Volume 8 **ISSN 1098-8394**

JOURNAL of ENTREPRENEURSHIP EDUCATION

An official Journal of the
Academy of Entrepreneurship ®

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The *Journal of Entrepreneurship Education* is published by the Allied Academies, Inc., PO Box 2689, 145 Travis Road, Cullowhee, North Carolina 28723, USA, (828) 293-9151, FAX (828) 293-9407. Those interested in subscribing to the *Journal,* advertising in the *Journal,* or otherwise communicating with the *Journal,* should contact the Executive Director at info@alliedacademies.org.

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LETTER FROM THE EDITOR

Welcome to the *Journal of Entrepreneurship Education*, a publication dedicated to the dissemination of information pertinent to improvement of methodologies and effectiveness of entrepreneurship education. The editorial board considers two types of manuscripts. First, we invite empirical research which expands the body of knowledge of entrepreneurship education. Secondly, we solicit manuscripts which document successful applied innovations in entrepreneurship education.

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James W. Carland
Editor
Western Carolina University

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TEACHING ENTREPRENEURSHIP TO AT-RISK STUDENTS IN THE MISSISSIPPI DELTA

Larry R. Dale, Arkansas State University
Henry G. Torres, Arkansas State University
Patricia Toney-McLin, Arkansas State University
Jeff Pittman, Arkansas State University
Carleen Marburger, Arkansas State University

ABSTRACT

The ASU SIFE Team participated in developed a program that was funded by a grant from the Horizon Institute of Technology. This program offered 28 at-risk students from two Arkansas delta school districts, Osceola and Forrest City, an opportunity to explore the role of technology in a free market economic system and to motivate them to pursue careers in the areas of math, science, business, entrepreneurship and technology. We examined the results to determine the effectiveness of the program using raw data, standard regression analysis and loglinear models and determine the significance of 8 factors in success on the MAME; Age, gender, race, access to home computer, education level of mother, education level of father, hours of computer use at school, and hours of play on computer video games as dependent variables. The independent variable was the score on the MAME Standardized Test. Of the factors tested; Age, ownership of home computer, success in the program; mothers education level, hours of computer use at school, and hours of play on computer video games were all significant at the .01 level. Only gender, race and father's education were not significant at the .01 level of significance.

INTRODUCTION

An opportunity exists to "brand" the minds of area school children with collegiate aspirations in a hands-on environment That explores the world of entrepreneurship The focus was on children that are from low income, disadvantaged and minority backgrounds and expose them to an educational experience that will promote continued investments in their own human capital by seeking a higher education. The students are frequently left behind unless some intervention takes place. We also planned to help them explore the world of entrepreneurship by making them real decision makers in a business simulation.

This collaborate effort offered a variety of distinct venues that encompass technology and education. Each venue will focus on attracting middle school aged students (6th - 8th graders) within the Northeast Arkansas area and exposing them to a unique educational experience. Including exposure to math, science, business and technology. Emphasis will be placed on these topics as life and career choices.

We began by selecting two of our more progressive area school districts with a high percentage of at-risk children and asking them to identify and contact children for the program. The two districts selected the participants, provided chaperons and bus drivers for the 4 weekend excursions. A team of 38 SIFE members provided additional chaperons and program coordinators who helped plan and execute the camp. Together these teams planned and executed a program on each of four consecutive Saturdays running beginning February 7,14,21, and ending on the 28, 2004.

Module #1 began with students taking a pretest version of the test of Marketing. Accounting, Management and Economics [MAME], which became the basic instrument for our study. This session was under the guidance of Dr. Larry R. Dale Sam Walton fellow from the department of economics in conjunction with SIFE student Chris Sanders. We then proceeded to present a SIFE developed Power point presentation called " Economics and Free Enterprise", which provided basic information on the free enterprise economy. We introduced the concept of economics and then proceeded to explore the market, command and traditional economic systems. Our focus quickly turned to the Market system, where consumers and producers interact to determine prices and quantities sols through something called "dollar voting". Next we introduced students to the natural, capital and human resources used to produce goods or services. Then we talked about the mixed nature of the economy of the USA with input from government and traditions, but a dominance of consumers led production through various markets

We ended the first program by showing the film "The Kingdom of Mocha", which reviewed all of the concepts previously covered. Mocha has a maturing market economy. The film covers basic economic vocabulary such as: Supply, demand, markets, Price, Productive resources [natural, capital, human], entrepreneur, production, consumer, producer, goods and services. It also reviews the basic tenants of a free enterprise economic system with producers providing a good or service that consumer's need or want; with vary little interference from government.

Module #2 Finance under the leadership of Mrs. Patricia Toney-McLin, instructor in the Accounting department and Sam Walton Fellow. Modules 2 and 4 were both designed to aid students in development of their Annual Report. Mrs. Toney-Mclin Pat and her team were in charge of the Accounting and bookkeeping records of the camp. The Finance module included a balance sheet and income statement using computer software. Students learned about assets, liabilities and stockholders equity as part of a balance sheet. The wide use of Accounting Information Systems were described with general examples such as using spreadsheets for small businesses to Quickbooks and the more advanced systems such as Peopl Soft Accounting and Finance software. While learning the basics of accounting, students were introduced to Microsoft Excel spreadsheets

used in bookkeeping. A spreadsheet was created by each student allowing them to make entries ending in calculated sums to feed the income statement. The income statement included: revenue from sales, costs of goods sold and operating items covered. Once complete, this became a series of presentations based created by using MicroSoft Power Point on overheads developed by the students. team.

Module #3 Business law was led by Dr. Jeff Pitman professor of Business Law. The overall purpose of this section was to expose the participants to the concept of legal regulation of business, with a particular focus on regulation and technology issues. We wanted to show that the rule of law was designed to protect business from unethical practices of competitors as well as to protect consumers and investors.

The first concept in this section was the definition of the law, essentially asking the participants to consider the question, "What is the law?" This initial inquiry lead to a discussion of related questions, "What purpose does the law serve?" and "Where does the law come from?" Answers offered by the participants included "our courts, legislatures, and executives (President Bush and the Arkansas governor)." After the legal introduction, attention was turned to business technology and the law. Here participants examined how businesses are legally organized. This included a discussion of the legal considerations involved in naming a business and its products, and in acquiring a website. We took the time to design a legal website for our corporation www.crazyshirt.com which was attached to the college of business website at ASU.

The participants next examined the online tools available for organization of a business in Arkansas. The main government agency related to business organization is the office of the Arkansas Secretary of State. We examined the tools available through the Secretary of State's web site, http://www.sosweb.state.ar.us/. Several of the specific areas analyzed included the following: Entity Online Filing Fees, Entity Forms, and Entity Filing. We went through the process of filing out these forms but did not submit them to the appropriate agency. The rest of the lesson looked at web sites

Module #4 Planning and Management was directed by Mr. Henry G. Torres instructor professor of Management Information Systems. This module included learning to create a forecast budget to use as a working tool to plan and manage day-to-day operations. Students created basic management tools using the excel program to calculate budgets and create graphs that would later appear in our annual report. All of this led to individualized help in producing and printing our professional looking annual report.

Module #4 was directed by Mrs. Carleen Marburger in a Marketing /management presentation that looked at the role of advertising in getting consumers to notice your product. The best product in the world is a flop if nobody knows about it. Students used MicroSoft Publisher software computer programs to create an advertising brochure about their company and the great product that it produced and sold. Teams of two students each were created to compete for the best

brochure design award. Teams used graphics, colors and typesetting to create a company logo and the winning brochure.

Each module of instruction was conducted in a computer lab setting where students would take a business scenario of a real business and expand it into a fully assorted real company that made and sold Tye Dye T-shirts, socks and shoelaces with the use of basic technology business solutions. The experience was fun, profitable and memorable for the attendees. Students developed an annual report, kept track of their income and eventually showed a profit of 14% on sales of over $4,000 in sales. We pointed out that corporations would have paid half of their profit, on average, for corporate taxes. We gave half our profit to the two school districts for a total of $600 to provide technology software for the schools involved in the project. The rest was returned to the students in one of three forms wages, commissions and dividends. By a vote of all stockholders wages were set at $1 per Saturday, $2 for officers. Commission equal to 25% of sales on each item for every student. Dividends were awarded each stockholder. Everyone in the group was provided with 10 shares of stock at $1.00, which they paid back from their income. In addition students bought an additional 121 shares when they found out that they would in all likely hood receive dividends on each share of stock they owned. Ownership of stock. Shares in the company, entitled then to one vote. Thus every share they owned gave them some decision making power in the company. We also had awards for the top three sales persons and other productivity awards for individual performance and creativity.

Students spent half their time in learning modules and half their time creating their product; Tye- Dye T -Shirts, socks and shoelaces. Students learned how to create a PowerPoint presentation for the Stockholders meeting and closing ceremonies of the camp.

The class consisted of 61 % Female students, 39% Male students. The racial mix was 78.7% African-American Students, 18% Caucasian students and 3.3% Hispanic. Despite the fact that almost all of the children came from low-income families with 83% eligible for the free lunch program, 42% had and used a computer at home. Regarding parental education level, 18 % of the children's father and 35% of the mothers had a college education. The average education of the mothers was 14.33 years and the fathers 13 years. In terms of computer use at school 61 % of the children said they spent more than two hours per week on the school computer, with 11 % more than 6 hours per week.

Our students showed a marked improvement that was statistically significant at the .01 level as compared to the national norm on the test. The pretest mean performance at the 58.23 percentile was well below the national norm of 72 percentile, but well above the posttest performance at the 89.61 percentile. They also showed greater interest in technology. Most important students over whelming expressed interest in obtaining a higher education 83%, and a willingness to study hard to make that dream possible by 77%. This was a marked improvement over the pre-camp survey with only 22% saying they planned to go to college. We believe that our project succeeded in training students to be skilled entrepreneurs and taught them to appreciate the economic system that

makes such a dream possible. We also ran a standard regression analysis and a loglinear model to examine the following 8 independent variables to see which were significant predictors of success on the MAME [y-dependent variable]; gender [GEN], race [RC], age [AG], fathers education [FE], mothers education [ME], owned a home computer [HC], use of a computer at school [SC], hours playing video games [HV]. This is expressed in the functional relationship;

$$Y=Xl\ GEN+X2\ RC+X3\ AG+X4FE+X5\ ME+X6HC+X7\ SC+X8\ HV$$

As shown in Table 1, of the dependent variables examined we discovered that the following were significant at the .01 level of significance; age, mother's education level, owning a home computer, use of a computer at school and hours spent playing video games. Some of these elements were expected. We were not surprised with the finding that age should prove to be a factor with older students doing better on the test than younger students. The students ranged in age from 10 to 14.

Owning a computer should also improve scores on computer and technology questions. We pulled those and looked at them separately. Students with home computers had a mean score on those questions of 83% as compared to 71 % for those without a computer. A similar pattern existed in students who spent more time playing video games or using the computer at school. We also were not surprised that the hours of computer use at school and playing video games should be correlated with knowledge of technical terms. Students scoring high on these items showed only slightly more knowledge of economics and marketing concepts, but the total mean score was higher.

The one surprise is that the mother's level of education was significant, but not the father's. One explanation is that the mother has more influence over a child's attitude toward education and therefore toward their achievement level.

