 and 42, the shift reflected the decline of the strongly agree responses and the increase of the neutral responses.

The Percentage Distribution Table mirrors the Frequency Distribution Table. This is because the data is the same but expressed in the percentage format. The "G" column reflects the response choice as 3% for strongly disagree, 4% for disagree, 18% for neutral, 42% for agree, and 33% for strongly agree. The response shift briefly described in the preceding paragraphs is reflected in the Percentage Distribution Table (Table 11) below.



Table 10

A Frequency Distribution of the Responses to the Questionnaire Items in the CourseContent Context Category

Questionnaire Items											
<u>Likert Scale</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>15</u>	<u>38</u>	<u>39</u>	<u>40</u>	<u>41</u>	<u>42</u>	<u>G</u>
1	0	0	0	1	0	2	0	6	3	0	12
2	1	0	0	0	3	2	4	3	3	2	18
3	2	5	9	6	9	5	6	12	10	17	81
4	19	22	16	7	25	25	19	14	22	20	189
5	23	18	20	31	8	11	16	10	7	6	150
Totals	45	45	45	45	45	45	45	45	45	45	450

Table 11

A Percentage Distribution of the Responses to the Questionnaire Items in the CourseContent Context Category

Questionnaire Items											
<u>Likert Scale</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>15</u>	<u>38</u>	<u>39</u>	<u>40</u>	<u>41</u>	<u>42</u>	<u>G</u>
1	0%	0%	0%	2%	0%	4%	0%	13%	7%	0%	3%
2	2%	0%	0%	0%	7%	4%	9%	7%	7%	4%	4%
3	4%	11%	20%	13%	20%	11%	13%	27%	22%	38%	18%
4	42%	49%	36%	16%	56%	56%	42%	31%	49%	44%	42%
5	51%	40%	44%	69%	18%	24%	36%	22%	16%	13%	33%

The third table for this category, Table 12, reflects the mean, median, mode, and standard deviation for the participants' responses. The column labeled "G" contains the mean, median, mode, and standard deviation of the participants' responses. The mean was 3.94; the median, 4; the mode, 5; and the average standard deviation, .87.

Only two items had a standard deviation greater than 1: items 40 and 42. However, in only one of these items were the mean and the median consistent. The median and the mode of item 42 were not consistent. Only one other item had the same situation. Even though item 3 does not have a standard deviation greater than 1, the behavior of the mean, median, and mode mirror the behavior of the mean, median, and mode of item 42.

Generally, the standard deviations for each of the questionnaire items, except for items 40 and 42, were less than 1. This was similar for the average standard deviation of the items as found in column "G."

Table 12

The Measures of Central Tendency and Standard Deviation for the Responses to the Questionnaire Items in the Course Content Context Category

Questionnaire Items											
<u>Measures</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>15</u>	<u>38</u>	<u>39</u>	<u>40</u>	<u>41</u>	<u>42</u>	<u>G</u>
Mean	4.4	4.3	4.2	4.5	3.8	3.9	4	3.4	3.6	3.7	4
Median	5	4	4	5	4	4	4	4	4	4	4
Mode	5	4	5	5	4	4	4	4	4	4	4
Stand Dev	.7	.7	.8	.9	.8	1	.9	1.3	1.1	.8	.9

## Data Analysis and Findings

There are two Data Analysis sections in this chapter. The first Data Analysis section analyzes the questionnaire item-by-item. The second section focuses on the validity, reliability, and effectiveness of the questionnaire and follows the item-by-item analysis as established in the first section.

The purpose of the first Data Analysis section was to analyze the data found in tables 1 to 12. The analysis was performed on an item-by-item basis within the larger context of the item category. The analysis compares the frequency distribution, supported by the percentage distribution, with the measures of central tendency on an item-by-item basis within the item category. The purpose of the analysis was to determine if the participants were in agreement with the item statement, based on the category receiving a majority of participants' responses.

According to Hayes (1992), when using an agree/disagree five-point Likert scale to determine satisfaction, the participant agreement/disagreement with the questionnaire item is proxy for the satisfaction/dissatisfaction of the participant. The four-item categories--Fellow Students, Faculty, Delivery of Content, and Course Content--and data tables were introduced in the previous section, Data Description.

### Fellow Students

There were 23 questionnaire items within this category. Each focused on the satisfaction/dissatisfaction of the participants' experiences with their peer students. The descriptive statistics, used in the item-by-item analysis, were drawn from the Frequency

Distribution, Percentage Distribution, and Measures of Central Tendencies tables.

Therefore, the purpose of this analysis was to determine whether the participants agreed or disagreed with the item statements as indicated by the participants' responses. This was determined by the response category receiving a majority of the responses.

Item 5. Students are accepting of new and different solutions to problems.

As Table 1 reflected, the majority of the responses were agree. This was supported by the mean of 4.07, median of 4, and mode of 4. The standard deviation of .69 supported the slight deviation of the participants' responses. The majority of responses were agree and strongly agree. Therefore, the participants agreed with the item statement. Even though the number of neutral responses was relatively significant, the impact of these neutral responses only slightly weakened the level of participant agreement.

Item 6. Members of group projects have differing levels of commitment to the "entrepreneurial vision."

The Frequency Distribution Table (Table 1) indicated the participants' responses to be predominately strongly agree, supported by a number of agrees. This indicated that the participants felt strongly about their agreement with the item statement.

The mean of 4.62, median of 5, and mode of 5 indicated that there was little deviation from the mean of 5 on the Likert scale. The standard deviation of .58 fully supported minimal variation in the participants' responses and therefore supported the participants' agreement with the item statement.

Item 7. There is too much emphasis on group projects.

The Measures of Central Tendencies Table (Table 3) reflected a standard deviation of .89, indicating slightly more deviation around the mean of 2.42 than the deviation of the previous item. The numeric difference between the mean and the median reflected the influence on the mean of the large number of neutral responses. The variation in the participants' responses was generated largely from the relatively large number of neutral responses. The large number of "disagree" responses indicated that the participants disagreed with the item statement. Although there was disagreement, the disagreement was not strong. The strength underlying the disagreement was weakened by the neutral and affirmative responses.

Item 8. The group members, who compensated for the slackers, feel cheated.

The frequency distribution reflected the majority of the responses to be affirmative. Therefore, the participants agreed with the item statement. However, the number of responses in the neutral, disagree, and strongly disagree categories reflected a lack of strength to the underlying agreement.

The weak agreement was supported by the Measures of Central Tendencies Table (Table 3), with a mean of 3.56 and a median and mode of 4. The standard deviation of 1.24 indicated the greatest variation of responses for the other items previously discussed. The mean of 3.56 also indicated the effect of the number of responses in the neutral and negative categories of the response continuum. Even though the participants agreed with the item, the strength of the agreement was weakened by the variation caused by the neutral and negative responses.

Item 9. The students share a common interest in business.

Most of the affirmative responses for this item were found in the agree (24) response category of the Likert scale. The second largest number of responses occurred in the strongly agree category (11). Even though there was variability with the participants' responses, the variability was slight as indicated by a .96 standard deviation. The negative and neutral responses of the participants weakened the overall participant agreement with the item statement.

Item 10. It is demoralizing when students from other majors fail to accept entrepreneurship as a serious discipline.

The standard deviation of 1.31 reflected the diversity in the participants' responses. Supporting this variation were the differences between the mean, median, and mode. The differences between the mean and the median resulted from the larger number of neutral and negative responses.

The participants' responses, according to the frequency distribution found in Table 1, were approximately split between the neutral and strongly agree responses. The next greatest frequency in the responses was the disagree followed by the agree responses. These responses indicated that the majority of the participants were in strong agreement with the item statement. Even though the majority of the responses were in the affirmative categories, the large number of neutral responses weakened the participant agreement with the item statement.

Item 11. The entrepreneurship student is motivated to achieving a high degree of quality.

The responses, as indicated by the frequency distribution found in Table 1, were clustered in the affirmative response range. The greatest number of responses were in the agree category with a slightly lower number of responses in the strongly agree range. This indicated that the participants agreed with the item statement with a slightly fewer number of participants strongly agreeing with the statement. The low number of neutral and negative responses supported the weakening of the participant agreement with the item statement. The standard deviation of .74, which indicated only a slight variation in the responses, supported the item agreement.

Item 12. All students add value to class by sharing their ideas.

The small number of responses in the negative and neutral ranges of the Likert scale affected the difference between the mean of 3.91 and the median of 4. The variation of the responses in this item was reflected by the standard deviation of 1.06, which indicated varying opinions regarding the subject matter of this item. Even though the varied opinions only slightly weakened the strength of agreement, the participants remained in agreement with the item statement.

The number of responses in the agree and strongly agree Likert scale range indicated a strong agreement with the item statement. Although the greatest number of responses were agree, the strongly agree responses added to the strength of the participants' feelings on this item.

Item 13. The students recognize the benefits of networking among themselves and alumni.



The standard deviation of 1.21 indicated that there was some dispersion around the mean of 3.76. That was evident when comparing the mean of 3.76 to the median of 4. This difference between the mean, median, and mode supported the variation in the responses of the participants. Therefore, the variation in the participants' responses weakened the agreement between the participants and the item statement.

The Percentage Distribution Table (Table 2) identified 24% of disagree responses, while another 24% were in the agree category. The largest percentage of responses was in the strongly agree category, with 38%, while the neutral responses were only 13%. Although the majority of the responses were in the strongly agree category, there was an equal number of responses in the agree and disagree categories. Therefore, the negating responses of the agree and disagree responses weakened the relative strength of the agreement between the participants and the item statement.

Item 19. The competitive nature of the program drives students to cheat.

The participants' responses, as reflected in the Percentage Distribution Table (Table 2), were 40% strongly disagree and 42% disagree, with a significant drop to 13% neutral and 4% agree. The standard deviation of .83 reflected little deviation around the mean. The comparison of the mean, median, and mode supported the lack of variability in the responses. The Frequency Distribution, the Percentage Distribution, and the Measures of Central Tendencies tables reflected little variation in the participants' responses. The responses were predominately negative, with the majority of the responses falling under disagree. The participants, therefore, disagreed with the item

statement. However, the number of neutral and agree responses weakened the strength of disagreement between the participants and the item statement.

Item 23. Bigotry in any form cheats fellow students of their opportunity to learn.

The largest number of participants' responses, as indicated by the Frequency Distribution Table (Table 1), resided in the strongly agree category with 8 responses, followed closely by 14 neutral responses, 8 agree responses, 3 disagree responses, and 2 strongly disagree responses. As indicated by the distribution of the responses and by the standard deviation of 1.22, the responses varied relatively widely. Even though the majority of the responses indicated a strong feeling of agreement, the large number of neutral responses significantly weakened the participant agreement with the item statement.

Item 37. The level of commitment of the students is indicated by their level of preparedness for class.

The Measures of Central Tendencies Table (Table 3) indicated little deviation from the mean of 4.13. The median and mode equaling 4 supported the slight variability in the participants' responses. The standard deviation of 1.01 confirmed the variation between the median and mean.

The majority of the participants' responses were agree with 22 responses, supported by strongly agree with 11 responses. The remainder of the responses were neutral (4) and disagree (8). There were no responses in the strongly disagree. An overwhelming number of responses were in the affirmative categories, indicating a strong feeling of agreement with the item statement.

### Category Summary

The purpose of the questionnaire items comprising the Fellow Students category was to identify those behaviors and methods that the participants identified as satisfying or dissatisfying based on the questionnaire as derived from the focus-group discussions. The following bulleted statements summarize the findings of the Fellow Students category as indicated by their responses to the questionnaire items.

1. The participants were moderately satisfied with the behavior of peer students being accepting to new and different solutions to business problems.
2. The participants felt moderately satisfied with the idea of feeling cheated for compensating for the nonparticipatory group members.
3. The participants moderately shared a common interest in business.
4. The entrepreneurship students were moderately motivated to achieve a high degree of quality.
5. All students moderately added value to the class by sharing their ideas.
6. The level of commitment of the students were moderately indicated by their preparedness for class.
7. The participants were moderately satisfied with the number of group projects being offered in the programs they represented.
8. The differing levels of the "entrepreneurial vision" within groups was strongly acknowledged by the participants, identifying that the entrepreneurial vision was possessed in differing degrees by the group members.

9. It was strongly demoralizing when other majors fail to accept entrepreneurship as an academic discipline.
10. The participants strongly recognized the benefits of networking among themselves and alumni.
11. The participants strongly recognized that bigotry, in any form, cheats fellow students of their opportunity to learn.
12. The participants were moderately dissatisfied with the idea that the competitive nature of the program drives the students to cheat.

The summary statements fell into three primary categories: moderately satisfying, strongly satisfying, and moderately dissatisfying. Each of these three categories identified specific peer behaviors that the participants found either satisfying or dissatisfying to some degree.

### Faculty

There are 11 questionnaire items in the Faculty category. The statistical data analyzed in this category was derived from the frequency and percentage distribution tabulations. In addition, the data found in the measures of central tendency were calculated for use in the analysis of this category, which was performed on an item-by-item basis within the context of the Faculty category. The purpose of this analysis was to determine the agreement or disagreement of the participants' responses with each of the item statements. The same item format established in the Fellow Students category

was continued in the category. The majority of responses in a given response category determined whether or not the participants agreed or disagreed with the item statement.

Item 14. The faculty have an open mind when it comes to the business plans of students.

The majority of the responses, as reflected by the Frequency Distribution Table (Table 4), indicated a strong affirmative response. 31 percent strongly agreed, while 38 percent agreed. Considering the number of affirmative responses, the participants agreed with the item statement. In addition to agreement, the number of affirmative responses indicated the potency of the agreement. The 11 neutral and 3 disagree responses slightly weakened the potency of the participant agreement.

The standard deviation of .91 indicated little variability in the responses around the mean. The data within the Frequency Distribution and Percentage Distribution tables confirmed the slight variability in the participants' responses. The slight variability supported the strength of the agreement as indicated by the distribution of the responses.

Item 16. The faculty always made time for the student.

The standard deviation of .8 indicated a slight deviation of the responses. The slight difference between the mean, median, and mode confirmed the variance as represented by the standard deviation. The Frequency Distribution Table (Table 4) reflected the majority of the responses to be on the affirmative side of the Likert scale. 38% strongly agreed, while 47% agreed. The strength of these responses resided in the number of the response categories. The numeric quantity and the response categories indicated that the participants agreed with the item statement.

The negative response categories received 3 responses, while the neutral response category received 4. These small numbers of contrary responses had little effect on the strength of the participants' agreement with the item statement.