We believe that our program was effective in improving students understanding of basic business and technology concepts since the difference between the pre and post test scores of 31.10% was significant at the .01 level of testing using the chi-square test of significance. Our other data supported this conclusion as well.

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Table 1 – Statistical Data from Study

INDEPENDENT VARIABLE	RAW DATA	R^2	T STAT	F STAT	SIGNIFICANT .01 LEVEL
GENDER	MALE 39.21% FEMALE 60.79%	.0131	.023	.871	NOT SIGNIFICANT
AGE	10YR-7.7%, 11Y-19.2% 12Y-34.6%, 13Y-23.1% 14Y-15.2%	.9899	3.81	241.97	SIGNIFICANT
RACE	BLACK- 78.7% WHITE-18% HISPANIC 3.3%	.0011	.187	.004	NOT SIGNIFICANT
MOTHERS ED	MEAN 14.33 YRS 85% HSG 35% C G	.9799	.734	876.21	SIGNIFICANT
FATHERS ED	MEAN 13.00 YRS 85% HSG 35% C G	.010	.2017	.003	NOT SIGNIFICANT
HOME COMPUTER	42% YES 58% NO	.997	24.88	826.09	SIGNIFICANT
COMPUTER HRS AT SCHOOL	LESS 1: 38% 1-5: 50% 6+: 11%	.981	18.44	27.90	SIGNIFICANT
HRS VIDEO GAMES	28% 2 HR + 24% LESS 1 31% NONE	.939	9.23	14.41	SIGNIFICANT
PRETEST MAME	58.34				
POSTEST MAME	72.62				
DIFFERENCE	+14.2				

ENTREPRENEURSHIP EDUCATION: SALVATION OR DAMNATION?

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ABSTRACT

Many researchers, and policy makers, across Europe emphasise entrepreneurship education as the way to a future new welfare society. Why? The aim of this article is to discuss critically entrepreneurship education, starting in contemporary European research on entrepreneurship. Earlier research defines entrepreneurship as a temporary process of innovation, only possible in capitalistic societies. In more recent research entrepreneurship is located within the entrepreneur, to a limited number of traits typical for the entrepreneurial personality despite its surroundings. Environmental or cultural factors are treated as either to promote or inhibit entrepreneurial behaviour/personality. The locus to specific traits of the individual is the logic behind the, normative and quite naïve, favouring of entrepreneurship education. Entrepreneurship education, characterised by learning by doing, practice-orientation, and so on, is viewed as the way to foster the right kind of individuals; individuals with the specific traits who form a kind of inner resources that can be profitable on the global market. In this perspective, entrepreneurship education seems to be a part of the ongoing neo liberal oriented restructuring process, which is sweeping through Europe, and the writings on entrepreneurship education can be understood as a specific political/ideological activity.

INTRODUCTION

This article is one part of an ongoing EU-funded research project, Learning Entrepreneurship, at Department of Education, Mid Sweden University. The project involves empirical studies and research overviews, and this article belongs to the latter. The aim of this article is to critically discuss writings on entrepreneurship education, and the discussion is based

on primary findings from an overview of research on entrepreneurship education and entrepreneurship.

The main focus is European, but since research in the field is a widespread phenomenon, this demarcation is not strictly adhered. A majority of the research in this field is conducted within other disciplines than the science of education. Therefore our discussion can be described in terms of a picture that we draw from research in the field, and then examined from a point of view within the science of education.

THE FIRST SKETCH

During the latest decades, orientation towards free market economy with decreasing public sector and increasing private ownership has been on the European agenda of policy making. The European Union, with its fundamental idea of Europe as one free market, is a central promoter in this. At the same time, research on entrepreneurship has exploded since the late 1980s (Audretsch, 2000). Another way to describe this is that during the last decades, the public and the academies have realised the important contributions of the entrepreneurs to economic growth and the standard of living (Brockhaus, 2001). This research reflects a increasing interest in entrepreneurship as a source of employment, innovation, growth and global competitiveness.

Research has also legitimated efforts to promote entrepreneurship in the eyes of the public (Swedberg, 1998), and the growing popularity and increasing status of the entrepreneur have trigged researchers to find the key to entrepreneurship (Morrison, 1998a). In other words, researchers in the field of entrepreneurship have been generally positive to the phenomenon studied, and the explicit ambition of the researchers can be exemplified as "… to encourage entrepreneurial efforts worldwide to create jobs, improve the economic well-being of all social strata and promote public policy that will encourage these efforts." (Landström & Sexton, 2000a, Xiv).

So, scientists, along with policymakers, are "… convinced that entrepreneurial effort is a key element in sustained economic development." (Henrekson, Larsson & Sjögren, 2001, 19). Beside the obvious connection to economics, i.e. traditional (small) business start-ups, entrepreneurship is viewed as important to professions like lawyers and doctors (Nieuwenhuizen & van Niekerk, 2001). Also in other spheres like music, literature, art, sports and research, entrepreneurship is seen as of fundamental importance: "Research without entrepreneurship is doomed to stagnation in the long run." (Henrekson, Larsson & Sjögren, 2001, 19).

To ensure the position of entrepreneurship, present political activities are estimated as insufficient: "But without highly educated, creative individuals with an entrepreneurial mindset and access to enterprise skills, no government strategy for business creation will succeed." (Yendell, 2001, p. 305). In other words, it is assumed that the way to realise the promising potential identified in entrepreneurship is education, entrepreneurship education. Since entrepreneurship is viewed as source for success on the global free market, entrepreneurship education, then, becomes the obvious

one and only way: "The importance of entrepreneurial education is derived from the importance of the entrepreneur to our economic system." (Ulrich, 2001, p. 147).

Through entrepreneurship education an entrepreneurial culture will emerge, it is postulated, but one problem is that the educational policy is underdeveloped in this aspect (Stevenson & Lundström, 2002). The arguments at hand are always, in one way or another, in favour of entrepreneurship education, originating from an economic rational: "If we can use enterprise programs to predict successful entrepreneurs with a view to identifying candidates for further support, grant aid or financial investment, then the risk factors associated with small business start-ups could be significantly reduced, and state or private investment could be rationalized to ensure the optimum return." (Henry & Titterington, 2001, 376).

DRAWING…

In order to understand the logic behind these optimistic views of entrepreneurship education we now turn to a closer look at writings on entrepreneurship and entrepreneurship education, and what outcomes the prescribed entrepreneurship education is supposed to bring forward.

ENTREPRENEURSHIP

When reading research on entrepreneurship, one often comes across the name Joseph A. Schumpeter, an Austrian-born economist active during the first half of the nineteenth century. Schumpeter is still referred to by many as the main figure in literature on entrepreneurship (Swedberg, 1998). Schumpeter describes entrepreneurship as a process of innovation, the carrying out of new combinations of already existing productive means. Entrepreneurship is a temporary function (Schumpeter, 1994). No one is an entrepreneur forever but just when the innovation is carried through (Swedberg, 1998).

The entrepreneurship function is a moment of breaking the daily routines of how things are done. This is possible only if others do not react in the same way in the same situation; the entrepreneurship function generates a kind of monopoly profit (Schumpeter, 1994). In a capitalistic system this profit is economic (Sandberg, 2001). Every social context has its own way to fulfil the entrepreneurship function, not necessarily derived from individuals and far from always from a singleperson. The entrepreneurship function can also be fulfilled by an organisation, an institution or a department (Schumpeter, 1994).

Even though Schumpeter regularly is mentioned or referred to in more contemporary research, "…scholarly work on entrepreneurs and entrepreneurship has not, to put it mildly, always adhered strictly to Schumpeter's concepts. The result has been a considerable amount of confusions and discussions at cross purposes." (Sandberg, 2001, p. 24). One indication of this is that the absence of a generally accepted definition of entrepreneurship is pointed out as a problem (see for

instance Watson, 2001; Friis, Paulsson, & Karlsson, 2002; Gartner, 2001). The one thing in common for all definitions in use is the commercial nature, it is argued (Landström, 2000; Kostkinen & Virtanen, 1998).

In spite of the contemporary variation of definitions there is another similarity. The major part of the research treats entrepreneurship as located within the entrepreneur, to a limited number of traits or behaviours typical for the entrepreneurial personality despite its surroundings (Morrison, 1998a). "At its core, entrepreneurship is comprised of unique human behaviours. The challenge for the field has been to identify the behaviours that distinguish entrepreneurship from other general management activity." (Arbaugh & Camp, 2000, 309). In this view, entrepreneurship is related to an individual person, through which entrepreneurship best is explained (Hansemark, 1999). "An increasing number of studies refers to the personal characteristics of the entrepreneur as the key to the success of the firm in early stages of its life." (Bellini, Capaldo, Raffa & Zollo, 2001, 419).

Even though, some argue, research on entrepreneurial personality yet has a long way to go, some factors are identified (Skaug, 2000). Examples of such factors are fantasy, creativity, responsibility, flexibility and skills in problem solving, decision-making and the exploiting of opportunities (Henry, & Titterington, 2001; Johannisson, Madsén, & Wallentin, 2000; Glas, 1998). However, concerning this kind of research there are some problems identified: "Innovation and creativity as criteria for entrepreneurship lead to the difficulty of measurement and detection of entrepreneurship." (De Clercq, Cerijns & Ooghe, 2001, 453).

There have also been more fundamental critiques on the low validity (Hansemark, 1999), or even impossibility (Swedberg, 1998; Landström, 2000), in research aiming at identifying so called entrepreneurial traits within the individual. One example is Gratzer (2001) who states that in spite of the increasing search for specific traits it is hard to imagine any individual factor as a model of explanation of entrepreneurial activity: "There is therefore every reason to make a closer study of the relation between business failures and macro economic, social-cultural institutional and moral factors." (p. 193). Other examples are Ottosson's (2001) underlining of other important factors as the state, financing possibilities and infra-structure, or Kostkinen & Virtanen's (1998) view of entrepreneurship as "…a sign of structural change in social and market characteristics." (p. 145).

Another kind of critique of the mainstream location of entrepreneurship within the individual is based on arguments involving the social/societal consequences of entrepreneurship, for instance that entrepreneurship is gendered (Ljunggren, 2002). As Morrison (1998a) argues, most of the different definitions used are of idealistic character, based on assumptions that entrepreneurship is morally sound and socially responsive. However, as the argument goes, entrepreneurship might be a threat to social order, and to economic and societal systems.

Entrepreneurship involves both winners and losers, and unruly behaviour - all outcomes are not positive. Morrison (1998a) also claims that the concept of freedom of choice, associated with

the entrepreneur, must be questioned, since certain circumstances, for instance unemployment, can force people to become entrepreneurs.

Even though researchers argue "… that variables explaining entrepreneurial performance include the environment, entrepreneur, resources, and management methods." (Mugler, 2000, p. 152), the individual stands out as central for the entrepreneurship process (se for instance Kostkinen & Virtanen's, 1998). When environmental or cultural factors occur, they are commonly treated as either to promote or inhibit entrepreneurial behaviour/personality (Glas, 1998; Gartner, 2001). Even when bigger entities such as organisations are treated, the possibilities to entrepreneurship rely on individuals: "By creating opportunities for entrepreneurial behavior of their employees, organizations and not only individuals can become entrepreneurial." (Henrekson, Larsson & Sjögren, 2001, 11).