Item 17. The faculty is a resource for students.

The differences between the mean, median, and mode, as found in the Measures of Central Tendencies Table (Table 6), indicated a slight variation in the responses of the participants. Furthermore, the standard deviation of .54 supported the slight variability in the responses. The clustering of the responses in the agree and strongly agree response categories confirmed the slight variability in the participants' responses. The tight cluster of the participants' responses indicated that the participants strongly agreed with the item statement.

Item 18. Negative comments by faculty impede their effectiveness as teachers.

The participant responses were 16 disagree and 11 neutral, as indicated by Table 4. An additional cluster of responses, with fewer numbers, was found in the affirmative categories with a total of 14 responses. A standard deviation of 1.2 reflected only moderate variability in the participants' responses. The differences between the mean and the median confirmed the variation in the responses. The greatest number of responses resided in the negative response categories. Therefore, the participants disagreed with the item statement. However, approximately a third of the participant responses were in the affirmative, creating a dissenting opinion that weakened the strength of the participants' disagreement to the item statement.

Item 20. The faculty are sensitive to the different learning objectives of the students.

The participants' responses were clustered in the neutral and agree categories with 19 and 12 responses respectively. The larger quantity of responses was found in the neutral response category, which indicated that either the participants had no opinion concerning the item statement or that the participants did not understand the issue. The contrast between the neutral responses and the relatively large number of agree responses indicated that the participants remained only slightly agreeable to the statement item.

The measures of central tendency reflected only a slight dispersion of the total responses. This was supported by the standard deviation of .94. The measures of central tendency further supported the slight agreement with the item statement.

Item 21. Faculty are always fully prepared for class.

According to the percentage distribution, 51% of the responses were agree, with 27% strongly agree. The remaining responses were 16% neutral and 7% negative. As reflected in the Frequency Distribution and Percentage Distribution tables, the majority of the responses were clustered in the affirmative categories of the response scale, which indicated participant agreement with the item statement. The standard deviation of .8 reflected little response variability and thus supported the participants' agreement.

Item 22. The faculty want to teach.

As in the previous item, the participants' responses were clustered in the agree with 62% and the strongly agree with 33%. The standard deviation of .55 indicated little

variation in the participants' responses. Considering the participants' responses being predominately clustered in the affirmative response categories and a standard deviation denoting slight variability, then the participants agreed with the item statement.

Item 24. The faculty and students learn from each other.

The participants' responses were clustered around the affirmative response categories with 51% agreeing and 38% strongly agreeing. There were responses in the neutral and negative response categories; however, the numbers were relatively insignificant and thus the influence they exerted was only slight. The standard deviation of .89 further indicated a slight variation of the responses around the mean. Therefore, the participants were in agreement with the item statement.

Item 25. The credibility of faculty is determined by their previous real-world experience.

As indicated by the Percentage Distribution Table (Table 5), the greater percentage of responses were in the strongly agree category with 62%, followed by 33% in the agree category with only 4% neutral. The standard deviation of .76 indicated a shallow variability in the responses. Due to the large numbers of affirmative responses and the shallow dispersion of the responses as indicated by the standard deviation, the participants' responses indicated agreement with the item statement

Item 26. Faculty mentoring gives students a psychological edge.

According to the Frequency Distribution Table (Table 4), the majority of the participants' responses were clustered in the affirmative response categories totaling 73%. However, the relatively strong neutral response (24%) indicated that either the



participants had no opinion regarding this particular issue or they did not understand the subject matter of the item. The standard deviation of .88 also supported the low variability of the participants' responses.

The participants agreed with the statement item; however, due to the relatively large number of neutral responses, the participant agreement with the item statement was significantly weakened.

Item 27. The faculty are effective communicators.

The agreement of the mean, median, and mode as found in the Measures of Central Tendencies Table (Table 6) indicated a slight variation of the participants' responses. A standard deviation of .7 indicated a slight variability in the participants' responses.

The Frequency Distribution Table (Table 4) reflected the responses clustered in the affirmative response categories of strongly agree and agree. The neutral category received approximately 24% of the responses as reflected by the Percentage Distribution Table (Table 5). These arguments supported the strong participant agreement with the item statement. As in item 26, the relatively large number of neutral responses indicated that the participants had chosen to abstain or had no opinion on the issue.

#### Category Summary

The purpose of the questionnaire items comprising the Faculty category was to identify those behaviors and methods that the participants identified as satisfying or dissatisfying based on the questionnaire, as derived from the focus-group discussions.

The following numbered statements summarize the findings of the Faculty category as indicated by their responses to the questionnaire items.

1. The faculty were moderately open-minded regarding the business plans of the student.
2. The faculty moderately made time for students.
3. The faculty was moderately prepared for class.
4. The faculty moderately wanted to teach.
5. The faculty and students moderately learned from each other.
6. The participants strongly viewed the faculty as resources.
7. The credibility of the faculty was strongly determined by their previous real-world experience.
8. The faculty strongly mentored the students, which resulted in a psychological edge.
9. The strong faculty were effective communicators.
10. The faculty were neither sensitive nor insensitive to the different learning objectives of the students.

The summary responses can be divided into three specific categories: moderate satisfaction, strong satisfaction, and neutral majority. In each category, the participants identified those behaviors from the faculty that they felt were satisfying or, in the case of the neutral majority, that they had no opinion.

### Delivery of Content

All seven of the questionnaire items within the Delivery of Content category were derived from the original focus-group discussions. The questionnaire items and the data tables used in this data analysis were introduced in the previous section, Delivery Category Data Description. The following analysis was on an item-by-item basis within the context of the category. The purpose was to determine agreement or disagreement with each of the item statements by examining the responses of the response categories.

Item 28. Faculty rely too much on case studies to deliver course content.

As indicted by the Frequency Distribution Table (Table 7), the responses were clustered in the agree, neutral, and disagree response categories. The neutral response category had the largest single number of responses (15), while the agree and disagree categories contained an equal but smaller number of responses (11). In addition, 11% of the responses occurred in the strongly disagree response category and 7% in the strongly agree.

The standard deviation of 1.1 indicated a wide variation of the participants' responses. This supported the difference between the mean and the median. The difference was due to the numeric impact that a wide dispersion of responses had on the calculation of the mean and the median.

Since the majority of the responses were in the neutral response category, this indicated that the participants were ambivalent toward the item statement. There were two possible explanations for these neutral responses. the item statement was not concise enough for the participants to understand or the participants had no opinion because of a

lack of experience with regard to this issue. Since the neutral response category received the majority of the responses, the participants neither agreed nor disagreed with the item statement.

Item 29. Power Point presentations are boring.

According to the Measures of Central Tendencies Table (Table 9), the standard deviation of 1.21 indicated a relatively strong dispersion of the responses. The differences between the mean and the median were because of the impact that the strong dispersion had on the calculation of the mean and the median.

The majority of the responses were disagree (14) and neutral (13). The strength of the variability of the participants' responses was indicated by the standard deviation of 1.21. The majority of the responses occurred in the disagree category, therefore the participants disagreed with the item statement. However, due to the equal number of combined affirmative responses (16) and combined negative responses (16), there were no resulting effects as the responses negated any effect. The simple majority of responses indicated that the participants had disagreed with the item statement; however, due to the relatively large number of neutral responses, the disagreement was very weak.

Item 30. Lectures contain real-world knowledge.

According to the Frequency Distribution Table (Table 7), the responses were clustered predominately under the agree (24) and strongly agree (13) response categories. There was dispersion among the responses, with only 2% strongly disagreeing, 2% disagreeing, and 16% remaining neutral. The remaining 80% of the participants' responses were in the agree and strongly agree response categories.

The Measures of Central Tendencies Table (Table 9) supported the slight dispersion of the responses with a standard deviation of .87. Therefore, the responses of the participants indicated agreement with the item statement.

Item 32. Guest speakers provide students with real-life solutions for real-life problems.

The Percentage Distribution Table (Table 8) revealed that 62% of the responses were strongly agree and 31% agree. Four percent of the responses were neutral and 2% in strongly disagree. The Measures of Central Tendencies Table (Table 9) indicated a standard deviation of .79, a slight variation in the participants' responses. Because of the significantly high rate of responses in the affirmative response categories, there was strong participant agreement with the item statement.

Item 34. Guest speakers motivated the students to be entrepreneurs.

The Frequency Distribution Table (Table 7) reflected the participants' responses clustered in the agree and strongly agree response categories. The approximate percentage distribution, according to Table 8, reflected 38% agree and 44% strongly agree.

The Measures of Central Tendencies Table reflected a standard deviation of .92, indicating variability in the responses. The differences between the mean and the median also reflected this dispersion. As the data from the Frequency Distribution Table and the Central Tendencies Table reflect, the participants strongly agreed with the item statement.

Item 35. Case study analysis is relevant.

The Measures of Central Tendencies Table (Table 9) reflected a standard deviation of .78, indicating slight variance in the participants' responses. The similarity between the mean and the median confirmed the slight variability in the participants' responses.

The Frequency Distribution Table (Table 7) reflected the responses as clustered in the agree and strongly agree response categories. The majority of the responses, 29, were in the agree category with the next highest number, 12, in the strongly agree. Since the neutral and negative response categories received a total of 4 responses, there was little effect on the predominate affirmative response of the participants. The participants' responses indicated agreement with the item statement.

Item 36. Varying the delivery mediums made the content more interesting.

The Percentage Distribution Table (Table 8) reflected the responses as clustered in the strongly agree and agree categories. The strongly agree category received approximately 53% of the total responses, while the agree category received 42%. The neutral category received 2%, and the strongly disagree received 2%.

The Measures of Central Tendencies Table (Table 9) reflected a standard deviation of .87, which indicates slight variance in the responses. The slight difference between the mean and the median confirmed the variability of the responses.

Approximately 95% of the responses resided in the affirmative response categories. Because of the slight variability in the responses, the participants were in agreement with the item statement.

### Category Summary

The purpose of the questionnaire items comprising the Delivery of Content category was to identify those behaviors and methods that the participants identified as satisfying or dissatisfying based on the questionnaire as derived from the focus-group discussions. The following statements summarize the findings of the Delivery of Content category as indicated by the participants' responses to the questionnaire items.

1. Lectures containing real-world knowledge were moderately satisfying.
2. The relevant case study analysis was moderately satisfying.
3. The real-life solutions provided by the guest speakers were strongly satisfying.
4. The motivation received by the students was strongly satisfying.
5. Varying the delivery mediums made the content strongly satisfying.
6. Power Point presentations were not boring.
7. Faculty relied neither too much nor too little on case studies to deliver course content.

The summary statements fall into three categories: moderately satisfying, strongly satisfying, and neutral. In each category, the participants identified those behaviors and methods of content delivery that they felt as satisfying or, in the case of the neutral majority, that they had no opinion.

### Course Content

Ten questionnaire items comprised this category. The items were derived from the original focus-group discussions held in the first phase of this study. The

questionnaire items--the Frequency Distribution Table, the Percentage Distribution Table, and the Measures of Central Tendencies Table--were drawn from the previous primary section of this study, Course Content Category Data Description. The purpose of this item-by-item analysis was to determine whether or not the participants agreed or disagreed with the item statement. Agreement or disagreement was based on which response category received the majority of responses.

Item 1. I am satisfied with the education I received from this program.

The responses were clustered in the agree and strongly agree response categories. The agree category contained 19 responses, or 42% of the total responses. The strongly agree category contained 23 responses, or 51% of the total responses. The remaining 3 responses resided in the neutral and disagree response categories.

As reflected by the Measures of Central Tendencies Table (Table 12), the standard deviation of .69 expressed a relatively low variability in the responses. The mean was 4.42, and the median was 5. The difference between the mean and the median was due to the mathematical impact of the variability of the responses. Since the majority of the responses were affirmative, then the participants agreed with the item statement.

Item 2. Case studies make the content cohesive.

The Percentage Distribution Table (Table 11) indicated that the responses were clustered in three response categories: 40% in the strongly agree, 49% in the agree, and 11% in the neutral.



The Measures of Central Tendencies Table (Table 12) reflected a standard deviation of .66, which indicated only slight variability in the participants' responses. The Frequency Distribution Table (Table 10) confirmed the low variability of participant responses. The 11% of the responses in the neutral category caused the slight difference between the mean and the median. The majority (89%) of the participant responses were affirmative; therefore, the participants agree with the item statement.

Item 3. The course content provides real-world business knowledge.

The Frequency Distribution Table (Table 10) reflected 20 responses in the strongly agree category, 16 in the agree, and 9 in the neutral category. With only three categories receiving all the responses, this indicated little variation in the responses.

The standard deviation of .77 confirmed the slight variability in the participants' responses. The Measures of Central Tendencies Table reflected a mean of 4.24 and a median of 4. The mathematical impact of the number of neutral responses caused the differences between the mean and the median. The majority of the total responses was in the affirmative response categories; therefore, the participants agreed with the item statement.

Item 4. I would like to see more internships.

Similar to items 1 and 3, the participants' responses were primarily clustered in the strongly agree, with only 7 responses in the agree category, 6 responses in the neutral category, and 1 response in the disagree category.

A standard deviation of .89 confirmed the variability of the participants' responses as reflected in the Frequency Distribution Table. As indicated by the data in

the Frequency Distribution Table (Table 10) and the Central Tendencies Table (Table 12), the participants strongly agreed with the item statement. However, the 13% of the responses in the neutral category combined with the 2% in the strongly disagree category, created a dissenting opinion and thus weakened the strength of the participant agreement.

Item 15. There is consistency between the syllabus and the catalog descriptions of courses.

According to the Percentage Distribution Table (Table 11), the agree response category received approximately 56% of the responses, followed by the neutral category (20%), the strongly agree (18%), and finally the disagree (7%). Since the majority of the participants' responses were in the affirmative categories, this indicated that the participants agreed with the item statement. However, due to the quantity of the neutral and negative responses, the strength of the participant agreement was weakened.

The measures as found in the Central Tendencies Table (Table 12) confirmed the variability data as reflected in the dispersion of the participants' responses in the Frequency Distribution Table. The numeric strength of the differing responses, in combination with the majority responses, tempered the participant agreement with the item statement.

Item 38. There is consistency between the syllabus and the content covered in class.

The Measures of Central Tendencies Table (Table 12) identified the standard deviation of 1.05, which indicated variability in the participants' responses. The

variability of the responses was confirmed by the slight difference in the mean as compared to the median. The difference between the mean and the median was caused by the influence of the larger number of responses in the disagree response categories.

The Frequency Distribution Table (Table 10) reflected the cluster of responses in the agree category with a smaller cluster of responses in the strongly agree category. In addition, the neutral and the two negative categories received fewer responses. Since the majority of the responses were in the affirmative categories, this indicated that the participants were in agreement with the item statement. The participant agreement remained strong but was slightly weakened by this dissenting opinion.

Item 39. I would like to see a series of seminars focusing on current workplace issues.

The Frequency Distribution Table (Table 10) reflected the distribution of responses clustered in the two agree categories. The strongly agree category received 16 responses, while the agree category received 19 responses. The standard deviation of .93, as found in the Measures of Central Tendencies Table (Table 12), indicated a minimal variance in the responses. Due to the clustering of the majority of the responses in the two agree categories, the participants therefore agreed to the item statement. Even though agreement existed, the number of responses in the neutral and disagree categories created a dissenting opinion. The dissenting opinion reduced the potency of participant agreement.

Item 40. Students desire closure to the program.

According to the Frequency Distribution Table (Table 10), the participants' responses were clustered in the agree (14), neutral (12), and strongly agree (10). Even though the standard deviation was 1.34, which signaled a relatively strong variability of the responses, the majority of the responses resided in the agree category, which indicated participant agreement with the item statement. However, the number of responses in the neutral category (12) indicated that either the item statement was unclear to a number of the participants or that the participants were not cognizant of the subject matter (they have no opinion). In any case, the large number of total affirmative responses indicated that the majority of the participants understood the issue as set forth in the item statement and therefore agreed with the item statement. The strength of the agreement was reduced significantly as a result of the large number of neutral responses.

Item 41. The course content provided the steps needed for start-up.

The Frequency Distribution Table (Table 10) reflected the responses clustered in the categories of agree (22), neutral (10), and strongly agree (7). There were dissenting opinions that were indicated by the Frequency Distribution Table and confirmed by the standard deviation of 1.05. Furthermore, the Frequency Distribution Table reflected a smaller number of responses that were equally distributed in the strongly disagree (3) and disagree (3).

The strong number of responses in the agree category indicated agreement with the item statement. However, with respect to the dissenting opinions, the strength of agreement by the participants was reduced.

Item 42. The management courses have the proper focus and depth.

The Frequency Distribution Table (Table 10) reflected that the majority of the responses were clustered in two categories: agree (20) and neutral (17). The disagree category received 2 responses and the strongly agree category received 6 responses. The standard deviation of .9 indicated a slight variability in the responses.

The majority of participants' responses were clustered in the agree category; therefore, the participants' responses indicated agreement with the item statement. However, due to the large number of responses in the neutral category, the strength of participant agreement was significantly reduced. Furthermore, the large quantity of neutral responses indicated that the participants in this situation had not experienced the item statement. Considering total responses, there was weak agreement with the item statement.

### Category Summary

The purpose of the questionnaire items comprising the Course Content category was to identify those behaviors and methods that the participants identified as satisfying or dissatisfying based on the questionnaire as derived from the focus-group discussions. The following numbered statements summarize the findings of the Course Content category as indicated by their responses to the questionnaire items:

1. The cohesiveness of case studies provided moderate satisfaction.
2. There was moderate consistency between the syllabus and the catalog course descriptions.

3. There was moderate consistency between the syllabus and the content covered in class.
4. The idea of additional seminars focusing on current workplace issues was moderately supported.
5. The course content was moderately satisfying in terms of providing the steps needed for start-up.
6. The focus and depth of the management courses were moderately satisfying.
7. The participants were strongly satisfied with the education they received from their programs.
8. The real-world course content was a strong source of satisfaction.
9. Additional internships were strongly supported.

The summary statements fell into two groups: moderately satisfying and strongly satisfying. In each category, the participants identified those behaviors and situations within the Course Content category that the participants recognized as a source of satisfaction.

#### Data Analysis and Findings: Reliability,

#### Validity, and Correlational Analysis

The purpose of the second data analysis section of this chapter was to determine the reliability estimate of the preliminary questionnaire by using the split-half correlational calculation. As mentioned in the beginning of Chapter III, the strength of this study's content validity was determined by the level of consistency between the

domain, as defined by the participants, and the domain residing in the questionnaire. The third area described by this section was the correlational analysis by which each questionnaire item was correlated within its own context category to determine whether or not the questionnaire item was effective or ineffective. This section had three segments: reliability, validity, and correlational analysis.

### Reliability

The concept of reliability refers to the idea that a specific questionnaire, upon repeated trials, will yield consistent results. This does not mean that the results will be the same; rather it refers only to the consistency of the results from measuring the same phenomenon.

The purpose of this section was to determine the reliability of the preliminary questionnaire. In order to make this determination, the section was divided into three areas: Data Summary, Data Analysis, and Findings from the Data Analysis. The Data Summary section presented the data in terms of spreadsheet description and arrangement. The Data Analysis section established the reliability method and calculated the reliability estimates. The Findings section identified the findings from the analysis of the data and identified possible explanations for the results.

### Data Summary

This section summarized the data received from the questionnaires that were returned to the researcher. This summary attached no value to the data as it pertained to

the significance or insignificance of the satisfaction measures that this study sought to identify. This section only described the data in terms of arranging for reliability testing.

The data received from the questionnaires was entered into a specifically configured spreadsheet. The vertical axis represented the order in which the questionnaires were returned based on the postmark date, and the horizontal axis represented the questionnaire item number. Please note: Regarding the numbering of the questionnaire items, numbers 31 and 33 were originally deleted during the preliminary questionnaire formation at the end of Phase One, and the questionnaire items were never renumbered to fill the numeric space. Even though the questionnaire items read as a total of 42, there were actually only 40. This oversight was corrected on the final questionnaire.

#### Split-Half Reliability

Split-half reliability estimates the reliability of an instrument by dividing the instrument into two halves. The halves are correlated with each other. A high correlation value indicated that the two parts of the same instrument yielded approximately the same information. If a low correlation coefficient was obtained, then the halves were not related. Therefore, each half yielded a set of information that was different from the other half.

In this study, the questionnaire was divided in half. Using an even-odd approach, half of the questionnaire contained only even-numbered questionnaire items, and the other half contained only odd-numbered items. Each half contained an equal number of



questionnaire items. The purpose of separating the questionnaire in such a manner was to ensure that each half contained questionnaire items from all four of the context categories used in the questionnaire formation.

The correlation coefficient was calculated for the split-half reliability estimate. The correlation coefficient calculated by the researcher was .113, significantly lower than the .8 required in order to have a reliable instrument.

In order to confirm these correlational findings, the researcher returned to the spreadsheet to reorder the columns of questionnaire-item responses to form a new split-half reliability estimate calculation. The columns were arranged in normal sequencing. The first half contained columns 1 to 20, and the second half contained columns 21 to 40. A second correlational coefficient was calculated. The coefficient that was returned was .112, not significantly different from the first split-half reliability estimate.

The possible causes for the low reliability estimates were the geographic dispersion between the sample subjects, the dispersion between the two populations being sampled (student and alumni), and the size of the sample. In order to test the geographic dispersion and the student/alumni dispersion, the researcher identified three questionnaires returned by students and three questionnaires returned by alumni for each of the institutions. The questionnaires and their responses were copied to another spreadsheet to attempt to establish a relationship between any of the possible groupings of the three sample groups.

A correlation coefficient was calculated between the group representing Institution A and a similar group representing Institution B. The result was a correlation

coefficient of .239. The same process was repeated for the combination of Institution A and Institution C. The result was .33. Finally, the process was repeated for a third time with Institutions B and C. The result was .26. The overall result was no significant relationship for any of the three groupings. These findings seemed to confirm the lack of relationship between any of the three groupings.

Upon further research, Hayes (1992) suggested that if the sample groups were too homogenous, then there would be no variance between the response sets. Since correlation coefficients measure the variance between the response sets, and if there was no variance in the responses, then the correlation coefficient would be low. In support of the homogeneity explanation was the manner in which the responses were distributed within each context category. In every context category, the responses were predominately in the same end of the Likert scale continuum. This observation supports the similarity of the sample groups.

Testing this hypothesis, the researcher established a correlation calculation between the student sample group and the alumni sample group for each of the three institutions. The correlation results were Institution A: .17; Institution B: .0005; and Institution C: .11. Even though the size of the samples used in this calculation were small, the results seemed to support the lack of relationship between the groups. The correlation coefficients were consistent with those identified in the previous paragraphs above. Even though this did not provide conclusive evidence that the lack of reliability was the direct result of the sample being too homogeneous, it did however suggest that

avenue for further exploration. As Joselyn (1977) argued, "It is possible to conduct a project that is valid, but unreliable or reliable, but invalid." (p. 66).

### Validity

According to Carmines and Zeller (1979), validity refers to the extent that a questionnaire measures what it is purported to measure. Because of the preliminary nature of the research of this study and the unreliability of the preliminary questionnaire, the researcher's primary concern, at this level of the study, was to establish the validity of the questionnaire's content. Because if the questionnaire's content proved to be valid, then the responses to this questionnaire would also prove to be valid. According to Rockhill (1982), the problem with validity and qualitative research is the acquisition of the intent of the participants of the phenomenon. In this study, the phenomenon was the satisfaction/dissatisfaction that the participants experienced. Rockhill (1982) continued by suggesting that the source of validity, in the qualitative study, is the consistency between what is experienced by the participant and reconstructed by the researcher. Therefore, if the questionnaire is considered valid, it must consistently represent the reconstruction of the participants' satisfaction/dissatisfaction experiences.

### Content-Related Validity

Content-related validity is concerned with the degree to which the content of the questionnaire used to measure the subjects' responses is representative of the defined content universe (Carmines & Zeller, 1979). This statement of Carmines and Zeller,

confirmed by Rockhill (1982), implies that if the questionnaire's content remains consistent with the domain or universe, as defined by the participants, then the content is considered valid.

If the questionnaire was to be proven valid, then the content must remain consistent with the domain throughout the questionnaire formation process. Therefore, to establish the validity of the questionnaire, the content must be traced through the questionnaire formation process in order to ensure its consistency. The process included three primary steps to establish the final questionnaire items: the focus group discussions, in which the domain was established; the clustering, in which the satisfaction items were established; and the elimination of 225 satisfaction items.

After tracing the process, it was determined that the consistency of the domain, as defined by the participants, was not violated for the following three reasons: 1) the domain was originally created during the focus-group discussions by the participants; 2) preliminary questionnaire items were derived directly from the participant discussions and in many cases without word adaptations; and 3) the researcher used the context guidelines and subject dimensions throughout the questionnaire formation process, thereby maintaining the consistency of subject matter.

Although the strength or degree of content validity cannot be empirically determined, Nunnally (1978) suggested, the researcher, through logical reasoning, can determine the existence of content validity. If the parameters of the domain have remained intact, then the content of the questionnaire has remained consistent with the

defined domain. Since the content of the questionnaire was consistent with the originally defined domain, as established in the previous paragraph, then the content was valid.

### Correlational Analysis

The purpose of the correlational analysis process was to eliminate the ineffective questionnaire items and thereby create a more effective questionnaire. The following paragraphs contained, under the three primary subject headings, the description of the results, the results, and the resulting final questionnaire.

The Process. The correlational analysis process consisted of separating the questionnaire items into their four context categories: Fellow Students, Faculty, Delivery of Content, and Course Content. The actual correlational analysis was a simple process. The response data for each questionnaire item was copied onto a clean spreadsheet within the same spreadsheet book. The data was arranged with the horizontal axis containing the questionnaire item numbers. The vertical axis contained the returned questionnaire number as determined by the return postmark on the return envelope.

As suggested by the model provided by Hayes (1992), each questionnaire item was correlated with the sum of the results of the remaining questionnaire items in the category. As the next questionnaire item was to be correlated, the item previously correlated was added back to the pool of questionnaire items, and the new questionnaire item was removed. Therefore, the item correlated with the pool of other items was not included in the sum of the pool. This process was repeated with every questionnaire item in each of the four context categories.

Each item had a correlation coefficient that established the strength of its relationship to the other category items. Those items with the lowest correlation coefficient were eliminated from the questionnaire. The ineffective questionnaire items were eliminated based on the strength of their relationship to the other items in the category.

The Results. The results of the correlational analysis for the four categories were indicated in Table 13.

The table contains the item and the corresponding correlation coefficient. The horizontal axis contains the column headings within each of the four categories. Each category contains a column for the items and a second column for the corresponding correlation coefficients.

The questionnaire items with correlation coefficients that were significantly outside the correlation coefficient cluster were judged to be less effective and therefore were eliminated from the final questionnaire. The following items were eliminated from the four questionnaire categories:

Fellow Students

- 19. The competitive nature of the program drives students to cheat.
- 23. Bigotry in any form cheats fellow students of their opportunity to learn.

Faculty

- 18. Negative comments by faculty impede their effectiveness as teachers.
- 25. The credibility of faculty is determined by their previous real-world experience.

Table 13

The Results of the Correlational Analysis for Each of the Four Context Categories

<u>Fellow Students</u>		<u>Faculty</u>		<u>Delivery</u>		<u>Course Content</u>	
<u>Item</u>	<u>Correlation Coefficient</u>	<u>Item</u>	<u>Correlation Coefficient</u>	<u>Item</u>	<u>Correlation Coefficient</u>	<u>Item</u>	<u>Correlation Coefficient</u>
5	.21	14	.4	28	-.21	1	.2
6	.3	16	.2	29	-.18	2	.14
7	.1567	17	.5	30	.335	3	.41
8	.06	18	-.13	32	.4	4	-.021
9	.347	20	.42	34	.22	15	.34
10	.4	21	.3	35	.17	38	.279
11	.1	22	.4	36	.3	40	-.1158
12	.2	24	.2			41	.127
13	.1	25	-.101			42	.137
19	-.02	26	.5				
23	-.2	27	.4				
37	.05						

### Delivery of Content

28. Faculty rely too much on case studies to deliver course content.
29. Power Point presentations are boring.

### Course Content

4. I would like to see more internships.
40. Students desire closure to the program.

After eliminating the eight questionnaire items that were determined to be ineffective by their correlation coefficients, the final questionnaire contained 32 questionnaire items.

The final questionnaire appears in Appendix E.

### Phase Three

The primary purpose of the final phase of this study was to identify the measures of satisfaction of undergraduate entrepreneurship students. This was done by comparing the responses of the two sets of participants: the single institution participants and those participants comprised of all three institutions.