ENTREPRENEURSHIP EDUCATION

Traditional education is marked as only a transformation of knowledge and skills while entrepreneurship education, in contrast, is held up as the model for changing attitudes and motives (Hansemark, 1999). Beside obvious advantages, like patronising business start-ups (McMullan & Gillin, 2001), entrepreneurship and entrepreneurship education has a wider market potential (Welsch & Kickul, 2001), which must be noticed: "Entrepreneurship has a unique and important role in business research and education. Consider the growing importance of this in educational settings." (Hitt & Ireland, 2000, 48). A well-conducted entrepreneurship education offers huge productivity gains, and can thereby be described as 'Taylorism of the Mind' (Guedalla, Herlau, Armer & Qasier, 2001).

Even if the content and form of entrepreneurship education is partly problematic, children are seen as entrepreneurial by birth (Landström, 2000). Therefore entrepreneurship education is to begin at the youngest age possible (Stevenson & Lundström, 2002). Entrepreneurship education demands a certain amount of time, single courses are not enough, and should optimally be integrated in all regular teaching at all levels of the educational system (Landström, 2000).

Concerning how to conduct entrepreneurship education, the lack of knowledge about effective teaching techniques for entrepreneurial educators is underlined as a problem, caused by that research on how to teach entrepreneurship is underdeveloped (Brockhaus, 2001). However, prescriptions are made: "Entrepreneurship education to be effective should be active, allowing students to demonstrate their learning through skills attained and attitudes developed." (Martin & Laing, 1998, 135). There is a consensus on that students can be successfully endowed with an enterpreneurial culture if their learning are experiential and problem based. Some examples are Duchénaut (2001): "…more than any other the entrepreneurial model requires an interactive pedagogy, leaving the initiative to the student." (p. 142), and Carland and Carland (2001): "The key, we feel, is the transfer of responsibility for learning from the instructor to the student." (p. 101). In

entrepreneurship education, entrepreneurship is visible, things happen, the individual does not just think and talk, the learning is self-made through concrete action (Johannisson, Madsén & Wallentin, 2000).

So, then, what insights is this problem-based and experiential learning supposed to bring forth? "The introduction of entrepreneurship in schools is consequently about further enforcing already existing pedagogic starting points. The entrepreneurial approach to learning is more student-centred and action-oriented, allowing students to work on cross-curricular projects and to learn entrepreneurship concept by playing games or running companies." (Stevenson & Lundström, 2002, 269). In addition to these concepts, some technical skills are viewed as necessary (Duchénaut, 2001) besides the practical know-how of how to start, run and develop business (Hansemark, 1999). Others argue that the development and learning process of the entrepreneur must be highlighted (Kostkinen & Virtanen, 1998), or that entrepreneurship education ought to cultivate both the language of management and personal communication (Landström, 2000).

Regardless of the 'what' and 'how' of entrepreneurship education one can identify two dimensions, exemplified by Stevenson & Lundström's (2002) writings on the economic and the education school of entrepreneurship education. The economic school is about: "…what entrepreneurs do - create business, jobs, wealth and those things that contribute and comprise the economy. The 'education school' says that enterprise has a broader meaning and application, with initiatives, responsibilities and problems requiring individuals to act in an 'enterprising' manner." (Stevenson & Lundström, 2002, 273).

…THE MAIN PICTURE

A main picture of entrepreneurship and entrepreneurship education is thereby emerging from the research overview. This picture tells us that entrepreneurship is the entrepreneurial personality or, more specific, an individual with certain traits and behaviours. Entrepreneurship is viewed clearly positively and important, and thereby worth every effort to promote and to get everybody to realise its importance. In this, the growing interest to foster and develop individuals with the right kind of traits and behaviours, that is entrepreneurial ones, stands out as crucial. Entrepreneurship education is the cutting edge, the means to secure the future utopian society: "This new interest is more than just a fad and accurately reflects an emerging economic environment created by a confluence of changes in the corporate world, new technology and emerging world markets. As educators, we will undoubtedly have increased opportunities to influence aspiring entrepreneurs, as well as positively impact economic development, but are we ready to meet the challenge?" (Fiet, 2001, p. 79). The natural next step is therefore arguments in favor for entrepreneurship education.

Beside knowledge and skills in business and enterprise, entrepreneurship education is mainly about a formation of certain beliefs, values and attitudes, with the aim to get students to "…

positively consider entrepreneurship as an attractive and real alternative to paid employment or unemployment. This represents a long-term strategy, an investment in the nation's future, aimed at effecting a significant cultural change." (Martin & Laing, 1998, 136). Entrepreneurship education is the way to build this entrepreneurial culture by fostering the right kind of individuals; individuals with the specific traits who form a kind of inner resource that can be profitable on the market. It is the rationale of the free market, decorated in educational concepts, that is fundamental to entrepreneurship education and it's consisting views on learning, knowledge and man.

SAME PICTURE - ANOTHER PERSPECTIVE

Now we want to take a step back and look at the picture from some distance, that is to leave it's parts in order to focus the broader outlines of the whole picture. The first that strikes the eyes of the spectator is the favourable approach to entrepreneurship held by researchers in the field. They have really recognised "… the value of, and need for, a truly entrepreneurial culture." (Glas, 1998, p. 108). Research on entrepreneurship stands out as an important task: "As an academic discipline it is our wish that this book will make a difference in the economic development and well-being in Europe and North America." (Landström & Sexton, 2000b, 443). Promoting entrepreneurship is conceptualised as more than a choice of a normative attitude; it is a responsibility (Hurley & Kuratko, 2001).

The first glance at the picture also reveals that this normativety is situated within the positivist paradigm (Ljunggren, 2002), with emphasis on measurement of the effectiveness of entrepreneurship and entrepreneurship education (often number of business start-ups as sole criteria). Further, mainstream research is characterised by shady empirical results, lacking theoretical base (Landström, 2000). This lack of theory is one primary criticism against research in this field (Watson, 2001), and Gartner (2001) argues that the lack is related to an unawareness of the basic assumptions research is founded on.

In the picture, there is a shift from the earlier, Schumpeterian, conceptualisation of entrepreneurship as a temporary process of innovation, to definitions of entrepreneurship as certain traits and behaviour of the individual. Schumpeter did not prescribe education, while contemporary mainstream research argues in favour of entrepreneurship education. Why? What does the connection between entrepreneurship and education mean? What causes the normativety of the research?

Perhaps the normativety has to do with the shift? Entrepreneurship education seems impossible if entrepreneurship is a function of carrying out new combinations, a moment of breaking routines possible only if others go on as usual, as Schumpeter (1994) states. How to educate a temporary function? This question gets even more complicated since no one knows in advance who or what organisation that will fulfil it (or what the function is), or when this will be done. In that case, perhaps today's locus of entrepreneurship to specific traits and behaviours of the

individual is the logic behind the favouring of entrepreneurship education? In other words, entrepreneurship education to be possible requires a conception of entrepreneurship as the entrepreneurial personality; a conception of an individual with certain traits and behaviours that can be formed, transferred and transformed.

Anyway, entrepreneurship education is worth further problematising. One paradox, touched upon by Morrison (1998b), is that education conforms while entrepreneurship is about non-conforming individual behaviour. Individualism as a criterion of, or closely related to, entrepreneurship might therefore make entrepreneurship education an obstacle for entrepreneurship. If education homogenises, as Durkheim (1975) states that education is mainly about, educated individuals are more homogenised than before the education started. So, if individuals act and react more in the same way after entrepreneurship education than before, where goes the individuality that constitutes entrepreneurship? The same question goes for the entrepreneurial culture that entrepreneurship education is supposed to bring forth. After all, culture is a social/collective phenomenon, and not an individual. If an entrepreneurial culture emerges, will entrepreneurship disappear? This raises questions on what entrepreneurship really is about.

However, in the picture we are facing, entrepreneurship education seems like uncomplicated input-output models (examples of models in the literature are TBA (Fiet, 2001) and KUBUS (Guedalla, Herlau, Armer & Quasier, 2001)). The problem identified with entrepreneurship education is that there is not enough of it. The only research suggested is how to make entrepreneurship education more efficient. Within the science of education similar research has, for quite some time, been criticised for a number of reasons: an ideological base, assumptions of a simple and direct relation between teaching and learning, a subjectivistic or behaviouristic model of explanation and the absence of lasting insights on the efficiency wanted (see for instance Callewaert & Lundgren, 1976).

Therefore the normative approach to entrepreneurship education also seems naïve. One example is the methods prescribed for entrepreneurship education (learning by doing, experiential, problem-based, and so on). In the history of education the same method prescriptions show up, aiming at fulfilling widespread explicit purposes. However, put into practice the results are others than those promised (c f. Kallós, 1978). The use of the prescribed methods could hardly guarantee fostering entrepreneurship since, as Blankertz (1987) reveals, such normative and naïve prescriptions are unhistorical and neglects the complexity and variability of existing conditions for education and learning. This raises questions on what entrepreneurship education, besides promoting business start-ups, really is about (after all, there are other factors such as unemployment or belonging to a ethnic minority (Hendreksson, 2001) that promote business start-ups, so-called forced entrepreneurship).

One question is what kind of identity entrepreneurship education is supposed to form. Is it the identity Bernstein (1997) calls De-Centred Market identity? This identity, arising out of a focus on consumables, is about having an exchange value in the market. In that case, writings on

entrepreneurship education perhaps is understandable as a parts in: "…the process of producing for the first time a virtually secular, market driven official pedagogic discourse, practice and context…" (Bernstein, 1997, p. 177). That would mean a new concept of knowledge, and of its relation to those who create it and use it (Bernstein, 2000). This new concept marks a fundamental divorce of knowledge from persons, there is no relation between the knower and what is known: "Knowledge should flow like money to wherever it can create advantage and profit. Indeed knowledge is not like money, it is money." (Bernstein, 2000, p. 86). Then, what counts as knowledge and worth knowing in entrepreneurship education?

The writings on entrepreneurship education are a part of the societal production of an order of meaning, that transforms to pedagogic communication and practice in educational settings (see Bernstein, 2000). This communication and practice are, beside the creation of specialised skills, always about a moral creation of order, relation and identity. What are the values and moral beliefs that entrepreneurship education is supposed to inculcate? No matter what kind of education, pedagogic communication and practice are always regulative due to a certain order of meaning. In entrepreneurship education, as well as other kind of education, pedagogic communication and practice: "…acts as a symbolic regulator of consciousness; the question is, whose regulator, what consciousness and for whom?" (Bernstein, 2000, p. 37). These questions, and the other ones above, are of relevance for further analysis of writings on entrepreneurship education. They are also worth to highlight in empirical studies of different types of actually existing entrepreneurship education (Entrepreneurship education is going on all over Europe, supported by policy. Common at the university level are courses or programs. At lower levels entrepreneurship education often is integrated parts in ordinary education. There are also other organisations, outside regular educational systems, that provide entrepreneurship education).

The same goes for questions concerning entrepreneurship education as a part of the ongoing neo liberal oriented restructuring process (Walford, 2000; Whitty, Power & Halpin, 1998), which is sweeping through Europe and its educational systems (Andersson & Nilsson, 2000). Perhaps the writings on entrepreneurship education, in this perspective, are understandable as a specific political/ideological activity? Either way, entrepreneurship education as salvation, as it stands out in the writings, or damnation, as is questioned in the title of this article, is a complex set of problems for empirical research within educational settings, under actual conditions.