The satisfaction measures of the undergraduate entrepreneurship students were determined by identifying those item statements that both sets of participants found agreeable. According to Hayes (1992), participant agreement is proxy to being satisfied with the item statements. This is assuming an agree-disagree five-point Likert scale like the one used in this study.

The consistency between the two sets of responses on an item-by-item basis determines the measures of satisfaction/dissatisfaction. The responses of both sets of



samples act as the source of selection for the satisfaction measures. Therefore, if both sets of responses agree with the same item statement, then that item statement can be considered as a satisfaction measure. However, this measure can only be generalized to the undergraduate entrepreneurship students within the population of the institutions represented by the responses of the universal participants.

This segment of Chapter IV was divided into three primary sections. The first section, Data Summary, summarizes the participants' responses on a category-by-category basis. The second primary section is the Data Analysis and Findings, in which the data was analyzed and the findings of the analysis were described. The format of the analysis and findings were performed on an item-by-item basis. The third and final primary segment compares the findings from Phase Two with the findings from Phase Three.

#### Data Summary

The four context categories as described in the Data Summary of Phase Two of this chapter remain unchanged for Phase Three. In addition, the focus and intent of the questionnaire items of each of the categories remain identical to those found in each of the four context categories of the Data Summary of Phase Two. Therefore, Phase Three begins with the Data Description of each of the four contextual categories.

This Data Description section for each of the categories summarizes the data that was derived from the questionnaire items by context category. The data description within each of the categories was based on the Frequency Distribution, Percentage Distribution, and Measures of Central Tendencies tables. The data from the final

questionnaire was arranged in such a manner as to expedite an efficient method to work with the data as well as to summarize the data.

#### Fellow Students

The data presented in the following tables resulted from the frequency and percentage distribution tabulations. In addition, the calculations deriving the mean, median, mode, and standard deviation of each questionnaire item in the Fellow Students category were found in the Measures of Central Tendencies Table. In addition to the individual items' data, there was a summary column for each of the three tables for this context category.

The questionnaire was designed to create a series of responses based on the five-point Likert scale. The specific Likert scale used by the researcher in this study numbered from 1 to 5 (1: strongly disagree with the questionnaire item, 2: disagree, 3: neither agree or disagree (neutral), 4: agree, and 5: strongly agree). By using this five-point Likert scale, the researcher could identify the degree of agreement or disagreement from participant.

The Frequency Distribution Table (Table 14) below represents the occurrences of the responses distributed throughout the questionnaire items found in the Fellow Students category of the preliminary questionnaire.

The horizontal axis contains the item numbers in the order in which they appeared on the final questionnaire. The vertical axis indicates the five-point Likert Scale. The far right side of the table is the column marked with a "G." This column is

Table 14

A Frequency Distribution for the Responses to the Questionnaire Items in the Fellow  
Students Context Category

<u>Likert Scale</u>	<u>Questionnaire Items</u>										<u>G</u>
	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>28</u>	
1	0	1	5	2	1	7	2	6	1	3	28
2	3	6	36	11	6	21	2	16	7	16	124
3	15	10	22	28	7	27	16	12	25	18	180
4	50	40	16	30	48	21	48	31	38	40	362
5	27	39	17	24	34	20	28	31	24	19	263
Totals	95	96	96	95	96	96	96	96	95	96	957

the summary of the frequency distribution for the category. It indicates that the total number of responses were 957: 263 responses were strongly agree, 362 agree, 180 neutral, 124 disagree, and 28 strongly disagree.

Each column of this table represents the participants' responses. The five-point Likert scale indicates the degree with which the participants agree or disagree with the particular item statement and within each column, the frequency with which each response was selected by the participants responding to the satisfaction continuum.

The category summary, as indicated by the summary column, indicated general agreement with the items within the Fellow Students category. However, the neutral and disagree responses dissipates some of the strength of the agree responses.

The Percentage Distribution Table (Table 15) reflects the same information as the Frequency Distribution Table. However, the data is expressed as a percentage relationship between the responses in the single response category and the total responses to the questionnaire item. The horizontal axis, similar to the frequency table, represents the item number in which the item appeared on the final questionnaire. The horizontal axis represents the Likert scale continuum. The "G" column, on the far right side of the table, reflects the same participant agreement with the item statement as indicated by the Frequency Distribution Table.

The Measures of Central Tendencies Table (Table 16), was comprised of three measures of central tendency and one measure of variability. The measures of central tendency are the mean, median, and mode. The one measure of variability is the standard deviation. The horizontal axis, like the two previous tables, indicates only the

Table 15

A Percentage Distribution of the Responses to the Questionnaire Items of the Fellow Students Context Category

Questionnaire Items											
<u>Likert Scale</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>28</u>	<u>G</u>
1	0%	1%	5%	2%	1%	7%	2%	6%	1%	3%	3%
2	3%	6%	38%	12%	6%	22%	2%	17%	7%	17%	13%
3	16%	10%	23%	29%	7%	28%	17%	13%	26%	19%	19%
4	53%	42%	17%	32%	50%	22%	50%	32%	40%	42%	38%
5	28%	41%	18%	25%	35%	21%	29%	32%	25%	20%	27%

Table 16

The Measures of Central Tendencies and Standard Deviation for the Responses to the Questionnaire Items in the Fellow Students Context Category

Questionnaire Items											
<u>Measures</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>28</u>	<u>G</u>
Mean	4.06	4.15	3.04	3.7	4.13	3.27	4.02	3.68	3.81	3.58	3.74
Median	4	4	3	4	4	3	4	4	4	4	4
Mode	4	4	2	4	4	3	4	4	4	4	4
Stand Dev	.755	.917	1.21	1.05	.874	1.23	.86	1.26	.937	1.08	.176

order in which the item appeared on the final questionnaire. However, the vertical axis indicates the particular measure.

The "G" column is the summary column for the category based on the information appearing in this table. Therefore, the mean is the mean of the means. The same was true for the median, mode, and the standard deviation. According to the table, the mean of the means appeared to be .26 less than 4, which provided the category mean of 3.74. Both the median and the mode are 4. The standard deviation is the standard deviation of the standard deviations. Therefore, the standard deviation of the summary column indicated the low variability of among the item standard deviations.

#### Faculty

The data in this category was expressed in three tables: a Frequency Distribution Table (Table 17), a Percentage Distribution Table (Table 18), and a Measures of Central Tendencies Table (Table 19). In each of the tables, the horizontal axis reflects the number of the questionnaire item. The only significance of this number is that it indicates the order in which the questionnaire item appeared in the final questionnaire. The vertical axis of the Frequency Distribution and Percentage Distributions tables identifies the five-point Likert scale. The vertical axis on the Measures of Central Tendencies Table identifies the specific measure of central tendency and variability. Each table contains a summary column by which the individual item responses are summarized. However, the Measures of Central Tendencies Table's summary column is actually a summary of the summary.

The Frequency Distribution Table (Table 17) reflected the total numbers of responses to the nine questionnaire items in this category: 872. The single response category receiving the majority of the responses was the agree category with 415 responses. This category was followed by the strongly agree category (292), the neutral category (129), the disagree category (31), and the strongly disagree category (5).

The Percentage Distribution Table (Table 18) reflects the same data as the Frequency Distribution Table. However, the data is expressed as a percentage of the single response category to the total responses of the entire column. As the summary column reflects, 48% of the responses were in the agree category. The remainder of the response categories reflected 33% in the strongly agree, 15% in the neutral, 4% in the disagree, and 1% in the strongly disagree response category.

The final table of this category is the Measures of Central Tendencies Table (Table 19). The summary column is the summary of the summary. The mean of this column is the mean of the means. The same is true for the median, mode, and standard deviation. The most significant information of this table was derived from the standard deviation figure. Since the standard deviation measures variability, then the standard deviation of the summary column measures the variability of the standard deviations of the questionnaire items. With a standard deviation of .137, there is little in the way of variability of the standard deviations of the questionnaire items. Therefore, the resulting standard deviations of the questionnaire items appear to be tightly clustered within a very specific range.

Table 17

A Frequency Distribution of the Responses to the Questionnaire Items in the FacultyContext Category

Questionnaire Items										
<u>Likert Scale</u>	<u>13</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>G</u>
1	3	1	0	0	0	0	0	0	0	5
2	7	0	2	11	1	0	3	2	3	31
3	19	8	3	24	8	6	15	34	9	129
4	38	48	31	47	59	45	53	32	58	415
5	29	39	60	12	27	45	25	26	24	292
Totals	96	96	96	94	95	96	96	94	94	872

Table 18

A Percentage Distribution of the Responses to the Questionnaire Items in the FacultyContext Category

Questionnaire Items										
<u>Likert Scale</u>	<u>13</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>G</u>
1	3%	1%	0%	0%	0%	0%	0%	0%	0%	1%
2	7%	0%	2%	12%	1%	0%	3%	2%	3%	4%
3	20%	8%	3%	26%	8%	6%	16%	36%	10%	15%
4	40%	50%	32%	50%	62%	47%	55%	34%	62%	48%
5	30%	41%	63%	13%	28%	47%	26%	28%	26%	33%



Table 19

The Measure of Central Tendencies and Standard Deviation for the Responses to the Questionnaire Items in the Faculty Context Category

Questionnaire Items										
<u>Measures</u>	<u>13</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>	<u>19</u>	<u>20</u>	<u>21</u>	<u>22</u>	<u>G</u>
Mean	3.87	4.29	4.55	3.64	4.18	4.4	4.04	3.87	4.09	4.1
Median	4	4	5	4	4	4	4	4	4	4
Mode	4	4	5	4	4	5	4	3	4	4
Stand Dev	1.03	.71	.66	.85	.618	.608	.739	.845	.689	.137

### Delivery of Content

The three tables representing the participants' responses of this phase of this study are the Frequency Distribution Table (Table 20), the Percentage Distribution Table (Table 21), and the Measures of Central Tendencies Table (Table 22). The Frequency Distribution and Percentage Distribution tables represent the same data. However, the Percentage Distribution Table expresses the information as a relationship between the single response to the total responses for that questionnaire item. Each of the horizontal axes of these tables contains the questionnaire number. The number expresses the order in which the questionnaire item appeared on the final questionnaire. The vertical axes on the Frequency Distribution and Percentage Distribution tables represent the five-point Likert scale. The vertical axis on the Measures of Central Tendencies Table represents the specific measure of central tendencies and variability.

The Frequency Distribution Table (Table 20) contains a summary column with the heading of "G." This summary column contains the sum of each of the response categories of the five-item scale. The total number of responses for this category is 479. The predominate clustering of responses appears to be in the strongly agree response category with 248 responses. The agree category contains 189 responses while 28 responses are contained in the neutral, 13 responses in the disagree, and finally only 1 strongly disagree response.

The Percentage Distribution Table (Table 21) reflects the same information as the Frequency Distribution Table. However, the data appearing in the later table is expressed as a percentage. According to Table 21, 52% of the responses were in the

Table 20

A Frequency Distribution of the Responses to the Questionnaire Items in the Delivery Context Category

Questionnaire Items						
<u>Likert Scale</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>G</u>
1	0	0	1	0	0	1
2	2	1	4	4	2	13
3	4	2	9	6	7	28
4	48	27	29	45	40	189
5	42	66	53	40	47	248
Totals	96	96	96	95	96	479

Table 21

A Percentage Distribution of the Responses to the Questionnaire Items in the Delivery Context Category

Questionnaire Items						
<u>Likert Scale</u>	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>G</u>
1	0%	0%	1%	0%	0%	0%
2	2%	1%	4%	4%	2%	3%
3	4%	2%	9%	6%	7%	6%
4	50%	28%	30%	47%	42%	39%
5	44%	69%	55%	42%	49%	52%

strongly agree category. The agree category held only 39% of the total responses. The remainder of the responses were 6% neutral, 3% disagree, and 1% strongly disagree.

The final table for this context category is the Measures of Central Tendencies Table (Table 22). The summary column represents the summary of the summary. The mean of this column is only the mean of the means of the items appearing in this category. The same is true for the median and the mode. The standard deviation in the summary column is the standard deviation of the standard deviations. It expresses the variability of the standard deviations of the participants' responses to the five questionnaire items. The standard deviation reported in the summary column is .117. This indicates that there is little variability in the standard deviations of the questionnaire items, which shows that the standard deviations are clustered relatively tightly together within a very narrow range.

### Course Content

The three tables used by the researcher to describe the data and its relationship to the questionnaire items were the Frequency Distribution Table (Table 23), the Percentage Distribution Table (Table 24), and the Measures of Central Tendencies Table (Table 25). The horizontal axes for each of the three tables expressed the questionnaire number that was the order in which the item appeared on the final questionnaire. The vertical axis on the Frequency Distribution and Percentage Distribution tables reflects the five-point Likert scale. The vertical axis on the Measures of Central Tendencies Table reflects the measures of central tendency and variability. Each table contains a summary

Table 22

The Measures of Central Tendencies and Standard Deviation to the Responses of the Questionnaire Items in the Delivery Context

Category

<u>Measures</u>	<u>Questionnaire Item</u>					
	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	<u>27</u>	<u>G</u>
Mean	4.35	4.65	4.34	4.28	4.38	4.4
Median	4	5	5	4	4	4
Mode	4	5	5	4	5	5
Stand Dev	.665	.58	.892	.764	.715	.117

column in which the response data has been totaled. The Measures of Central Tendencies Table's summary column is actually the summary of the summary. For example, the mean score in the summary column is the mean of the means of the questionnaire items. The same is true for the median, mode, and standard deviation.

The Frequency Distribution Table (Table 23) reflected the total number of responses in the category: 761. The majority of the responses (385) were clustered in the agree response category. The strongly agree category received 320, while the remaining categories received 114 for neutral, 27 for disagree, and 5 for strongly disagree.

Table 23

A Frequency Distribution of the Responses to the Questionnaire Items in the Course  
Content Context Category

<u>Likert Scale</u>	<u>Questionnaire Items</u>								
	<u>1</u>	<u>2</u>	<u>3</u>	<u>14</u>	<u>29</u>	<u>30</u>	<u>31</u>	<u>32</u>	<u>G</u>
1	0	0	0	1	0	0	1	3	5
2	2	1	3	5	2	4	4	6	27
3	9	9	8	23	10	17	18	20	114
4	48	41	39	48	62	39	57	51	385
5	37	45	46	18	22	34	14	14	230
Totals	96	96	96	95	96	94	94	94	761

The Percentage Distribution Table (Table 24) expressed the same data as the relationship between the single response category to the total number of responses to the questionnaire item. The summary column showed that the agree category received 51% of the total responses. The strongly agree category received 30%, the neutral category 15%, the disagree category 4%, and the strongly disagree only 1%. These results were consistent with and therefore confirmatory to the results of the Frequency Distribution Table (Table 23).