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ENTREPRENEURS IN ACTION!: A TEAM DEVELOPMENT PROCESS

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ABSTRACT

This paper describes a multi-disciplinary approach to teaching entrepreneurship to a diverse group of students, i.e. Engineering and Human and Organizational Development students. The paper reports on the curriculum process used with these diverse groups of students and how teaming was developed. Results of how the teams developed along with descriptive statistics are used to describe the process. This process is designed to teach students how to dream about new ideas and how to take new business ventures to the market place. A rubric was developed and the following four subscales were used to describe the process: 1) Name of Group, 2) Creativity Activity, 3) Business Plan and 4) Ideas to Marketplace. Taking ideas from the classroom to the market place is an important part of this research.

INTRODUCTION

This paper describes a multi-disciplinary approach to teaching entrepreneurship to a diverse group of students, i.e. Engineering and Human and Organizational Development students. A curriculum process has been designed to provide this group of students with an overall understanding of entrepreneurship and to prepare students for developing a mindset for thinking creatively. Traditional disciplinary boundaries are crossed as students are freed to innovate and to think creatively about future ventures. The courses are targeted at students who would like to create their own business and they are given the opportunity to develop a business plan from one of their own ideas. Students from entirely different programs, like Human and Organizational Development and Engineering, are encouraged to work collaboratively on joint projects. Opportunities to share their ideas with other entrepreneurs are made possible.

The courses are designed to teach students how to dream about new ideas and how to take new business ventures to the marketplace. In part, we define entrepreneurship as a "state of mind – an artful, insightful and innovative mentality rather than a business management or administration concept." It is a way of perceiving and exploiting opportunity wherever it is found. Students are given the opportunity to explore markets for their own ideas and to conceptualize a business enterprise for such markets. Our research is designed to develop entrepreneurship teams of young,

ambitious, innovative students and to help them mold their creative ideas into business ventures. In a world undergoing fundamental economic evolution, the ability to think "like an entrepreneur" has become a core skill.

A wide variety of teaching strategies are used, including lecturettes, video clips, guided discussions, peer group learning, telephone/video conferencing, outside entrepreneurial speakers, online searches and comprehensive web-based interactions. Learning theories developed by Clouse and Goodin related to "just in time" teaching and "whole-part-whole" techniques are used to teach entrepreneurship concepts. (Clouse, Goodin, & Aniello, 2000).

PURPOSE

The purpose of this research is develop learning environments that will encourage cross-disciplinary learning between Human and Organizational Students and Engineering Students at Vanderbilt University. These two groups are vastly different and have different goals and missions. We wanted to examine the two learning environments to determine if a teaming process could be developed and if the teams could help each other develop creative ventures that would result in business start ups in the short term or if the results would be latent and occur later in the student's life. Our teaching strategies are based on the following approach.

PHILOSOPHY

We see Entrepreneurship Education as a vehicle for creating a school-learning environment that fosters entrepreneurial activities and develops the mindset for thinking outside of a structured setting. Such a learning environment is designed to teach students how to live and work outside of bureaucracy, to learn to dream about new ideas and new ventures, to push the edge of the "envelope," and to see entrepreneurship as reality. By promoting creativity, innovation and entrepreneurship, we hope to nurture a new generation of entrepreneurial thinkers.

WHAT WE BELIEVE

The course syllabi are developed based on the following core beliefs.

- The work environment will change drastically in this millennium.
- Twenty-first century entrepreneurs must think differently and more creatively.
- Much of our current schooling process teaches us how to work inside a structured and sometimes bureaucratic organization. It teaches certainty.
- Schools should teach about uncertainty, helping students learn how to deal with ambiguity and how to manage chaos.
- We need to develop citizens who will "make jobs instead of take jobs."

- People need to know how to be creative and think outside of the "box" of conformity.
- We want Americans to be prepared to compete effectively in the new global economic environment.

WHAT IS ENTREPRENEURSHIP EDUCATION?

Entrepreneurship education is the process of providing individuals with concepts and skills to help them: 1) Recognize opportunities that others have overlooked, and 2) Have the insight and courage to act where others have hesitated. It includes instruction in opportunity recognition, marshaling resources in the face of risk, and initiating a business venture. It also includes instruction in business management processes such as business planning, capital development, marketing, and cash flow analysis.

We want to impact collegiate level and adult education. With the rapid advances in technology and our ever-changing world we feel that entrepreneurship education will help individuals meet the challenges that are before us. In addition, we want to conduct research on new and innovative ventures that will likely have an impact on twenty-first century living and will help develop research structures for new ventures.

COURSE DESIGN

The HOD 2760, Creativity and Entrepreneurship course was taught in the Peabody College of Education and Human Development at Vanderbilt. Forty-nine undergraduate students enrolled in this course. One over-riding goal of this course was to develop a creative idea and to develop a business plan to take the idea to the marketplace. Students were given the flexibility to select their own teams. Each student also was required to develop his or her own idea within the team setting. It was the purpose of the teams to encourage each other in the group and to provide assistance to each other. The course used a recursive design. A concept or an idea was taught and then each team member was required to apply that concept to his or her creative idea. Intense discussions took place within the team to assist and help each other play out the concept. Forty-nine different businesses plan ideas evolved from the class for the HOD students and 9 quasi business plans evolved from the engineering class. The engineering class was a one-hour seminar and we did not expect a full-blown business plan to be a final product, but rather a plan for their idea, which included target market, estimated cost and projected income stream. Near the end of the class students were given a questionnaire to complete to determine the effectiveness of the team development process. A copy of the questionnaire is shown in Appendix A.

The Engineering Course ES 101 03, Freshman Engineering Entrepreneurship Seminar was taught in the Vanderbilt College of Engineering. The concept behind the class is to bridge the gap

between the development of new innovations in either classes or in the laboratory, and the development of new business ventures. This class helps the young creative mind to connect his or her theoretical work to the world and life experiences. From the course, students learn early in their careers how to take ideas to the marketplace.

These two groups of students have little or no contact with each other since they are, for the most part, in buildings and programs that are located at least a mile apart on the Vanderbilt campus. The Human and Organization Development program is concerned with the soft skills of life, while the Engineering program is concerned with new product or process development. No two groups could be further apart in distance and in program than these two groups.

In order to facilitate these learning environments, five outside research associates and/or entrepreneurs were invited to participate in the process. They are as follows:

1) Jason Wolf, Partner in 4Results, Inc., a small human and organizational development company,

2) Gina Scott, President of Technically Right, a small company that matches technically skilled people with technical jobs in the Nashville and Middle Tennessee area,

3) Jerry Carr, President of Carr and Associates, a computer forensics company,

4) Terry Goodin, President of Dayspring Academy, a new and developing academy that will emphasize entrepreneurship throughout the entire curriculum,

5) Joe Aniello, Research Associate and corporate entrepreneur and creative thinker.

LEARNING THEORIES

Whole-Part-Whole Teaching and Learning

A key part of this curricular design is that of a "whole-part-whole" instructional approach (Clouse, Goodin & Aniello, 2000). Rather than beginning with the parts and expecting students to create a meaningful "whole" on their own, the instructor presents the whole scenario first, which establishes the context within which the student will operate. Then student groups "plunge into" the problem, take it apart, and put it back together into a new "whole," one which represents a solution to the problem.

There is ongoing debate among educators as to whether it is more effective to teach from "part to whole" or vice versa. Those who advocate the former insist that it is preferable to break

complex concepts down into their simplest parts and to teach those parts (Ormrod, 1995). Once students have mastered the components, they are expected to put the pieces together to make the whole. Usually, this practice dominates a student's school life from the beginning. Diagram 1 shows the conceptual framework of our whole-part-whole model. In our model, the student starts with a creative idea and learn the process (parts of a business plan) and takes his/her idea to the marketplace, thus creating a new whole around the idea. Our instructional process is grounded in the concepts of situated cognition and holistic learning. To reinforce the importance of the process that we used in our course design we briefly discuss the supporting elements, which are a part of what we call the "whole-part-whole" model of learning and teaching.

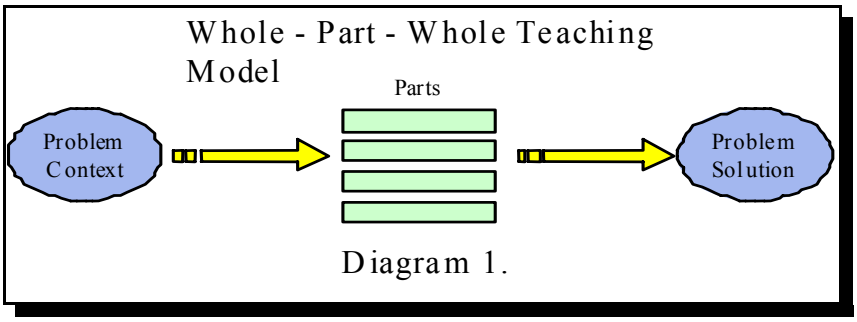

Diagram 1.

SITUATED COGNITION

People generally learn new information in the context in which it is used (Brown, Collins & Duguid, 1989). This suggests that students may be drilled to the point that they will be able to do well on a test, but that they will not retain the knowledge over time or be able to apply it elsewhere (Bransford, Brown & Cocking, 1999). According to the concept of situated cognition, it is imperative to provide students with contextual practice in order to insure that they really "know" a concept. Knowledge that is unused (in context) quickly becomes "inert" and is no longer available to the learner.

In order to bridge this gap between traditional classroom learning and real–world applications, educators must present concepts within a situational, reality–based context (Lampert, 1986). In fact, true learning, according to Brown, et. al., requires the adoption of the domain's culture. In order to solve mathematical problems, one must learn to be "a mathematician." To be a mathematician involves more than just learning formulas from the blackboard. A student must adopt the culture of the mathematician, to a certain extent. In order to immerse them in the culture of a domain, teachers can employ the idea of cognitive apprenticeships. Modeled after the craft apprenticeships, this approach allows students to use knowledge in truly "authentic" ways. For example, if students learn mathematics in authentic settings, such as in setting up a business, they

are more likely to begin thinking "like a mathematician," or to see the world the way a mathematician would see it. In addition, Brown, Collins, and Duguid argue that there is a transfer of creative problem-solving ability, in that students will begin to solve other problems "mathematically."

HOLISTIC CURRICULUM

The Cognition and Technology Group at Vanderbilt University (1990) has expanded upon the idea of situated cognition through a model called "anchored instruction," which embeds mathematical and science concepts in an adventure learning series called "Jasper Woodbury." The idea of "macrocontexts," holistic scenarios which allow students some immersion into the field being studied, are employed. Our work follows this cognition model and permits students to generate their own sets of problems, a feature which reinforces the notion that there are often multiple solutions to a problem in real life. (Clouse, et. al., 2000).

IMPLEMENTING THE COURSE

Connecting With The Learner's Framework

Our goal has been to create an "entrepreneurial culture" at the university level by encouraging students to "think like an entrepreneur," much as Brown, et. al. promote mathematical problem solving by the establishment of a "mathematician's" culture. Using the learner's ideas, we attempt to develop a multi-disciplinary entrepreneurship case teaching independence, personal freedom and working outside structured environments. This instructional design gives us the ability to begin with the "big picture" (the "whole") as it relates to the student. Once the connection to student interest has been established it becomes relatively easy to teach the kinds of concepts and skills related to real-world productivity (Changnon, 1998).

We also use "just-in-time" teaching techniques. Once we have connected with the framework of the learner we use just-in-time techniques to teach the concepts related to entrepreneurship. After each major concept is taught, we use the recursive instructional design to reinforce the concept.

The process is to connect, learn and use the concept. Diagram 2 illustrates the recursive design.

Our first approach to developing the interdisciplinary concept and implementing the teaching strategy of "whole-part-whole" began in 1997 when we authored courses in entrepreneurship in the School of Education and Human Development at Vanderbilt University. The primary focus of the graduate course was to teach administrators of all levels to think entrepreneurially. Our second approach was to develop and offer a course at the undergraduate

level, entitled "Creativity and Entrepreneurship." This course was offered to a group of students in Human and Organizational Development enrolled in the School of Education and Human Development at Vanderbilt. Both the graduate and undergraduate courses were available for students throughout the university to enroll. However, in most cases students from the School of Education were the only students to enroll in the classes. Thus, we approached the Vanderbilt College of Engineering and volunteered to teach a class using our methodology to engineering students.

Diagram 2
Recursive Instructional Design

TEAM DEVELOPMENT

Most university structures are not designed to encourage cross-discipline activities. Universities are structured around academic departments that strive for excellence in their field but sometimes are myopic in their approach. Engineering students are among the brightest in universities today. They know and understand, and can apply, many of the theoretical constructs, but lack the knowledge of how to apply their learning to business ventures. Using the learning theories discussed in this paper, this research centered on developing a learning environment where cross-discipline activities can occur. In this research a cross-discipline activity took place in two seemingly diverse fields of study: Engineering and Human and Organizational Development (HOD). The two fields of study exist at Vanderbilt University in different schools and are physically located across campus. To encourage a cross-discipline, and to some extent a cross-cultural, interface with these two groups we have tried the following models:

1) A creativity and entrepreneurship Human and Organizational Development course has been offered in the School of Education and Human Development and made available to students in the School of Engineering. The course has been approved for engineering elective credit. Although the course has been announced and the professor has met with several engineering classes, it has still been difficult to recruit large numbers of students to cross the discipline divide. Engineering students feel more comfortable taking classes in their Engineering Building, and are reluctant to take classes with a different cohort. Engineering students who have taken the HOD class have enjoyed it, and have greatly enhanced the learning environment for other HOD students.

2) Freshman Engineering Entrepreneurship Seminar. The professor who has taught the entrepreneurship courses in the School of Education and Human Development agreed to teach a course in entrepreneurship for engineers. The concept related to this course is to capture the attention of the engineering student early in his or her career and to illustrate how new innovations can be taken to the marketplace. HOD students have been invited to participate in this seminar series. This has been an effective model, but limited in terms of student interactions. (The Education Professor also has a background in Chemistry and Physics and industrial experience.)

3) Peer Group Consultant. In this model, students who are taking the HOD class in Creativity and Entrepreneurship are required to serve as consultants to the freshman Engineering students. Students who are also taking a Marketing Leadership class are required to work with Engineering and HOD students in terms of how to market the product. We believe that this model may prove to be the most effective. Technical and non-technical students will be sharing ideas around common business ventures.

4) The Engineering students have a capstone experience in their Senior Design class. Another course is taught in Human and Organizational Development, entitled Leadership and Marketing. The HOD students in this class are required to work with the Senior Engineering Design students to identify and develop markets for the Engineering students' projects.

STRATEGIC APPROACH

There is a growing body of literature concerning peer group learning and team process development. Most of the peer group learning and team development occurs within a single discipline. For example, engineering students work together to solve technical problems and Human and Organizational Development students work together to solve and develop organizational issues and perhaps offer suggestions on social issues. These disciplines are almost always departmentalized and/or cut across other related departments such as the Department of Biomedical Engineering consulting with that of Electrical and Mechanical Engineering. Human and Organizational Development students seldom have the opportunity to work in teams across disciplines, unless it is with fields such as Sociology and Education. Of course, some students in colleges of arts and sciences have the potential to cut across disciplines in their work. In our work

between Engineering and Human and Organizational Development, we have no formal structure to tie the groups together. Therefore, we have decided to tie the groups together in terms of developing an entrepreneurial way of thinking about organizational and engineering issues.

We have structured our curriculum around the following issues:

- Creative and Entrepreneurial Thinking
- Marketing and Niche Development
- Funding, Venture Capitalists, Banks, Loans, etc.
- Legal Entities
- Future Expansion and Growth Capabilities.

These concepts are carried out in a series of different kinds of activities. First, a formal course is taught both to the Engineering students and to the Human and Organizational Development students. Engineering students are free to take the Human and Organizational Development course, but HOD students cannot obviously take the Engineering class. Cross-discipline activities include the following: 1) HOD students teach a section on Creative Thinking to Engineering students, 2) HOD Entrepreneurship students review the marketing strategy for engineering ideas developed by Engineering students, 3) HOD and Engineering students work together to develop future markets for engineering ideas. Copies of the Engineering and HOD syllabi are available upon request.

GROUP PROCESS DEVELOPMENT PROCEDURES

There is a growing body of literature that supports peer-group learning. (Page & Donelan, 2003). There is a trend in many universities ,which moves away from individual student competition within classes. More and more, schools across the country are beginning to teach collaboration, teaming and group decision-making.

In our work in the development of entrepreneurial learning environments we have conducted a pilot study on how students feel about the group process-learning environment in entrepreneurship. We have developed a rubric to measure the perception of entrepreneurship teams within classes taught at Vanderbilt University, HOD 2760 Creativity and Entrepreneurship and ES 101 Engineering Freshman Entrepreneurship Seminar. At the beginning of each class students were given the opportunity to self-select themselves into groups. Usually the groups were composed of four to five students. The grouping occurred after students were given the opportunity to introduce themselves and to briefly discuss their personal interests. The self-selection of a group occurred during the second meeting of the class. A total of 58 students participated in the study – 49 students were from Human and Organizational Development and 9 students were from Engineering.

The assignments for the classes were individual, but the process was group-related. Each group was instructed to develop an appropriate name for their group. Students were encouraged to discuss class assignments, including: 1) Their creative idea, 2) The creative process, 3) Parts of the business plan, such as mission and vision, marketing and pricing, revenue stream projection, break-even point and risk. Students were also requested to indicate their desire to take their creative idea to the marketplace or if they thought that they would generate another creative idea in the future and move it to the marketplace. Thus, the rubric fell into four subscales: 1) Name of Group, 2) Creativity Activity, 3) Business Plan and 4) Ideas to Marketplace.

The classes were also enhanced by having a series of outside speakers to join the class and for additional outside entrepreneurs and graduate students to meet individually with groups to further the dialog. Our intentions were to provide the student with the understanding, background knowledge and techniques to take one of their creative ideas to the marketplace, or at least to determine whether or not it was feasible to take such an idea to the marketplace. (Clouse, 2004)

The HOD 2760 student groups in the Creativity and Entrepreneurship class were also invited to meet with the ES 101 Engineering Freshman Entrepreneurship Seminar class to discuss issues and the HOD students, since they were juniors and seniors, acted as consultants to the ES 101 class. The central theme was the same for both classes; that is, "How do I generate a creative idea and take that idea to the marketplace?" Of course, the creative ideas differed tremendously. The engineering students usually identified technical problems or issues, while the HOD students identified more creative services and/or processes. The rubric we developed used a 5-point Likert scale.

The results of the rubric evaluation, which apply to the first three subscales, are shown in Table 1. In subscale 1, related to whether or not the group name was appropriate and unique, scores reflect a mean of 3.92 on each of the two items. In subscale 2, creativity activity, students strongly indicated that developing their creative idea helped to develop relationships within the group and that additional creative activity would encourage a more cohesive group. We had expected that this group activity would indicate that students would have developed lifetime friendships around central ideas and themes. However, the mean score with this item was only 3.60. Students also indicated that the creative activity helped them to identify and work through problems. The mean score here was 3.88.

The third subscale measured the extent to which each group helped to facilitate the development of the traditional items of a business plan. The highest items from this subscale were the help in developing a marketing plan (3.60) and the help in risk analysis (3.30). The lowest average items from this subscale were the development of the revenue stream (3.00) and break-even analysis (2.77). From our past experience both with working with Human and Organizational Development students and Engineering students, we find the most difficult areas to teach involve revenue stream development and break-even analysis. While the Engineering students are very quantitatively oriented, they usually have not had experiences related to financial projections. The

Human and Organizational Development students have had very little experience in quantitative courses such as financial development, and thus, revenue stream development and break-even analysis are difficult concepts for them to grasp.

Table 1: Subscales—Name-Creativity-Business Plan		
Group Name	**Mean**	**SD**
Appropriate	3.92	.932
Unique	3.92	1.134
Creativity Activity		
Developing Relationship	4.17	.752
Cohesive Group	4.26	.762
Lifetime Friendship	3.60	1.138
Identifying/Working Through Problems	3.88	.919
Business Plan Development		
Mission Statement	3.21	1.130
Vision Statement	3.25	1.074
Pricing	3.09	1.154
Risk Analysis	3.30	1.052
Marketing Plan	3.60	1.10
Revenue Stream	3.00	1.086
Break-even Analysis	2.77	1.035

The fifth and final subscale, dealing with whether or not a student would take his or her idea to the marketplace, is perhaps the most interesting and is the heart of this study. We gave students a range of time periods in which they could consider taking their idea to the marketplace. The range was from six months to five years, with another category of "never." This question was related to the creative idea that they developed in this class and for which they had developed an individual business plan. As shown in Table 2, 19% of the students felt that they would take their creative idea, developed in this class, to the marketplace within five years. Approximately 14% of students reported that they intend to take their creative idea to the marketplace within a year. However, 29% of students indicated that they would "never" take the creative idea developed in this class to the marketplace.

Table 2: Taking the Idea to the Marketplace	
Timeframe	**Percent**
6 Months	8.6
1 Year	6.9
2 Years	8.6
3 Years	12.1
4 Years	12.1
5 Years	19.0
Never	29.3
Total	**100.0**

Students were also asked if they would start a company from another idea. Once again, 19% of students indicated that they would start a company from another new idea within 5 years. Some 31% reported that they would take another idea to the marketplace in 10 years, and another 10% indicated that they would take an idea to the marketplace within 15 years. Only 6.9% of students said that they would "never" take an idea to the marketplace. Results are shown in Table 3.

Table 3: Business Startups From Another Idea	
Timeframe	**Percent**
6 Months	1.7
1 Year	0.0
2 Years	5.2
3 Years	6.9
4 Years	13.8
5 Years	19.0
10 Years	31.0
15 Years	10.3
Never	6.9
Total	**100.0**

From these data from subscale five, it appears that these two groups of students are more likely to take jobs with some company for the first 5-10 years of their careers. Thus, the content of these courses would lie dormant until the student was ready to move away from the structure and security of corporate America. Finally, a comparison of student reactions reveals that students in

both courses were unwilling to readily commit to the taking of their ideas to the marketplace. Students in both the Engineering and HOD courses, for example, reported that they were unlikely to take their class-developed idea to the marketplace, with 44.4% of Engineering and 25.5% of HOD saying that they would "never" start a business using their in-class idea. Fully 88.8% of engineering student responses fell in the "4-year" to "never" categories, while 55.1% of HOD student responses fell in the same zone. Results are shown in Table 4.