The third table in this category is the Measures of Central Tendencies Table (Table 25). As mentioned previously, the summary column is the mean of the means. This is also applicable to the median, mode, and standard deviation. The standard

Table 24

A Percentage Distribution of the Responses to the Questionnaire Items in the Course  
Content Context Category

Questionnaire Items									
<u>Likert Scale</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>14</u>	<u>29</u>	<u>30</u>	<u>31</u>	<u>32</u>	<u>G</u>
1	0%	0%	0%	1%	0%	0%	1%	3%	1%
2	2%	1%	3%	5%	2%	4%	4%	6%	4%
3	9%	9%	8%	24%	10%	18%	19%	21%	15%
4	50%	43%	41%	51%	65%	41%	61%	54%	51%
5	39%	47%	48%	19%	23%	36%	15%	15%	30%

Table 25

The Measures of Central Tendencies and Standard Deviation for the Responses to the  
Questionnaire Items in the Course Content Context Category

Questionnaire Items									
<u>Measures</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>14</u>	<u>29</u>	<u>30</u>	<u>31</u>	<u>32</u>	<u>G</u>
Mean	4.25	4.35	4.33	3.81	4.08	4.09	3.84	4.03	4.1
Median	4	4	4	4	4	4	4	4	4
Mode	4	5	5	4	4	4	4	4	4
Stand Dev	.711	.696	.763	.842	.643	.843	.766	.911	.089

deviation reflects the variability of the standard deviations of the questionnaire items. The standard deviation of .089 reflected a slight variability among the standard deviations of the questionnaire items. The standard deviation of column "G" reflected a slight variability in the item standard deviations. The slight variability indicated that the item standard deviations were clustered relatively tightly together within a very narrow range.

### Data Analysis and Findings

Each of the questionnaire items was derived from the original focus-group discussions in the first phase of this study. The second phase eliminated the ineffective questionnaire items and established the validity of the questionnaire. The final questionnaire, therefore, evolved from the results of the preliminary questionnaire. The final questionnaire contained 32 questionnaire items that the participants responded to using a five-point Likert scale.

According to Hayes (1992), when using an agree/disagree five-point Likert scale to determine satisfaction, the participant agreement/disagreement with the questionnaire item is proxy for the satisfaction/dissatisfaction of the participant. The purpose of the item-by-item analysis is to determine whether or not the participants agreed or disagreed with the item statement. Participant agreement or disagreement is based on the response category receiving the simple majority of responses. The degree of agreement or disagreement is determined by the number of opposing responses and the number of neutral responses.



This segment was divided into the four context categories of Fellow Students, Faculty, Delivery of Content, and Course Content. Each segment was further divided into subsections by items, thereby expediting the item-by-item analysis.

### Fellow Students

Ten questionnaire items comprised this segment. Each item was identified in order of appearance on the final questionnaire. The data used in this segment was derived from the Frequency Distribution, Percentage Distribution and Measures of Central Tendencies tables. These tables were presented in the Phase Three, Data Summary. The purpose of the analysis was to determine whether or not the participants agreed or disagreed with the questionnaire item. The agreement or disagreement was determined by the response category with the simple majority of responses. Determining the level or degree of agreement and disagreement was based on the number of responses in the opposing response category and the number of neutral responses.

Item 4. Students are accepting of new and different solutions to problems.

The responses indicated relatively strong agreement with this questionnaire item. The responses were clustered in the affirmative response categories with 81% of the responses being affirmative. The remaining 19% of the responses were in the neutral and disagree categories. The clustering of the affirmative responses was confirmed by the standard deviation of .755, which indicated a slight variability among the participant responses. This slight standard deviation also indicated the strength of the agreement with the questionnaire item.

Item 5 . Members of group projects have differing levels of commitment to the "entrepreneurial vision."

The data was clustered in the affirmative response categories that represented approximately 83% of the total responses for this item. The remaining responses were dispersed among the neutral, disagree, and strongly disagree response categories. The dissenting opinions were approximately 17% of the total responses. The standard deviation for this questionnaire item was .917. This figure represented a slight variability in the responses to this questionnaire item. Even though the opposing opinion was only 17% of the total responses, the individual category makeup of the opposing opinion was important to indicate the strength of the opposing opinion. The neutral responses make up the majority of the total responses; however, it was the number of disagree and strongly disagree responses that created the strength in this opposing opinion. Even though there was an opposing opinion, a significant majority of the responses were in the affirmative categories. Because of the majority of the responses were in the affirmative, the participants agree with the questionnaire item.

Item 6 . There is too much emphasis on group projects.

The participants' responses were clustered in the neutral and disagree response categories. The disagree category received approximately 38% of the total responses, while the neutral category received 22%. Adding the strongly disagree responses to the disagree responses increased the total responses in the negative categories to 41%, while the affirmative responses received only a total of 35%. Due to the simple majority of the responses being in the disagree response category, the indication of the participants was

to disagree. The standard deviation of a 1.213 indicates greater variability in the responses for this questionnaire item. The standard deviation confirmed the diverse participants' responses to this questionnaire item. Even though the disagree category received the simple majority, the number of neutral and affirmative responses provided for a very strong opposing opinion, thereby weakening the disagreement of the participants.

Item 7 . The group members, who compensated for the slackers, feel cheated.

The participants' responses were clustered in the affirmative response categories. The agree response category received 32% of the responses, and the strongly agree category received approximately 25% of the total responses. The total negative or disagree response categories received approximately 17% of the responses. The neutral category received a significant 29% of the total responses.

The standard deviation of the responses to the questionnaire item equaled 1.048, which indicated variability in the responses. This standard deviation confirmed the dispersion of the responses as indicated in the Frequency Distribution and Percentage Distribution tables.

The significant number of responses in the neutral category decreased the strength of the affirmative responses and thus weakened the strength of the participant agreement to the questionnaire item. When combined with the total disagree responses, the agreement of the participants was weakened further. This implied that a large number of the participants either had not experienced the issue or had no opinion as to the meaning of the questionnaire item.

Item 8. The students share a common interest in business.

The responses to this questionnaire item indicated strong participant agreement with the questionnaire item. The responses were clustered in the affirmative response categories of agree and strongly agree. The agree category received 50% of the total responses, while the strongly agree category received 35%. Combining the two categories together, they received approximately 85% of the participants' responses. Even though the neutral and negative categories received approximately 14% of the responses, the strength of agreement was only slightly weakened.

The standard deviation of .874 reflected only a slight variability among the participants' responses, therefore supporting the slight weakening of the agreement of the participants with the item statement.

Item 9. It is demoralizing when students from other majors fail to accept entrepreneurship as a serious discipline.

The participants' responses were clustered in the neutral, agree, and disagree response categories. The disagree and agree categories each received an equal number of responses to the questionnaire item. The neutral response category received the majority of the responses, thereby indicating that the participants had either not experienced the issue or the issue was not meaningful to the participants. The neutral category received 28% of the total responses, while the disagree and agree categories each received 22%. The strongly agree category received approximately 21% of the responses, while the strongly disagree category received only 7% of the responses. If the affirmative categories were combined, then the participants would clearly agree with

the questionnaire item. However, the significantly large neutral response weakened the strength of the participant agreement.

The standard deviation of this questionnaire item reflected a 1.227, which indicated a relatively significant variability in the responses to this questionnaire category. This was confirmed by the Frequency Distribution and Percentage Distribution tables.

Item 10. The entrepreneurship student is motivated to achieving a high degree of quality.

The participants' responses to this questionnaire item resulted in the clustering of the data in the strongly agree and the agree categories. The strongly agree category received 29% of the total responses, while the agree category received 50%. The remaining responses were in the neutral, disagree, and strongly disagree categories. Combining these three categories together, the total responses equaled approximately 21%. The majority of the responses indicated that the participants agreed with the questionnaire item. The strength of the agreement was weakened by the 21% of the responses in the negative and neutral responses categories.

The standard deviation for this questionnaire item equaled .858, which indicated only a slight variability in the responses. This was confirmed by the number of responses in each of the neutral and disagree categories and was reflected in the Frequency Distribution and Percentage Distribution tables.

Item 11. All students add value to class by sharing their ideas.

The standard deviation in this questionnaire item indicated a wide variability of responses. The standard deviation equaled 1.261, thereby indicating that the participants' responses were reflected in the number of responses in each of the response categories. The Frequency Distribution Table reflected that the responses were clustered in the agree and strongly agree response categories. The disagree category received a total 23% of the responses, while the affirmative categories received 64%. The agree and strongly agree categories each received 32% of the total responses. The neutral category received only 12%. As a result of the data being clustered in the affirmative categories, the participants agreed with the questionnaire item. The strength of the disagree responses reflected a relatively strong opposing opinion, thereby weakening the strength of the affirmative responses.

Item 12. The students recognize the benefits of networking among themselves and alumni.

The participants' responses were clustered in three responses categories: strongly agree, agree, and neutral. The majority of the responses (38) were in the agree category, while the neutral received 25. The two affirmative categories both received 24 responses. The simple majority was located in the agree category, which indicates that the participants agreed with the questionnaire item. However, since the second largest category was the neutral category, the strength of agreement between the participants and the questionnaire item was weakened. The standard deviation of this questionnaire

item indicated slight variability in the participants' responses, therefore the standard deviation confirmed the weakened strength of the participant agreement.

Item 28. The level of commitment of the students is indicated by their level of preparedness for class.

The majority of the responses to this questionnaire item indicated only a moderate agreement to the questionnaire item by the participants. The standard deviation of 1.083 indicated that the data was dispersed among the Likert scale response categories. The simple majority of responses was located in the agree category, which indicated only moderate agreement to the item. The agree category received 42% of the responses, while the strongly agree category received 20%, the neutral category 19%, and the disagree category 17%. Even though the simple majority was in the agree category, the remaining responses weakened the strength of the participant agreement.

#### Category Summary

The purpose of the questionnaire items comprising the Fellow Students category was to identify those behaviors that the participants identify as satisfying or dissatisfying based on the questionnaire as derived from the focus-group discussions. The following statements summarize the findings of the Fellow Students category as indicated by their responses to the questionnaire items.

1. The students were only moderately accepting of new and different solutions to problems.

2. The students who compensated for the group members who refused to equally participate in the group project felt only moderately cheated.
3. The participants only moderately shared a common interest in business.
4. The entrepreneurship student was only moderately motivated to achieve a high degree of quality in their work.
5. The participants only moderately recognized the benefits of networking among themselves and alumni.
6. The participants only moderately agreed that the level of commitment was indicated by the level of preparedness for class.
7. The participants strongly agreed with the concept that each member of a group would have a different commitment to the "entrepreneurial vision."
8. All students strongly added value to the class by sharing their ideas in class.
9. The participants moderately disagreed that too much emphasis was placed on group projects. On the other hand, the participants were moderately satisfied with the current number of group projects offered in the program.
10. The neutral responses provided by the participants indicated that there was neither satisfaction nor dissatisfaction when other majors failed to accept entrepreneurship as a serious academic discipline.

The above statements can be divided into four response categories: moderately satisfied, strongly satisfied, moderately dissatisfied, and neutral. The findings, indicated by the resulting statements, were derived by combining the response category findings with the questionnaire item.



## Faculty

There are nine questionnaire items within this category, and each item was stated as it appears on the questionnaire. Each focused on the satisfaction/dissatisfaction of the participants' experiences with faculty. The descriptive statistics, used in the item-by-item analysis, were drawn from the Frequency Distribution, Percentage Distribution, and Measures of Central Tendencies tables. The purpose of this analysis was to determine if the participants agreed or disagreed with the item statements as indicated by the response category receiving the simple majority.

Item 13. The faculty have an open mind when it comes to the business plans of students.

The participants' responses to this questionnaire item were clustered in the affirmative portion of the agree/disagree continuum. The strongly agree response category received 30% of the total responses, while the agree category received the simple majority of 40%. The neutral and the negative categories received a total of 30% of the responses. The standard deviation of 1.032 indicated a moderate variability in terms of the dispersed nature of the responses. Since the majority of the responses were in the agree category, then the participants were said to agree with the questionnaire item.

Item 15. The faculty always made time for the students.

The participants' responses resulting from this questionnaire item were clustered in the strongly agree and agree response categories. These categories received 41% and 50% of the total responses respectively. The remaining 9% of the responses were

neutral (8%) and strongly disagree (1%). The standard deviation of .71 for this questionnaire item indicated a slight variability in the participants' responses. This variation was due primarily to the dispersion of the responses among the response categories. The simple majority was clustered in the agree category, therefore the participants agreed with the questionnaire item.

Item 16. The faculty is a resource for students.

The responses were clustered in the two affirmative categories of the five-point Likert scale. The strongly agree response category received 63% of the total responses, while the agree category received 32%. The remaining responses were clustered in the neutral (3%) and disagree (2%). The standard deviation of .663 indicated only a slight variability of the responses. The simple majority of responses were clustered in the strongly agree category, therefore the participants strongly agreed with the questionnaire item.

Item 17. The faculty are sensitive to the different learning objectives of the students.

The responses to this questionnaire item were clustered in the agree and neutral response categories. The majority of the responses resided within the agree category with 50% of the total responses. The neutral category contained only 26% of the total responses. Even though the majority resided within the agree category, the responses in the neutral category indicated that they had no opinion regarding this issue. The standard deviation of .853 indicated only a slight variability due to the tight dispersion of the responses. Since the majority of the responses were in the agree category, the

participants agreed with the questionnaire item. However, the significance of the neutral responses cannot be overlooked due to the nature of the item.

Item 18. Faculty are always fully prepared for class.

The participants' responses were clustered in the response categories of strongly agree with 28% and agree with 62% of the total responses. The remaining 10% were in the neutral (8%) and disagree (2%). The majority of the responses resided in the agree category. The standard deviation of .618 reflected only a slight variability as indicated by the weak dispersion of the responses among the response categories. Due to the majority of the responses being clustered in the agree category, the participants agreed with the questionnaire item.

Item 19. The faculty want to teach.

The participants' responses were clustered in the agree and the strongly agree response categories. Each of these two categories received 47% of the total number of responses. The 6% of the responses were found in the neutral category. The standard deviation of .608 reflected little variability among the responses of the participants. Since the affirmative categories shared in the majority of responses, therefore the participants agreed with the questionnaire item.

Item 20. The faculty and students learn from each other.