Table 4: Students Willing to Start A Business From Their Class-developed Idea

		Time Frame (m=months, y=years)								**Total**
Class			6m	1y	2y	3y	4y	5y	Never	
ES101	Count	0	0	0	1	0	3	1	4	9
	% within V	.0%	.0%	.0%	11.1%	.0%	33.3%	11.1%	44.4%	100.0%
	% of Total	.0%	.0%	.0%	1.7%	.0%	5.2%	1.7%	6.9%	15.5%
HOD2760	Count	2	5	4	4	7	4	10	13	49
	% within V	4.1%	10.2%	8.2%	8.2%	14.3%	8.2%	20.4%	26.5%	100.0%
	% of Total	3.4%	8.6%	6.9%	6.9%	12.1%	6.9%	17.2%	22.4%	84.5%
Total	Count	2	5	4	5	7	7	11	17	58
	% within V	3.4%	8.6%	6.9%	8.6%	12.1%	12.1%	19.0%	29.3%	100.0%
	% of Total	3.4%	8.6%	6.9%	8.6%	12.1%	12.1%	19.0%	29.3%	100.0%

Students' responses did seem to support the conclusion that they would take some idea to the marketplace, however. All Engineering students reported that they would start a business from a new idea within 10 years, with the majority of responses falling in the 4-10 year range. Only 8.2% of HOD students said that they would "never" start a business, with the remainder asserting that they would start a business from another idea within 15 years. Fully 61.2% said that they would start a business in the time range of 4-10 years. Results are shown in Table 5.

CONCLUSIONS

From this limited study it can be concluded that, in general, students do enjoy working with groups and that students perceive that peer group learning does take place. It also appears that HOD students, who are very strong in verbal skills, tend to score better on this rubric in the fields related to the development of a marketing plan, vision statement and mission statement as they relate to business plan development. The study further indicates that students do plan to either take their creative idea or another idea to the marketplace sometime during their career. While this is a static study, it does suggest that a follow-up study may be of interest within 1 year, 5 years, and 15 years after students graduate.

Table 5: Students Willing to Start A Business From A Different Idea

		Time Frame (m=months, y=years)									Total
Class			6m	2y	3y	4y	5y	10y	15y	Never	
ES101	Count	0	0	1	1	2	2	3	0	0	9
	% within V	.0%	.0%	11.1%	11.1%	22.2%	22.2%	33.3%	.0%	.0%	100.0%
	% of Total	.0%	.0%	1.7%	1.7%	3.4%	3.4%	5.2%	.0%	.0%	15.5%
HOD2760	Count	3	1	2	3	6	9	15	6	4	49
	% within V	6.1%	2.0%	4.1%	6.1%	12.2%	18.4%	30.6%	12.2%	8.2%	100.0%
	% of Total	5.2%	1.7%	3.4%	5.2%	10.3%	15.5%	25.9%	10.3%	6.9%	84.5%
Total	Count	3	1	3	4	8	11	18	6	4	58
	% within V	5.2%	1.7%	5.2%	6.9%	13.8%	19.0%	31.0%	10.3%	6.9%	100.0%
	% of Total	5.2%	1.7%	5.2%	6.9%	13.8%	19.0%	31.0%	10.3%	6.9%	100.0%

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APPENDIX A
Entrepreneurship Team Development

Introduction

At the beginning of the semester you were self-selected to be in a group. The group was encouraged to work together to develop the Entrepreneurship Spirit and to help each other develop their creative ideas. You were encouraged to discuss class assignments, including: 1) creative ideas, 2) the creative process and 3) parts of the business plan such as mission, vision, marketing, pricing, revenue stream projection, break-even point and possible risks. The class also was enhanced by having a series of outside speakers to join the class and for additional outside entrepreneurs and graduate students to meet individually with groups to further the dialogue. Our intentions were to provide you with the understanding, background knowledge and techniques to take one of your creative ideas to the marketplace or at least to determine whether or not it was feasible to take such an idea to the marketplace. We now solicit your feedback on this process in order that we may investigate ways to improve the process of teaching creativity and entrepreneurship. Using the scale provided, please give us your responses by specifying the degree to which you agree to the following statements.

Team Name -- The team names are designed to be a creative process that will give your group some type of identity.
1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Name of Group		
1)	The name chosen by our group was appropriate.	1 2 3 4 5
2)	The name chosen by our group gave us a unique identity within the class.	1 2 3 4 5
Creative Activity		
3)	The one creative activity that my group did to the class was helpful to developing the relationship within the group.	1 2 3 4 5
4)	I think additional creativity exercises would be beneficial in developing a more cohesive group.	1 2 3 4 5
5)	I have a developed a friendship within my group that may well last for my entire life.	1 2 3 4 5
6)	My group was very helpful to me in identifying major problems and in working through those business-related problems.	1 2 3 4 5
Business Plan		
7)	My group was very helpful to me in developing my mission statement for my business plan.	1 2 3 4 5
8)	My group was very helpful to me in developing my vision statement for my business plan.	1 2 3 4 5
9)	My group was very helpful to me in developing my pricing plan for my business plan.	1 2 3 4 5
10)	My group was very helpful to me in developing my risk analysis for my business plan.	1 2 3 4 5
11)	My group was very helpful to me in developing my marketing plan for my business plan.	1 2 3 4 5
12)	My group was very helpful to me in developing my revenue stream projections for my business plan.	1 2 3 4 5
13)	My group was very helpful to me in developing my break-even analysis for my business plan.	1 2 3 4 5

Moving My Creative Idea to the Marketplace

We are very interested in knowing whether or not you think it would be possible for you to move your creative idea to the marketplace within a reasonable time frame.

14) I expect to form a business from my creative idea within:
_____a) six months,
_____b) one year
_____c) two years,
_____d) three years,
_____e) four years,
_____f) five years,
_____g) I will never take this idea to the marketplace.

15) From the concepts and ideas I learned from this class, I am likely to start another business in the future. If so, when? Within:
_____a) six months,
_____b) one year
_____c) two years,
_____d) three years,
_____e) four years,
_____f) five years,
_____g) ten years,
_____h) fifteen years, or
_____i) never

I would like to have the opportunity to keep in touch with you throughout a major portion of your career. Could you please provide me with a permanent address?

Name: _____
Street Address: _____
City: _____
State: _____
Zip: _____
Phone _____
Email Address: _____

Entrepreneurs in Action! is a research project funded in part by support from the Coleman Foundation and an NSF subcontract from Tennessee Technological University on Partnerships for Innovation: Expanding Innovation Opportunities in Tennessee.

FORMULATION OF ECONOMIC ATTITUDES AND VALUES: A CASE STUDY OF THE FUTURE BUSINESS LEADERS OF AMERICA

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ABSTRACT

This study measured the economic attitudes and values of a random sample of young Americans (Future Business Leaders of America members (FBLA)) towards the American Economic System and its essential elements: profits, economic freedom, competition, corporate taxes, business ethics, advertising, and labor unions. The study suggested that the respondents (FBLA members) demonstrated less than affirmative attitudes toward economic and business issues than one would expect based on their training and economic education. A regression model was developed to explain Future Business Leaders of America (FBLA) students' attitude toward traditional business values and the American economic system. The following factors were determined to be most important in the FBLA respondents' attitude formulation: average grades, gender, parental marital status and education, race, income, and employment status.

INTRODUCTION

Young Americans' attitude toward the economic issues is an important determinant of the future of the private enterprise system. In a society where political and economic decision - making is decentralized, the right and responsibility to make decisions rests with individuals. Competent economic policies are, therefore, a function of economic understanding and attitudes of the masses toward profits, economic freedom, competition, government intervention, taxes, business, and the right to work.

The current study investigated economic attitudes and values of a random sample of the North Carolina seniors and Future Business Leaders of America students using a nationally normed Economic Values Inventory test. Future Business Leaders of America (FBLA) is a national youth organization for secondary school students enrolled in business subjects that include a fair amount of economic content. Business courses encompass a vast majority of the micro and macroeconomic concepts identified in the National Economic Standards and include specific competencies requiring an understanding of the free enterprise economy and the role of business in it (Tannenbaum, 1994). FBLA is designed to increase business knowledge and acumen and develop competent business leadership among its members. The FBLA has several objectives. One of the objectives is to

actively encourage interest in and understanding of the American enterprise system. It seeks to reward students, who develop projects to increase understanding and support of the American enterprise system within the school and/or community by developing information/education programs.

Considering the time and efforts expended on FBLA activities, and FBLA avowed objectives, it is expected that high school students who are members of the FBLA will have higher mean scores on the Economic Value Inventory Test (a measure of attitudes toward private enterprise and its concomitant) than the mean score of non – members of FBLA. Therefore, the null hypothesis was stated as follows: There is no difference in economic value inventory test mean scores between high school students who are FBLA members and those who are non - members of FBLA.

METHODS

Students' performance in the affective domain was measured the Economic Values Inventory (EVI) Test developed by the Social Science Research Center at the University of Chicago. The instrument was tested with diverse national sample of 850 of secondary students. The instrument has proven construct and content reliability and validity for research (O'Brien, 1987). The initial survey consisted of 250 items. The number of items were reduced to 45 through the application of factor analysis. The eight (8) EVI scales, scale means, reliability and factor loadings of individual items, meet and in some cases exceed the required standards (Cronback-alpha ratio of a minimum .50).

The aforementioned instrument was administered to a random sample of 363 high school seniors in North Carolina and 350 FBLA members. The respondents were drawn from all of the North Carolina education districts. In order to ensure the inclusion of smaller and less financially endowed units, the schools were classified into type A and type B institutions. Type A institutions were secondary schools with a graduating class of 250 students or more. A senior class of 249 pupils or less was categorized as a Type B institution. Using random numbers, five (5) large and five (5) small schools were selected from the education districts.

Scale 1 of the EVI focused on the respondents' support for the American economic system and its ancillary: profits, economic freedom and competition, need for saving, and importance of productivity as a determinant of standard of living. Scale 2 consisted of statements designed to gauge the respondents' perception of the image of the American businesses. Respondent's views were sought regarding corporate taxes, business ethics, advertising, and the need to expand the business role in decision-making. High scores in this scale would affirm respondents' distrust of the business.

Table 1: Mean Score on the Economic Values Inventory(evi)for the National Sample, North Carolina High School Seniors, and Future Business Leaders of America Respondents

	National Sample	NC High School Seniors	NC Future Business Leaders
	x	x	x
SCALE 1: The American Economic System (Support for the Economic System)	5.40	5.61	5.35 (4.65)***
SCALE 2: Business (Trust in Business)	4.70	4.71	4.78 (0.96)
SCALE 3: Psychological-Personal Efficacy (Alternative & Powerlessness)	2.80	2.70	2.88 (2.18)**
SCALE 4: Government Role in Social Welfare (Government is Responsible)	4.90	4.46	4.59 (1.82)*
SCALE 5: Government Role in Setting Prices (Against Government Role)	4.00	4.18	3.94 (2.31)**
SCALE 6: Unions (Against Powerful Unions)	4.60	4..60	4.24 (4.75)***
SCALE 7: Treatment of Workers (Workers' Treatment is Fair)	3.10	3..32	3.23 (0.96)
SCALE 8: The Economic Status Quo (Against the Distributive Status Quo	4.80	4.42	4.65 (3.10)***

Note: *Significant to the 0.10 level or better, one tailed test
**Significant to the 0.05 level or better, one tailed test
***Significant to the 0.01 level or better, one tailed test

t statistics are reported in parentheses below Future Business Leaders.
N: National Sample - 850
North Carolina - 363
Future Business Leaders - 350

Scale 3 was designed to investigate the psychological orientation of the respondents. It measures the strengths and weaknesses of the respondent's belief in an individual's ability to control his/her destiny and whether the economic system is exploitive in nature. A high score in this category would indicate that the respondents feel powerless and alienated from the system. Scale 4 addressed the issue of the social responsibility of the government and assessed respondents' views on whether the individual or the society is responsible for unemployment and poverty in the system.