The responses to this questionnaire item were clustered in the strongly agree and agree categories. These categories received a combined 81% of the total responses, while the remaining 19% were received by the neutral and disagree categories. The standard deviation of .739 indicated only a slight variability among the response

categories. The majority of the responses resided in the agree category, thereby indicating that the participants moderately agreed with the questionnaire item.

Item 21. Faculty mentoring gives students a psychological edge.

The responses were clustered among the neutral, agree, and strongly agree response categories. There is an 8% point range difference between the neutral category, on the high end, and the strongly agree category, on the low end. The majority of the response were received by the neutral category with approximately 36% of the total responses. The response categories of agree and strongly agree received only 34% and 28% of the total responses respectively. The standard deviation of .845 reflected only a slight variability of responses among the response categories. The neutral category received the majority of the responses, therefore the participants neither agreed nor disagreed with the questionnaire item.

Item 22. The faculty are effective communicators.

The responses to this questionnaire item were clustered in the agree and strongly agree response categories. The agree category received 62% of the total responses, while the strongly agree category received 26%. The remaining 13% appeared in the neutral with 10% and the disagree with 3%. The standard deviation of .689 reflected only a slight variability among the response categories of this questionnaire item. The majority of the responses resided in the agree category, therefore the participants only moderately agreed with the questionnaire item.

### Category Summary

The purpose of the questionnaire items comprising the Faculty category was to identify those behaviors that the participants identify as satisfying or dissatisfying based on the questionnaire as derived from the focus group discussions. The following statements summarize the findings of the Faculty category as indicated by their responses to the questionnaire items.

1. The faculty were slightly moderately open-minded toward the business plans of the students.
2. The faculty moderately made time for the students.
3. The faculty were slightly moderately sensitive to the different learning objectives of the students.
4. The faculty and students slightly moderately learned from each other.
5. The faculty were slightly moderate communicators.
6. The students strongly perceived the faculty as a resource.
7. The faculty strongly wanted to teach.
8. There was no indication of a psychological edge being or not being derived from the faculty mentoring.

The resulting statements as reflected above were divided into three primary categories: moderately satisfying, strongly satisfying, and neutral. Each category contained those faculty behaviors that the participants identified. The summary statements resulted from the item findings and were combined with the questionnaire item in order to create the summary item statement.

### Delivery of Content

The five questionnaire items within the Delivery of Content Category, as with all the questionnaire items, evolved from the original focus-group discussions from Phase One. The data used in the following item analysis was introduced in the section, Delivery of Content Category Data Description. The response category receiving the simple majority of responses determined the participant agreement or disagreement.

#### Item 23. Lectures contain real-world knowledge.

The responses to this questionnaire item were clustered in the agree and strongly agree response categories. The agree category received 50% of the total responses, while the strongly agree category received 44%. The remaining 6% fell into the neutral (4%) and the disagree (2%) categories. The standard deviation of .665 reflected a slight variability in the participants' responses. The result: The participants moderately agreed with the questionnaire item due to the agree category receiving the majority of the responses.

Item 24. Guest speakers provide students with real-life solutions for real-life problems.

The responses in this questionnaire item were clustered in the agree and strongly agree response categories. The strongly agree category received the greatest number of responses with 69%. The agree category received 28%, the neutral received 2%, and the disagree received 1%. The standard deviation of .58 indicated little variability among the response categories. The strongly agree category received the majority of the responses, therefore the participants strongly agreed with the questionnaire item.

agree category received 39%. The remaining 9% of the responses were spread to the neutral category (6%) and the disagree category (3%). The standard deviation of .715 reflected only a slight variability in the dispersion of the participants' responses among the response categories. The majority of the participants' responses were clustered in the strongly agree category. Because of the slight variability in the responses, the participants strongly agreed with the questionnaire item.

### Category Summary

The purpose of the questionnaire items, comprising the Delivery of Content category, was to identify those behaviors and methods that the participants identified as satisfying or dissatisfying. The following statements summarize the findings of the Delivery of Content category as indicated by their responses to the questionnaire items.

1. The lectures contained moderate amounts of real-world knowledge.
2. The case studies were moderately relevant.
3. The guest speakers were strong providers of real-life solutions for real-life problems.
4. The guest speakers strongly motivated the participants.
5. The participants were in strong agreement with varying the delivery mediums.

The summary statements were divided into two primary areas: the items that were moderately satisfying and those items that were strongly satisfying. Both

categories focused on those items that identified the relevancy of the real-world knowledge and case studies.

### Course Content

The eight questionnaire items that comprise the Course Content category, as with all the questionnaire items, evolved from the development process that began with the original focus-group discussions from Phase One. The data, referred to in the following item analysis, first appeared in the tables from the previous section, Course Content Category Data Description. The purpose of the following item-by-item analysis was to determine whether or not the participants' responses agreed with the questionnaire item. This determination was made based on the response category receiving the simple majority of participants' responses.

Item 1. I am satisfied with the education I received from this program.

The participants' responses to the questionnaire item were clustered in the agree and strongly agree response categories. The agree category received 50% of the total responses, while the strongly agree category received 39%. The remaining 11% of the total responses fell in the response categories of neutral (9%) and disagree (2%). The standard deviation for this questionnaire item was .711, which indicated only a slight variability among the responses of the categories. Due to the majority of responses residing within the agree category, then the participants moderately agreed with the questionnaire item.



Item 2. Case studies make the content cohesive.

The responses to this questionnaire item were clustered in the strongly agree and agree response categories. The strongly agree category received approximately 47% of the total responses, while the agree category received 43%. The remaining 10% resided in the neutral category (9%) and disagree category (1%). The standard deviation of .696 reflected a slight variability in the participants' responses among the response categories. With only slight dispersion of the response and the majority of the responses falling into the strongly agree category, then the participants strongly agreed with the questionnaire item.

Item 3. The course content provides real-world business knowledge.

The responses to this questionnaire item were clustered in the strongly agree and agree response categories. The strongly agree category received approximately 48% of the total responses, while the agree category received 41%. The remaining 11% resided in the neutral category (8%) and disagree category (3%). The standard deviation of .763 reflected a slight variability in the participants' responses among the response categories. Because there was only a slight dispersion in the responses and the majority of the responses were in the strongly agree category, therefore the participants strongly agreed with the questionnaire item.

Item 14. There is consistency between the syllabus and the catalog descriptions of courses.

The responses to this questionnaire item were clustered in the agree and neutral response categories. The agree category received 51% of the total responses, while the

neutral category received only 24%. The remaining 25% of the responses were received by the strongly agree category (19%), the disagree category (5%), and the strongly disagree category (1%). The standard deviation was .842. The variability of this questionnaire item was considered slight even though each of the five response categories contained participant responses. Because the majority of the responses appeared in the agree category, the participants only moderately agreed with the questionnaire item. In addition, due to the relatively large number of responses in the neutral category, the participant agreement was modified to be even more moderate than without the neutral responses.

Item 29. There is consistency between the syllabus and the content covered in class.

The responses to this questionnaire item were clustered in the strongly agree and agree response categories. The strongly agree category received approximately 65% of the total responses, while the agree category received 23%. The remaining 12% resided in the neutral category (10%) and disagree category (2%). The standard deviation of .643 reflected a slight variability among the response categories. Because of the slight dispersion of response and the majority of the responses falling into the strongly agree category, then the participants strongly agreed with the questionnaire item.

Item 30. I would like to see a series of seminars focusing on current workplace issues.

The responses to this questionnaire item were clustered in the strongly agree and agree response categories. The strongly agree category received approximately 36% of

the total responses, while the agree category received 41%. The remaining 22% fell in the neutral category (18%) and disagree category (4%). The standard deviation of .843 reflected a moderately slight variability in the participants' responses. Due to the slight dispersion of responses and the majority of the responses falling into the agree category, then the participants moderately agreed with the questionnaire item.

Item 31. Course content provides the steps needed for start-up.

The responses to this questionnaire item were clustered in the agree and neutral response categories. The agree category received 61% of the total responses, while the neutral category received only 19%. The remaining 20% of the responses were received by the strongly agree category (15%), disagree (5%), and strongly disagree (1%). The standard deviation was .766. The variability of this questionnaire item was considered slight even though each of the five response categories contained participant responses. Since the majority of the responses appeared in the agree category, the participants only moderately agreed with the questionnaire item. In addition, the participant agreement was made more moderate in light of the relatively large number of neutral responses.

Item 32. The management courses have the proper focus and depth.

The responses to this questionnaire item were clustered in the agree and neutral response categories. The agree category received 54% of the total responses, while the neutral category received 21%. The remaining 25% of the responses were received by the strongly agree category (15%), the disagree category (6%), and the strongly disagree category (3%). The standard deviation of .911 was the strongest indicator of variability of all the questionnaire items of this context category. The variability of this

questionnaire item was considered slight, even though each of the five response categories contained participant responses. Due to the majority of the responses appearing in the agree category, the participants only moderately agreed with the questionnaire item. In addition, due to the relatively large number of responses in the neutral category, the participant agreement was modified to be even more moderate.

### Category Summary

The purpose of the questionnaire items comprising the Course Content category was to identify those behaviors and methods that the participants identified as satisfying or dissatisfying. The following statements summarize the findings of the Course Content category as indicated by their responses to the questionnaire items.

1. The participants were moderately satisfied with the education they have received from the program.
2. There was moderate consistency between the course descriptions as described in the catalog and the syllabus.
3. There was moderate consistency between the description of the course and the content covered in class.
4. The participants were moderately supportive of the idea of offering a series of seminars focusing on current workplace issues.
5. The course content moderately contained the steps needed for starting a business.

6. The management courses moderately contained the necessary focus and depth.
7. The case studies provided strong content cohesion.
8. The course content strongly provided real-world business knowledge.

The summary statements were divided into two primary categories: moderately satisfying and strongly satisfying. The moderately satisfying category contained the issues of global satisfaction, course description consistency, and quality content. The strongly satisfying category contained the issues of cohesiveness as provided by the case studies and the real-world knowledge that was provided by the content of the courses offered in the program. Even though there were two categories of content, the participants' responses indicated general satisfaction in varying degrees with the items within the Course Content category.

#### Comparative Summary

In order to form the final questionnaire, eight questionnaire items were eliminated by the correlational analysis in the second phase of this study. Therefore, the first set of differences between the preliminary and final questionnaire items was the absence of eight items from the final questionnaire. Because of this difference, the questionnaire items that were eliminated were not included in this comparative summary.

The purpose of the comparative summary was to identify on an item-by-item basis the satisfaction/dissatisfaction measures that were congruent between the responses from both sets of sample groups. In order to execute this summary, it was necessary to

divide this section into four segments representing each of the four context categories: fellow students, faculty, delivery, and course content.

The comparison was based on the information provided in the category summaries from the Data Analysis and Findings sections of Phase Two and Phase Three. Each questionnaire item containing similar subject matter from each context category from Phase Two and Phase Three was compared. The comparison focused primarily on the level of satisfaction as determined by the previous data analysis. The idea was to reach consensus between the two different sample groups. Those questionnaire items in which consensus was met can therefore be identified as satisfaction measures.

#### Fellow Students

Each questionnaire item of Phase Two Fellow Students category was compared to the similar questionnaire items from Phase Three Fellow Students category. The comparison was made on the basis of the level of satisfaction as indicated by the responses of the sample groups. If the sample groups were in agreement, then consensus was met. Each of the following items was restated from the original to provide an indication of the level of satisfaction.

1. The students were moderately accepting of new and different solutions to problems.
2. The students who compensated for the group members who refused to equally participate in the group project felt moderately cheated.
3. The participants moderately shared a common interest in business.
4. The entrepreneurship student was moderately motivated to achieve a high degree of quality in his or her work.
5. The participants moderately recognized the benefits of networking among themselves and alumni.
6. The participants moderately agreed that the level of commitment was indicated by the level of preparedness for class.

7. The participants strongly agreed with the concept that each member of a group will have a different commitment to the "entrepreneurial vision."
8. All students strongly added value to the class by sharing their ideas in class.
9. There was moderate disagreement with the level of emphasis on group projects.

However, the sample groups were not in agreement on the following questionnaire item:

1. It was demoralizing when other majors fail to accept entrepreneurship as an academic discipline.

The multiple group sample was strongly in agreement with the item statement: They felt strongly demoralized by the lack of acceptance of entrepreneurship as an academic discipline. However, the sample from the single institution responded with a majority of the responses in the neutral category. Therefore, the neutral responses provided by the participants indicated that there was neither satisfaction nor dissatisfaction when other majors failed to accept entrepreneurship as a serious academic discipline.

### Faculty

The questionnaire items of Phase Two Faculty category were compared to the questionnaire items from Phase Three Faculty category. The comparison was focused on the level of satisfaction as indicated by the responses of the sample groups. If the sample groups were in agreement, then there was consensus. Each of the following items was restated from the original to provide an indication of the level of consensus satisfaction.

1. The faculty were slightly moderately open-minded toward the business plans of the students.
2. The faculty moderately made time for the students.
3. The faculty and students slightly moderately learned from each other.

4. The students strongly perceived the faculty as a resource.

The sample groups were not in agreement with the following four questionnaire items:

1. The faculty were sensitive to the different learning objectives of the students.
2. The faculty were effective communicators.
3. The faculty wanted to teach.
4. Faculty mentoring gave the students a psychological edge.

The first nonconsensus questionnaire item dealt with the level of sensitivity the faculty was perceived to have toward the different learning objectives of the students. The multiple group sample was neutral, which was equivalent to having no opinion. However, the single institution sample group only moderately acknowledged that the faculty was sensitive to the different learning objectives of the students.

The second nonconsensus questionnaire item referred to the perceived effectiveness of the communication abilities of the faculty. Even though both sets of samples agreed with the questionnaire item, the level of agreement was inconsistent. The multiple group sample felt that the faculty were strongly effective communicators. However, the single institution sample felt that the faculty were only moderately effective communicators.

The third nonconsensus item identified the strength of the faculty's perceived desire to teach. The perception was identified by the sample groups based on their experiences with faculty. Even though the multiple sample group identified the faculty's perceived desire to teach as being only moderate, the single institution sample identified the faculty's perceived desire to teach as being strong. Again, the difference is a matter of degrees of agreement.



The final nonconsensus item sought to identify if the mentoring of faculty created a perceived psychological competitive edge. The multiple sample groups strongly felt that the mentoring by faculty did produce a psychological edge over the competition. However, the single institution sample group had no opinion as to the psychological effects of faculty mentoring.