Scale 5 dealt with the role of government in price setting. Low scores in this category are indicative of respondents' lack of support for government control of prices.

Scale 6 polled the respondents regarding their views on labor unions. A high score in this scale would indicate that the respondents are against powerful labor unions and would like to see their influence reduced.

Scale 7 was concerned with whether or not workers are treated fairly. A low score in this category would be indicative of respondents' agreement with the unfair treatment of workers by businesses. Scale 8 dealt with income distribution and equality of opportunities in our society. A high score in this category would indicate that respondents agree that income and opportunities are unequally distributed in the society.

The study suggested that the FBLA respondents demonstrated less affirmative attitudes toward economic and business issues than the North Carolina high seniors and the national sample (Nijhawan, 2003). The economic attitudes of the FBLA respondents were surprising considering one of the objectives of FBLA is to actively encourage interest in and understanding of the free enterprise economy and the role of business in it (Tannenbaum, 1994) .The study discovered that FBLA students demonstrated only moderate support for the American enterprise system, marginal affirmation of support for and trust in business, liberal attitude toward the role of government in price setting and income distribution, unexpected affirmation of the unfair treatment of the workers, and moderate opposition to strong labor unions (Nijhawan, 2003).

The purpose of this article is to explore the determinants of the attitudes of FBLA students toward the American economic system and traditional business values.

The interactive relationship between students' attitudes and cognitive learning was studied by Hodgin (1984), Ingels and O'Brien (1985), Grimes et al (1989), Walsted and Soper (1989), Marlin (1991) and Phipps and Clark (1993) and Frey et al (1993). Most of these studies investigate how students attitudes are influenced by factors such as (a) student academic performance measured by the cumulative grade (Hodgin ,1984), instruction based on a specific textbook (Ingels and 0, Brien, 1985); specific economics course (Grimes, 1989), teacher characteristics and knowledge level (Walsted and Soper, 1989); teacher attitude and training (Marlin, 1991) and student characteristics (Frey 1993). Ingels and O'Brien's (1985 and 1987) papers are particularly relevant to our study. Like our study, Ingels and O'Brien used the Economic Value Inventory instrument developed by the University of Chicago, Social Science Research Center to measure younger adolescents' attitudes toward economic issues.

EXPLAINING ATTITUDES: A MODEL AND FINDINGS

A multiple regression equation was formulated to investigate the influence of a variety of student characteristics and socio-economic factors on the attitude of FBLA students regarding the American Economic System, business, personal economic efficacy, government role in social welfare and setting prices, labor unions, treatment of workers and economic status quo. The

regression equation employed 10 independent variables to predict student economic attitudes (not counting the intercept):

EVI Scale = L_o + L_1 Aggrades + L_2 Employed + L_3 TV Watch+ L_4 Hrs Study + L_5 Mag Read + L_6 Liv Part + L_7 Par School + L_8 Sex + L_9 White + L_{10} Housing.

where

EVI Scale	= Economic Value Inventory consisting of eight (8) measures economic attitudes.
Aggrades	= Average grades
Employed	= Number of hours employed each week
TV Watch	= Hours spent watching TV/VCR each week
Hrs Study	= Hours spent per week studying at home
Mag Read	= Newspaper/Magazines Read (1) Otherwise (0)
Liv Part	= Living with mother and father (1) Otherwise (0)
Par School	= Highest education of parent/guardian
Sex	= Male or female; Male (1), Female (0)
White	= Race; White (1), Black (0)
Housing	= Rent or own a house; Own House (1), Otherwise (0)

A priori one would expect that male white students who are high achievers and employed, live with father and mother, have educated parents, belong to higher income families will be supportive of the American economic system and its concomitant: business, profit, economic freedom, competition, individualism, existing distribution of income, etc. and less supportive of the labor unions and the need for government intervention in social and economic arena. The average number of hours the student spends watching television and reading print material may also influence student's attitude toward issues. Some conservatives think that the liberal bias of the news media may make the respondents less supportive of the private enterprise system.

Table 2 summarizes the relative importance of various explanatory factors in determining FBLA respondents' economic attitudes. T-statistics are noted in parenthesis. Multicolinearity is not a serious problem because the Eigen values of centered correlation (see Table 3) indicate that the condition numbers are less than 100 (see Table 3).

Table 2: Relationship Between the Predictor Variables and the Economics Value Inventory Scores: Future Business Leaders

	SCALE 1	SCALE 2	SCALE 3	SCALE 4	SCALE 5	SCALE 6	SCALE 7	SCALE 8
INTERCEPT	4.4737***	5.4004***	4.4137***	5.2786***	1.9372***	3.5847***	3.1393***	5.4800
	(23.25)	(23.35)	(16.48)	(21.59)	(5.51)	(13.57)	(10.364)	(21.875)
AGGRADE	. 1062***	-.1492***	-.248***	.0366	.2426***	0261	.0403	-.0338
	(2.49)	(-2.91)	(-4.164)	(.68)	(3.11)	(.44)	(.59)	(-.59)
EMPLOYED	.0060***	.0041	.0018	-.0008	.0091***	.0093***	-.0038	0084***
	(2.67)	(1.437)	(.56)	(-.24)	(2.10)	(2.84)	(-1.03)	(2.73)
TVWATCH	-.0050	.0004	.0064	.0053	-.0029	0027	-.0016	.0107*
	(-.93)	(.06)	(.89)	(.83)	(-.32)	(.392)	(-.20)	(1.62)
HRSTUDY	.0228	.0007	-.0138	-.0017	-.0138	-.0049	.0103	0024
	(3.04)	(.08)	(-1.32)	(-.18)	(-1.01)	(-.48)	(.87)	(.24)
MAGREAD1	.0446	-.0529	-.0426	.1422	.4664**	.2699	-.0725	-.0974
	(.36)	(-.35)	(-.25)	(904)	(2.06)	(1.58)	(-.37)	(-.60)
LIVPART1	.1510**	.1609**	-.1706**	-.1104	.1279	-.0401	-.0323	-.0674
	(2.39)	(2.12)	(-1.94	(-1.38)	(1.11)	(-.46)	(-.33)	(-.82)
PARSCHOL	.0328***	-.0031	-.0552***	-.0273*	.0619***	. 0181	-.0118	-.0516***
	(2.64)	(-.21)	(-3.18)	(-1.73)	(2.73)	(1.06)	(-.60)	(-3.19)
SEX	.1015*	-.1942***	-.0490	-.2475***	.4649**	.2629***	.3353***	-.3376***
	(1.62)	(-2.59)	(-.57)	(-3.12)	(4.07)	(3.06)	(3.41)	(-4.15)
RACE	.0884	-.2363***	-.2687***	-.2863***	.1289	.2574***	.1411	-.2283***
	(1.46)	(-3.26)	(-3.19)	(-3.736)	(1.17)	(3.10)	(1.48)	(-2.90)
HOUSING	-.0617	-.1688**	.1009	-.2620***	.3534***	2752***	.0017	-.0799
	(-.86)	(-1.96)	(1.00	(-2.88)	(2.691)	(2.79)	(.02)	(-.85)
F	5.49	3.89	6.74	6.60	8.14	6.02	1.64	6.40
R^2	.06	.04	.08	.08	.09	.07	.01	.07
n	688	690	688	689	690	690	690	665

*Significant at the 0.10 level or better.
**Significant at the 0.05 level or better.
***Significant at the 0.01 level or better.

Table 3: Test of Multicollinearity				
NO.	Eigen Value	Incremental percent	Cumulative per cent	Condition Number
1	2.6206	26.206	26.206	1.00
2	1.2023	12.023	38.229	2.18
3	1.1062	11.062	49.291	2.37
4	0.3414	3.414	52.705	7.67
5	0.0274	0.274	52.705	95.64
6	2.2246	22.246	75.225	1.18
7	1.2777	12.777	88.002	2.05
8	.6306	6.306	94.308	4.16
9	.3414	3.414	97.222	7.68
10	.2278	2.278	100.00	11.50

It is instructive to note that the level of achievement as measured by average grades (Aggrade) was a significant predictor of student attitude towards the prevailing American Economic System (Scale 1), image of American business (Scale 2), economic efficacy (Scale 3), and the role of government in price setting (Scale 5). However, it is not a statistically significant explanation of student attitude toward the role of government in social welfare (Scale 4), labor union (Scale 6), treatment of workers in the economy (Scale 7) and economic status quo (Scale 8).

As expected, students' participation in the labor force as workers was a significant determinant of their support for the American Economic System (Scale I), conservative attitude toward the role of government in price setting (Scale 5), antithetical attitudes toward labor unions (Scale 6) and more tolerant attitude toward income inequality (Scale 8).

Parents' marital status played an important part in formulation of student attitude towards the support of the American Economic System (Scale 1), trust in business value (Scale 2), and individual economic efficacy (Scale 3).

Student gender was an important contributory factor in trust in business (Scale 2), government role in social welfare (Scale 4), attitude toward government intervention in the market decision making (Scale 5), less support for labor unions (Scale 6), fair treatment of workers (Scale 7) and economic status quo (Scale 8).

As expected, housing (proxy variable for income) was a significant determinant of students' support of business (Scale 2), role of government in social welfare (Scale 4) and price setting (Scale 5), and attitude toward labor unions (Scale 6).

The study confirmed the importance of race in attitude formation. Race was an important explanatory variable in five (5) out of eight (8) EVI scales. A black is more likely to show greater

distrust of business (Scale 1), discount the view that economic system is participative and that individual has the opportunity and ability to control his/her destiny (Scale 3), show greater support for labor unions (Scale 6), subscribe to the view that workers are treated unfairly (Scale 7), and that income and opportunities are distributed unequally in our society (Scale 8). Their general alienation with the system is also reflected in their disenchantment with the role of government in the social arena (Scale 4).

Our study corroborated the widely held view that parental schooling was an important predictor of student attitude toward the American economic system (Scale 1), personal efficacy (Scale 2), government role in social welfare (Scale 4), government role in price setting (Scale 5) and maintaining personal status quo (Scale 8).

SUMMARY AND CONCLUSIONS

Admittedly, aside from an organizational membership, student economic attitudes formulation depends upon a vaiety of student characteristics and socio-economic factors. In this study, however, the factors which contribute significantly to the FBLA respondent's attitude formulation are, average grades, gender, race, income, employment status and parental marital status and education..

RECOMMENDATION FOR FURTHER RESEARCH

In this study, we assume that the Likert Scale responses can be measured cardinally and that these responses are uni-dimensional. A follow up study may apply factor analysis provided the data collected is continuous and normally distributed.

ENDNOTES

We gratefully acknowledge the assistance provided by Luther Lawson and Paul Vowter in compiling the survey data and statistical analysis.