### Delivery of Content

Each questionnaire item of the Delivery of Content category of the two phases were compared. This comparison was based on the level of satisfaction and agreement as indicated by the sample groups. The sample groups were in agreement, therefore consensus was met concerning the agreement and level of satisfaction for all the items within this category. Each of the following restated items was the result of combining the consensus level of satisfaction and the questionnaire item. The purpose was to provide an indication of the satisfaction measure.

1. The lectures contained moderate amounts of real-world knowledge.
2. The case studies were moderately relevant.
3. The guest speakers were strong providers of real-life solutions for real-life problems.
4. The guest speakers strongly motivated the participants.
5. The participants were in strong agreement with varying the delivery mediums.

### Course Content

The questionnaire items of the Course Content categories of Phase Two and Phase Three were compared. The comparison was constructed on the basis of

satisfaction level and agreement with the questionnaire item. If the sample groups agreed, then consensus was met. Each of the following items was restated from the original to provide an indication of the level of consensus satisfaction.

1. There was moderate consistency between the course descriptions as described in the catalog and the syllabus.
2. There was moderate consistency between the description of the course and the content covered in class.
3. The participants were moderately supportive of the idea of offering a series of seminars focusing on current workplace issues.
4. The course content moderately contained the steps needed for starting a business.
5. The management courses moderately contained the necessary focus and depth.
6. There was a strong degree of real-world business knowledge within the course content.

The sample groups were not in consensus regarding the level of agreement with the following two questionnaire items. In each case, both groups agreed with the item statement; however, the degree of agreement provided the lack of consensus for each sample group.

1. I am satisfied with the education I received from the program.
2. Case studies make the content cohesive.

The first item of nonconsensus identified the level of global satisfaction each group had with their particular program. The multiple group sample was strongly satisfied with the education they received from the programs they attended. However, the single institution sample was only moderately satisfied with education they received from their program.

The second nonconsensus item reflected the nature and use of the case study. This item reflected the use of the case study as an avenue through which the content of

the course was consolidated using the case study. The sample from the single institution strongly agreed with the item, therefore indicating that the use of the case study as a tool for content cohesion was acceptable for the students. Although the multiple group sample was in agreement, they were only moderately satisfied with the use of case studies.

The following list is the collection of the questionnaire items that have been, by consensus, identified as a set of measures that mark the level of satisfaction of the consumers of undergraduate entrepreneurship programs. All these items were originally identified by the participants. Prior to this point, these items were processed through a product development model as suggested by Hayes (1992). These items were selected by both sets of sample groups, therefore the following list can be considered a set of items to measure the satisfaction of undergraduate entrepreneurship students.

1. The students were moderately accepting of new and different solutions to problems.
2. The students who compensated for the group members who refused to equally participate in the group project felt moderately cheated.
3. The participants moderately shared a common interest in business.
4. The entrepreneurship student was moderately motivated to achieve a high degree of quality in his or her work.
5. The participants moderately recognized the benefits of networking among themselves and alumni.
6. The participants moderately agreed that the level of commitment was indicated by the level of preparedness for class.
7. The participants strongly agreed with the concept that each member of a group will have a different commitment to the "entrepreneurial vision."
8. All students strongly added value to the class by sharing their ideas in class.
9. The participants were moderate dissatisfied with the emphasis on group projects.
10. The faculty were slightly moderately open-minded toward the business plans of the students.
11. The faculty moderately made time for the students.
12. The faculty and students slightly moderately learned from each other.

13. The students strongly perceived the faculty as a resource.
14. The lectures contained moderate amounts of real-world knowledge.
15. The case studies were moderately relevant.
16. The guest speakers were strong providers of real-life solutions for real-life problems.
17. The guest speakers strongly motivated the participants.
18. The participants were in strong agreement with varying the delivery mediums.
19. There was moderate consistency between the course descriptions as described in the catalog and the syllabus.
20. There was moderate consistency between the description of the course and the content covered in class.
21. The participants were moderately supportive of the idea of offering a series of seminars focusing on current workplace issues.
22. The course content moderately contained the steps needed for starting a business.
23. The management courses moderately contained the necessary focus and depth.
24. The course content strongly provided real-world business knowledge.

The items that were not in consensus were eliminated from the satisfaction measures. These satisfaction measures represent only the findings of the study. The conclusions were explored in Chapter V.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this chapter is to identify the conclusions and recommendations that resulted from data of this study. This chapter is divided into three segments: summary, conclusions, and recommendations. The summary contains a brief overview of the entire study, including the research objective, the research questions, the method, and the results of the analysis. The second segment, the conclusions, are drawn directly from the results of the data as collected by the preliminary and final questionnaires. The third segment identifies the researcher's recommendations for further study.

#### Summary

The Darwinistic nature of capitalism is the elimination of the obsolete and the unadaptable by the new and the adaptable, creating a cycle of life with survival going to the fittest. This act of survival is described by Schumpeter (1942) as the "perennial gale of the creative destruction of capital," which is continuous in nature and instigated by the entrepreneur (p. 84). The entrepreneur's survival can be enhanced by the creation of an

entrepreneurial infrastructure that is inclusive of a community of investors, an entrepreneurial culture, an incubator system, and entrepreneurial education.

It is the latter, entrepreneurial education, that this dissertation is focused. This summary is divided into three sections. The first section identifies the primary underlying assumption of the student as a consumer of education. The second section describes the purpose of this study as identifying the satisfaction attributes of undergraduate entrepreneurship students. This section also identifies the method as a product development process used in industry to determine the satisfaction attributes of consumer products/services. The final section depicts the application of the results as assisting in the development and improvement of the entrepreneurial infrastructure.

The primary underlying assumption is that undergraduate entrepreneurship education is an economic transaction between the student as consumer and the educational institution as product/service provider. Thus, the educational institution, in order to compete in a dynamic environment and thereby attract new students and fulfill its mission, must continuously create and recreate the highest-quality program it is capable of offering. In order to accomplish this, the educational institution must continuously adapt and improve its product offerings to remain relevant. The adaptation process begins with identifying the satisfaction measures of the undergraduate entrepreneurship students, past and present.

Originally, the purpose of this study was to create a questionnaire that measured the satisfaction/dissatisfaction of the undergraduate entrepreneurship students. In order to accomplish this task, the study needed to answer two questions: 1) What are the

measures of effectiveness for undergraduate entrepreneurship programs as reflected by the literature? and 2) Within the contextual domains of fellow students, faculty, course content, and content delivery, what are the behaviors promoting student satisfaction and dissatisfaction within the undergraduate entrepreneurship programs? In the process of creating this questionnaire, the satisfaction/dissatisfaction attributes of the undergraduate entrepreneurship programs were identified by the participants. The process or method followed the product development model, from focus groups to pilot test to field test. The focus-group discussions defined the domain of satisfaction and dissatisfaction experiences of the students, past and present, thereby deriving the questionnaire. The pilot test established the questionnaire as being unreliable but valid. The unreliable nature of the questionnaire caused a shift in the focus of the study from the creation of a reliable questionnaire to the identification of the satisfaction/dissatisfaction measures for undergraduate entrepreneurship programs. In addition, by submitting the results of the pilot test to a correlational analysis, the questionnaire's effectiveness was improved by eliminating the ineffective questionnaire items. The field test confirmed the questionnaire as a tool by which to improve the quality of an undergraduate entrepreneurship program.

The purpose of this research shifted from developing a questionnaire to identifying the satisfying and dissatisfying attributes of undergraduate entrepreneurship programs. The application of this information would result in this same goal of improving the quality of the product/service being offered by these institutions. When the quality of the program is enhanced, then the propensity for survivability of the entrepreneur is improved.

## Conclusions

The primary purpose of this study was to form a reliable questionnaire by which to measure the effectiveness of undergraduate entrepreneurship education programs. It was found that the questionnaire that was developed was unreliable due to the homogeneous nature of the sample groups. Therefore, the secondary purpose, identifying a set of satisfaction measures, became the primary focus of this study.

The purpose of this section was to objectively express the logical consequences of the results of this study. There were two primary conclusions derived from the data of this study: 1) a set of base line satisfaction measures; 2) a process by which to evaluate an undergraduate entrepreneurship education program.

### Satisfaction Measures Conclusion

The secondary purpose of this study was to establish a set of satisfaction measures by which to compare other entrepreneurship education programs. The multi-sample responses derived from the preliminary questionnaire comprise the set of base line set of satisfaction measures.

The act of comparing a single set of responses to the multi-institutional sample group establishes this group of responses as a base-line measurement. A single set of responses is somewhat meaningless when compared to itself. In order to gain meaning within a context, a comparison of two or more sets of responses is necessary. In order to further the meaning, one set of responses must perform as a base line by which all other sample groups are compared. The base line is established, in this case, on the basis



of the quality of the programs from which the sample participants were drawn throughout this study. This provides a level of credibility necessary to establish the base-line measurements.

The credibility of the base-line measurements was further strengthened through the validity of the content of each of the questionnaire items. The content validity in this study was established in a qualitative methodological manner by having the participants express their experiences within four contextual categories. By allowing the participants to define the meaning of satisfaction/dissatisfaction, according to Rockhill (1982), then the results of this study were provided with a meaning within a context.

Even though, the questionnaire developed by this study was proven to be unreliable, the homogeneous nature of the responses provided a strength and cohesion to the satisfaction measures used as the base-line measure.

Therefore, the act of comparing two sets of responses established the base-line measures. The credibility of the institutions participating in this study established the credibility of the base-line measures. The meaning of satisfaction/dissatisfaction as provided by the participants established the validity of the satisfaction measures. The homogeneous nature of the sample groups established a cohesion to the responses of the base-line measurement. Therefore, the base-line measures are the satisfaction measures by which to compare other entrepreneurship programs.

### The Process Conclusion

The process established in this study resulted in the satisfaction measures, as stated above, being created, developed, and confirmed. Therefore, it is concluded that this specific process, as applied in this study, can be used in the future to evaluate the customer satisfaction of undergraduate entrepreneurship programs.

As Block and Stumpf (1992) suggested, the process must be able to compare students, faculty, course content, and other variables (delivery) not only within the program but also among other programs. The design resides within the parameters as established by Block and Stumpf. Phase One created the original questionnaire items from the focus-group discussions. Phase Two not only established the validity of the content but also established the base-line comparison. The base line consisted of the three samples from the three institutions that were ranked in the top five undergraduate programs in the United States. Phase Three compared the responses of the multi-institution sample with the single institution sample, thereby establishing and confirming the list of satisfaction measures as the base-line measure of satisfaction.

The primary source of information in the derivation of the base-line satisfaction measures was the student, past and present. The use of the student as the primary source of evaluation information, particularly the acquisition of the measures, conforms to the suggested parameters of Rabbior (1990), Terenzini (1989), and Worthen and Sanders (1987).

Since the process conforms to the initial design as suggested by Block and Strumpf (1992), the total process therefore is the uniform method of evaluating undergraduate entrepreneurship programs as called for by Block and Strumpf (1992).

### Recommendations

The purpose of this section is to express the researcher's recommendations as directly derived from the conclusions of this study. The primary recommendation of further study in this particular field is included in this section. The section continues by identifying three secondary recommendations to enhance the data collection and analysis processes.

The primary recommendation as derived from this study identifies the need to perform further research within each of the specific context categories: fellow students, faculty, content delivery, and course content. However, although it is suggested that the research be continued, it is recommended that it be focused on only one of the four context categories at a time. In that manner, the satisfaction and dissatisfaction behaviors of the entrepreneurship students can be specifically identified for that specific context category.

In pursuing the primary recommendation, the researcher suggests the continuation of the qualitative/quantitative research method as established in this study. According to Hayes (1992), the nature of specific satisfaction/dissatisfaction experiences must be identified and defined by the participants for there to be any significance placed on the validity of the results. Additionally, Rockhill (1982) suggested that the meaning

as defined by the participants provides the value to the satisfaction and dissatisfaction experiences as related by the participants. Therefore, it becomes necessary to continue the qualitative research methodologies of this study. The quantitative research methodologies, as suggested by Rockhill (1982), add a reliability beyond the reliability of a questionnaire. The quantitative analysis, by virtue of its reliability, adds reliability to the study as a whole in terms of the analysis of the result from the data. Rockhill (1982) suggested that by combining the qualitative and quantitative methodologies, the study would gain greater depth of interpretation, meaning, and reliability.

As a second recommendation, the researcher suggests that the sample be drawn from a larger population. The population could be the students and alumni, as described in this study, from each of the top five schools or from the top 10 schools as ranked by U.S. News and World Report. By increasing the size of the sample population, according to Hayes (1992), the reliability issue could be eliminated.

A third recommendation is to increase the number of focus-group discussions on each of the participating campuses. The suggested method would be to hold a total of four sessions, two with students and two with alumni, once a semester for two semesters. As Morgan (1988) suggested, if the number of sessions were to be increased, then the researcher would gain greater depth and quantity of inputs. In addition, the participants would gain more experience in their programs to contribute to the focus-group sessions. Thus, the students provide the future researcher with newer insights into the field of knowledge and their program. Also, in regards to the focus groups, the researcher suggests that the number of participants per focus group session be increased

to seven or eight from the 5 participants originally used in this study. The larger number of students would provide the future researcher with the opportunity to gain greater and deeper information by increasing the interaction possibilities within the group as suggested by Morgan (1988).

A fourth recommendation is to compare the student responses to the alumni responses. due to the confidentiality agreement between the researcher and the three participating institutions this comparisons was not performed. The purpose of this comparison is to identify the specific perceptual differences between these two sample groups. By gaining this perceptual information the future researcher would then possess a better understanding of the differences between the two sample groups which would enhance the interpretation of the results of past and future studies.

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## APPENDIXES

## APPENDIX A

## COVER LETTER

Participating Institution  
1313 Pluto Lane  
Bogus Town, State 000000

February, 1996

Dear Alumni:

We have agreed to assist Mr. William M. Mayfield, a doctoral student from Oklahoma State University, with his dissertation. The purpose of Mr. Mayfield's study is to identify satisfaction measures of students.

Upon completion of this study, Mr. Mayfield has agreed to share the results of his study with the Center of Entrepreneurial studies at Participating Institution. Thus, by participating in this study, you will be assisting this institution improve its undergraduate Entrepreneurship program. We encourage you to complete the enclosed questionnaire as quickly as possible and return it to Mr. Mayfield in the enclosed return envelope.

Your cooperation and consideration of this request are fully appreciated, not only by the researcher, but also by our center. Thank you.

Best regards,

Dr. John or Jane Doe  
Director, Center for Entrepreneurial Studies

APPENDIX B

CONTEXT GUIDELINES AND  
SUBJECT DIMENSIONS

### The eight Context Guideline Questions

- Question #1: What did you experience from your fellow students that was displeasing?
- Question #2: What did you experience from the faculty that was dissatisfying?
- Question #3: What did you dislike about the delivery of the course content?
- Question #4: What expectations did you have about course content that were not met?
- Question #5: What did you experience from your fellow students that was pleasing?
- Question #6: What did you experience from the faculty that was satisfying?
- Question #7: What did you like about the delivery of the course content?
- Question #8: What expectations did you have about the course that were met?

#### Delivery Category

##### Questions

Question #3

What did you dislike about the delivery of the course content?

Question #7

What did you like about the delivery of the course content?

##### Dimensions

1. Preparation
2. Consistency
3. Methods used

#### Course Content Category

##### Questions

Question #4

What expectations did you have about course content that were not met?

Question #8

What expectations did you have about the course that were met?

##### Dimensions

1. Prior expectations to joining the program
2. Consistency of course descriptions with what you experienced
3. Course Objectives consistent with course descriptions
4. Course work consistent w/ the content taught



**A listing of the Context Guideline Questions with their associated Subject Dimensions****Fellow Students Category****Questions**

Question #1

What did you experience from your fellow students that was displeasing?

Question #5

What did you experience from your fellow students that was pleasing?

**Dimensions**

1. Teams and or group projects
2. Class
3. Gender bias/problems
4. Core values - students within the program

**Faculty Category****Questions**

Question #2

What did you experience from the faculty that was dissatisfying?

Question #6

What did you experience from the faculty that was satisfying ?

**Dimensions**

1. Attitudes - respectful of he students
2. Accessibility
3. Expectation of Performance

APPENDIX C

PRELIMINARY QUESTIONNAIRE

## RESEARCH QUESTIONNAIRE

The overall purpose of this questionnaire is to enhance the effectiveness of undergraduate Entrepreneurship education by identifying satisfaction measures of past and present students. Please take the time to complete this questionnaire and return it to the researcher in the attached, self-addressed and stamped envelop. Your time and input to my research are greatly appreciated.

Please indicate the extent to which you agree or disagree with the following statements by circling the appropriate number using the scale below.

- 1.- I strongly Disagree with this statements (SD).  
 2.- I Disagree with this statement (D).  
 3.- I neither agree or disagree with this statement (N).  
 4.- I Agree with this statement (A).  
 5.- I Strongly agree with this statement (SA).

SD	D	N	A	SA	
1	2	3	4	5	1. I am satisfied with the education I received from this program.
1	2	3	4	5	2. Case studies make the content cohesive.
1	2	3	4	5	3. The course content provides real world business knowledge.
1	2	3	4	5	4. Would like to see more internships.
1	2	3	4	5	5. Students are accepting of new and different solutions to problems.
1	2	3	4	5	6. Members of group projects have differing levels of commitment to the "entrepreneurial vision".
1	2	3	4	5	7. There is too much emphasis on group projects.
1	2	3	4	5	8. The group members, who compensated for the slackers, felt cheated.
1	2	3	4	5	9. The students share a common interest in business.
1	2	3	4	5	10. It is demoralizing when students from other majors fail to accept Entrepreneurship as a serious discipline.

SD	D	N	A	SA	
1	2	3	4	5	11. The entrepreneurship student is motivated to achieving a high degree of quality
1	2	3	4	5	12. All students add value to class by sharing their ideas.
1	2	3	4	5	13. The students recognize the benefits of networking among themselves and alumni.
1	2	3	4	5	14. The faculty have an open-mind when it comes to the business plans of students.
1	2	3	4	5	15. There is consistency between the syllabus and the catalog descriptions of courses.
1	2	3	4	5	16. The faculty always made time for the student.
1	2	3	4	5	17. The faculty is a resource for students.
1	2	3	4	5	18. Negative comments by faculty impede their effectiveness as teachers.
1	2	3	4	5	19. The competitive nature of the program drives students to cheat.
1	2	3	4	5	20. The faculty are sensitive to the different learning objectives of the students.
1	2	3	4	5	21. Faculty are always fully prepared for class.
1	2	3	4	5	22. The faculty want to teach.
1	2	3	4	5	23. Bigotry in any form cheats fellow students of their opportunity to learn.
1	2	3	4	5	24. The faculty and students learn from each other.
1	2	3	4	5	25. The credibility of faculty is determined by their previous real world experience.
1	2	3	4	5	26. Faculty mentoring gives students a psychological edge.
1	2	3	4	5	27. The faculty are effective communicators.

SD	D	N	A	SA	
1	2	3	4	5	28. Faculty rely too much on case studies to deliver course content.
1	2	3	4	5	29. Power point presentations are boring.
1	2	3	4	5	30. Lectures contain real world knowledge.
1	2	3	4	5	32. Guest speakers provide students with real life solutions for real life problems.
1	2	3	4	5	34. Guest speakers motivated the students to be entrepreneurs.
1	2	3	4	5	35. Case study analysis is relevant.
1	2	3	4	5	36. Varying the delivery mediums made the content more interesting.
1	2	3	4	5	37. The level of commitment of the students is indicated by their level of preparedness for class.
1	2	3	4	5	38. There is consistency between the syllabus and the content covered in class.
1	2	3	4	5	39. Would like to see a series of seminars focusing on current workplace issues.
1	2	3	4	5	40. Students desire closure to the program.
1	2	3	4	5	41. Course content provided the steps needed for start-up.
1	2	3	4	5	42. The management courses have the proper focus and depth.

Thank you for taking the time and providing me with your input. Each school participating in this study will receive a copy of the results and will utilize them to improve the effectiveness of their particular programs.

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APPENDIX D

QUALITY-ASSURANCE RESUME  
OF REVIEWER

**LISA M. SPADAFORA**

18 Larkspur Way, #2  
Natick, MA 01760  
(617) 239-5930 X2535 or (508) 655-1412

**Experience**

Summer 1995 **JOHNSON & JOHNSON/VISTAKON** **BRUSSELS, BELGIUM**  
**Consulting Intern**

- Managed an independent consulting project designed to explore a new market opportunity for J&J contact lens division.
- Recommended the best methods for supplying the new market by researching competitive pricing structures and distribution strategies.
- Conducted field based research to gain valuable market information about a diverse country for which very little data is available.

1994-1995 **DELTA DENTAL PLAN OF MASSACHUSETTS** **CHARLESTOWN, MA**  
**Consulting Intern**

- Participated as member of a student consulting team on competitive benchmarking project.
- Forecasted company sales and analyzed trends in dental managed care industry.
- Developed a marketing strategy to enhance company's "national" image.

1992-1994 **BRAINTREE LABORATORIES, INC.** **BRAINTREE, MA**  
**Pharmaceutical Sales Representative**

- Marketed pharmaceutical products to physicians, hospitals and pharmacies in New England.
- Managed over 2,000 accounts while increasing territorial sales 6% over company sales goal.
- Represented the company at national pharmaceutical trade shows which resulted in 25% increase in client base.
- Negotiated large, key hospital and managed care contracts.
- Coordinated product pricing and bidding for health maintenance organizations which increased managed care contracts by 75%.

1991-1992 **SCUDDER, STEVENS & CLARK** **BOSTON, MA**  
**Associate, Shareholder Services**

- Serviced client mutual fund accounts by advising clients on tax, legal and economic issues.
- Sold the company's Japanese Mutual Fund which required knowledge of Japanese markets, indices and business practices.
- Trained all new departmental associates.
- Received Series 6 & 63 registrations.
- Educated uninformed clients and marketed the entire line of Scudder investment funds.

**Education**

1994-1996 **BABSON GRADUATE SCHOOL OF BUSINESS** **WELLESLEY, MA**  
Candidate for Master of Business Administration degree, May 1996.  
GPA: 3.4. President, Graduate Student Association.

1987-1991 **REGIS COLLEGE** **WESTON, MA**  
Bachelor of Arts, Magna Cum Laude; GPA 3.8.  
Major: French Literature Concentration: Economics

**Computer Skills**

Proficient in use of VAX/VMS, Microsoft Word, Excel and Powerpoint and Lotus 1-2-3

**Personal**

Proficient in French.

APPENDIX E

FINAL QUESTIONNAIRE



RESEARCH QUESTIONNAIRE

The overall purpose of this questionnaire is to enhance the effectiveness of undergraduate Entrepreneurship education by identifying satisfaction measures of past and present students. Please take the time to complete this questionnaire and return it to the researcher in the attached, self-addressed and stamped envelope. Your time and input to this research project are appreciated, not only by the researcher, but also by The Center for Entrepreneurial Studies.

Please indicate the extent to which you agree or disagree with the following statements by circling the appropriate number using the scale below

- 1.- I strongly Disagree with this statements (SD).  
 2.- I Disagree with this statement (D).  
 3.- I neither agree or disagree with this statement (N).  
 4.- I Agree with this statement (A).  
 5.- I Strongly agree with this statement (SA).

SD D N A SA

- |   |   |   |   |   |  |
|---|---|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 | 1. I am satisfied with the education I received from this program.   |
| 1 | 2 | 3 | 4 | 5 | 2. Case studies make the content cohesive.   |
| 1 | 2 | 3 | 4 | 5 | 3. The course content provides real world business knowledge.  |
| 1 | 2 | 3 | 4 | 5 | 4. Students are accepting of new and different solutions to problems.  |
| 1 | 2 | 3 | 4 | 5 | 5. Members of group projects have differing levels of commitment to the "entrepreneurial vision".              |
| 1 | 2 | 3 | 4 | 5 | 6. There is too much emphasis on group projects.   |
| 1 | 2 | 3 | 4 | 5 | 7. The group members, who compensated for the slackers, felt cheated.  |
| 1 | 2 | 3 | 4 | 5 | 8. The students share a common interest in business.   |
| 1 | 2 | 3 | 4 | 5 | 9. It is demoralizing when students from other majors fail to accept Entrepreneurship as a serious discipline. |
| 1 | 2 | 3 | 4 | 5 | 10. The entrepreneurship student is motivated to achieving a high degree of quality.                           |
| 1 | 2 | 3 | 4 | 5 | 11. All students add value to class by sharing their ideas.  |
| 1 | 2 | 3 | 4 | 5 | 12. The students recognize the benefits of networking among themselves and alumni.                             |
| 1 | 2 | 3 | 4 | 5 | 13. The faculty have an open-mind when it comes to the business plans of students.                             |

SD	D	N	A	SA	
1	2	3	4	5	14. There is consistency between the syllabus and the catalog descriptions of courses.
1	2	3	4	5	15. The faculty always made time for the student.
1	2	3	4	5	16. The faculty is a resource for students.
1	2	3	4	5	17. The faculty are sensitive to the different learning objectives of the students.
1	2	3	4	5	18. Faculty are always fully prepared for class.
1	2	3	4	5	19. The faculty want to teach.
1	2	3	4	5	20. The faculty and students learn from each other
1	2	3	4	5	21. Faculty mentoring gives students a psychological edge.
1	2	3	4	5	22. The faculty are effective communicators.
1	2	3	4	5	23. Lectures contain real world knowledge.
1	2	3	4	5	24. Guest speakers provide students with real life solutions for real life problems.
1	2	3	4	5	25. Guest speakers motivated the students to be entrepreneurs.
1	2	3	4	5	26. Case study analysis is relevant.
1	2	3	4	5	27. Varying the delivery mediums made the content more interesting.
1	2	3	4	5	28. The level of commitment of the students is indicated by their level of preparedness for class.
1	2	3	4	5	29. There is consistency between the syllabus and the content covered in class.
1	2	3	4	5	30. Would like to see a series of seminars focusing on current workplace issues.
1	2	3	4	5	31. Course content provided the steps needed for start-up.
1	2	3	4	5	32. The management courses have the proper focus and depth.

Thank you for taking the time to fill out this questionnaire. Your assistance with my research is appreciated. Please know that The Center for Entrepreneurial Studies will receive a copy of the analysis of the results of this study. Thank you again for your assistance.

STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD  
APPROVAL FORM

IRB 10-96-036

2010

APPENDIX F

INSTITUTIONAL REVIEW BOARD

APPROVAL FORM

**OKLAHOMA STATE UNIVERSITY  
INSTITUTIONAL REVIEW BOARD  
HUMAN SUBJECTS REVIEW**

**Date:** 01-03-96

**IRB#:** ED-96-056

**Proposal Title:** THE DEVELOPMENT OF A SET OF STUDENT SATISFACTION MEASURES BY WHICH TO CREATE A VALID AND RELIABLE INSTRUMENT IN ORDER TO MEASURE EFFECTIVENESS OF UNDERGRADUATE ENTREPRENEURSHIP EDUCATIONAL PROGRAMS

**Principal Investigator(s):** James A. Gregson, William M. Mayfield

**Reviewed and Processed as:** Exempt

**Approval Status Recommended by Reviewer(s):** Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.

APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.

ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

---

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Provisions received and approved.

Signature:

  
\_\_\_\_\_  
Chair of Institutional Review Board

Date: January 12, 1996

## VITA

William Mabry Mayfield

Candidate for the Degree of

Doctor of Education

Thesis: **EFFECTIVENESS OF UNDERGRADUATE ENTREPRENEURSHIP  
EDUCATION IN THE USA: A STUDY OF SATISFACTION MEASURES**

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Shreveport, Louisiana, October 30, 1954, the son of John and Jean Mayfield.

Education: Graduated from Jesuit High School, Shreveport, Louisiana, in May 1972; received Bachelor of Arts degree in Economics from The University of Southern Mississippi at Hattiesburg, Mississippi in May 1981; received Master of Business Administration degree in Finance from Northeastern State University in Tahlequah, Oklahoma in May 1990; completed requirements for Doctor of Education degree at Oklahoma State University in July, 1996.

Professional Experience: Landman, Producing Properties Acquisitions and Sales, Cities Service Oil and Gas Corporation, August, 1981 to January, 1987; Account Executive, Investment Analysis and Marketing, Fitzgerald, Dearman and Roberts Inc., April, 1987 to May, 1988; Instructor, Finance and Economics, Department of Finance and Economics; Instructor, Business Administration, Department of Business, Northwestern Oklahoma State University, September, 1989 to May, 1990; Graduate Research Associate, School of Occupational and Adult Education at Oklahoma State University, August, 1990 to August, 1995; Babson Visiting Doctoral Fellow, Center of Entrepreneurial Studies, Babson College, August, 1995 to Present.