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ENTREPRENEURSHIP RESEARCH: USING STUDENTS AS PROXIES FOR ACTUAL ENTREPRENEURS

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ABSTRACT

This paper considers the practice of using university undergraduate as proxies for small business owners in entrepreneurship research. A data set was gathered from a sample of university undergraduate students at a major business school as well as from a sample of actual small business owners "actual entrepreneurs". The university undergraduate respondents were divided into those with high nascent entrepreneurial inclinations and those low in nascent entrepreneurial inclinations. A discriminate analysis between the three groups was then done and results were then and examined for similarities or differences with regards to life aspirations, life goals, and work goals of each group. Unlike the undergraduate respondents with low entrepreneurial potential, undergraduate respondents with high entrepreneurial potential were found to be very similar to actual entrepreneurs. Results of this research suggest that, when using students as proxies in the study of entrepreneurship, one needs to separate nascent from non-nascent students and use only those students who are high in nascent entrepreneurial inclinations.

INTRODUCTION

This paper considers the practice of using students as proxies for small business owners in entrepreneurial research. Past research has been done using undergraduate students (Segal, Borgia, Schoenfeld, 2002), always with the assumption that results are generalizable to the overall population of practicing entrepreneurs, but, to date, no study has examined the validity for this assumption. This study begins the process of correcting that. A population of 815 undergraduate students at a major university located in the Midwest were sampled using a questionnaire method while, in a similar time frame, a population of practicing entrepreneurs were given the same set of questions. The data was analyzed and results are provided in the discussion section of this paper.

A common theme found in entrepreneurship research is that entrepreneurship plays a critical role in the US economy. Of the 25.5 million businesses in the United States today, approximately 25.1 million or 98.5 % are small businesses. These small businesses are largely entrepreneurial and are responsible for 75.8% of our nation's new jobs. (Scarborough & Zimmer , 2003). Potential

entrepreneurs appear to be critical to the notion of a resilient "self renewing" economic environment (Shapero, 1982). Entrepreneurial growth is a critical part of our nation's economic health. Past research has also noted that Entrepreneurial potential seem to provide the best predictive power when attempting to predict the movement of the populace in the practice of entrepreneurship (Kureger & Brazeal, 1994; Bagozzi & Yi, 1989). Research into entrepreneurial potential, therefore, serves us well, both in improving our predictive abilities and in providing a fertile ground from which the seeds of entrepreneurship can sprout.

Attracting the interest and time from existing entrepreneurs, however, is a difficult proposition. Acting entrepreneurs are pressed for time, resource short, and suspicious of anyone asking sensitive questions which might give away their competitive edge. A proxy, if found, without the above mentioned constraints, would be a welcome resource for entrepreneurship researchers.

In the past, undergraduate students, in university business schools, have been considered to be these proxies and, as such, representative of actual entrepreneurs. Students are not as time constrained as actual entrepreneurs. They are more accessible to researchers, assumed to be representative of the overall population, and are at the headwaters of their career path. The purpose of this paper is to explore the suitability of undergraduate students to serve as proxies for actual entrepreneurs in entrepreneurial research.

WAYS OF PREDICTING ENTREPRENEURIAL BEHAVIOR

Research exploring entrepreneurial behavior can be divided into four categories, how entrepreneurs act, what happens when they act, why they choose to act as entrepreneurs (Stevenson & Jarillo, 1990), and research into the identification of environmental and situational factors that predict entrepreneurial activity (Segal, Borgia, & Schoenfeld).

Because of the above mentioned difficulties of studying actual entrepreneurs, environmental and situational factors, if effective, would be excellent avenues from which to study entrepreneurial behavior. Environmental and situational factors include job displacement, previous work experience, availability of resources, and governmental influences, all of which can be gleaned from data available outside the internal entrepreneurial environment. However, while each of these factors are considered to be important to the development and encouragement of budding entrepreneurs, empirical studies of these contextual factors have found low explanatory power and predictive ability (Krueger, Reilly, & Carsrud, 2000).

Levesque, Shepherd, & Douglas, 2002 and Praag & Cramer, 2001, have proposed models using economic perspectives to predict self-employment. These economic models suggest that the decision to become self employed is based on maximizing the net usefulness, utility, or desirability of an entrepreneurial career. Shapero's model of the entrepreneurial event (SEE) assumes that inertia guides human behavior until something interrupts or displaces that inertia. All of the above

methods remain wedded to various ad hoc profiles of personality and demographic characteristics. They do not depend on intimate contact with the actual entrepreneur and get around the difficulties in acquiring the more difficult internal information of the actual entrepreneur. However, they also appear to have minimal predictive ability (Krueger & Brazeal 1994).

Within the context of how and why entrepreneurs act, two theories, Ajzen's theory of planned behavior (TPB), and Social Cognitive Career Theory (SCCT) seem to hold some promise on the front of prediction of entrepreneurial behavior (Segal, Borgia, & Schoenfeld; Krueger & Brazeal). Ajzen's theory of planned behavior suggests that three key attitudes predict entrepreneurial inclinations; (1) Attitude towards the act, (2) Social norms, and (3) Perceived behavioral control. Social Cognitive Career Theory suggests that Career interests, goals, and choices are related to self-efficacy beliefs and outcome expectations (Lent, Brown, & Hackett, 1994,1996). Segal, Borgia, and Schoenfeld make the suggestion, then, that peoples self efficacy beliefs and outcome expectations with regard to self-employment can predict their goals to become self employed.

Therefore, if entrepreneurship is viewed through the lens as simply one of many career choices, SCCT becomes a good benchmark from which to operate. It is a good place to hang ones theoretical hat as it is one of the most accepted and validated models discussed in the careers literature regarding the understanding of career interests and goals (Segal, Borgia, & Schonefeld; Gore & Leuwerke, 2000; Smith & Fouad, 1999; Swanson & Gore, 2000).

SOCIAL COGNITIVE CAREER THEORY

SCCT is anchored in social cognitive theory and highlights the importance of self-beliefs and self-thought in fostering an individual's motivation and subsequently guiding their behavior(Segal, Borgia, & Schoenfeld). Core variables of the SCCT model are (1) self efficacy--which affects an individual's expectations for outcomes as well as their intentions toward performance, (2) outcome expectations--which affects their future performance or goals, and (3) goals-- for entrepreneurs towards self employment.

This model bases much of its predictive powers on Vroom's (1964) work in expectancy theory. Expectancy theory states that in order for on outcome to be achieved, three things must be in place; (1) a person must believe that he or she can do it (expectancy), (2) accomplishment of the task must be clearly connected to an outcome (outcome expectations), and (3) the outcome must be desired by the individual (valence). According to Vroom, an individual will choose among alternative behaviors by considering which behavior will lead to the most desirable outcome. SCCT suggests that these outcome expectations are important determinants of career interests (Segal, Borgia, & Schoenfeld). Bandura (1986) noted that a person's behavior results from the interaction of that person and their environment but, as noted above, issues of the environment

contain low explanatory power and predictive ability when used alone (Krueger, Reilly, & Carsrud, 2000).

Therefore the researcher finds himself dealing with other methods of studying entrepreneurial behavior, expressed in general terms of how and why entrepreneurs act and what happens when they act. Past studies have shown these areas to be more fruitful in their predictive and exploratory powers to explain entrepreneurial behavior. However, the thorny issue of gaining access to actual entrepreneurs remains. Since the more easily gathered data (economic and demographic) appears to be ineffective, the obvious alternative is to use some form of a more accessible proxy for the ever busy and difficult to reach actual entrepreneur. This effort to locate proxies high in entrepreneurial potential is seen as a major stumbling block to a precise description of the entrepreneurial effort (Reynolds, 1995). One possible source for these nascent entrepreneurs is located in universities. However, results of past entrepreneurial research using students have been mixed at best.

FOCUS OF THIS PAPER

This paper looks, in particular, at the issue of using students as proxies for actual entrepreneurs in entrepreneurial research. We suggest that an acceptable proxy will be one with high potential to become an actual entrepreneur.

Because recent research suggests promise for Social Cognitive Career Theory this paper concentrates on those traits and issues that best fit into the Social Cognitive Career Theory realm to provide discrimination between students exhibiting nascent entrepreneurial tendencies and students low in these nascent entrepreneurial tendencies (Segal, Borgia, & Schonefeld; Gore & Leuwerke, 2000; Smith & Fouad, 1999; Swanson & Gore, 2000). In particular, we look at measures of life aspirations along with work and life goals within a sample of junior and senior level undergraduate students at a major Midwest university. We also look at the same measures within a sample of actual entrepreneurs who agreed to participate in our research.

Students high in nascent entrepreneurial inclinations, for the purposes of this research, are defined as those individuals who exhibit high potential to become actual entrepreneurs (Reynolds, 1995; Palit & Reynolds, 1993; Reynolds & White, 1993). Undergraduate respondents were divided into two categories. We develop a nascent entrepreneurship index and make a distinction between those who score high on this index and those who scored low. Our expectations were that students exhibiting high levels of nascent entrepreneurship, as evidenced by their score on the nascent entrepreneurship index will respond similarly to actual entrepreneurs in the administration of the questionnaire.

Our attempt is to validate the link between those undergraduate students with a high level of nascent entrepreneurial inclinations and actual entrepreneurs and as such validate their use as proxy's for the much more difficult to obtain data from actual entrepreneurs. Furthermore, we look

at the lack of correlation between the answers given by those students who are low in nascent entrepreneurial inclinations and actual entrepreneurs and suggest that, in order to improve the reliability of using university students as proxies for actual entrepreneurs, one needs to separate out those students who exhibit low nascent entrepreneurial inclinations.

METHODOLOGY

The study was done through the use of a nearly identical questionnaire administered to a group of approximately 500 university students as well as 286 actual entrepreneurs. The questionnaire items are grouped into two main categories of work goals (Table 1) and life aspirations (Table 2). These items were derived from those used in current entrepreneurial research. The respondents were asked to rate the importance of (1=not at all important, 7=extremely important) seventeen job characteristics (work goals) in their ideal jobs.

Table 1: Work Goals

To be able to use my skills and talents to the maximum
To be able to achieve something that I personally value
To work with others as members of a group
To have the freedom/opportunity to make my own decisions
To have job security
To have the opportunity to learn new things
To receive attractive pay and benefits
To perform challenging and exciting work
To e able to extend my range of abilities
To have opportunity for advancement/promotions
To be friends with, and be liked by my co-workers
To have the authority to influence others
To always know specifically and exactly what I am expected to do
To have fixed working hours
To be able to set my own working hours
To have control over the pace of my work
To be ultimately involved in the entire operation (i.e. the whole enterprise)

Respondents also were asked to divide one hundred points among ten life goals/aspirations to indicate the relative importance of each in their lives (see Table 2).

The sample was already naturally divided into two groups, that of students and actual practicing entrepreneurs. We further divided the student group into those students with low nascent entrepreneurial qualities and those with high nascent entrepreneurial qualities. This was done through deriving an average score for each student based on responses to four questions (Table 3).

Students responded to the questions in the form of a likert scale of 1-7. Students who scored an average response of three or less to the questions in Table 3 were classified as having low nascent entrepreneurial qualities. Students who scored an average response of five or higher to the questions in Table 3 were classified as having high nascent entrepreneurial potential. Students who scored an average of 3 were discarded as being too ambiguous to classify into either category for the purposes of this research.

Table 2: Life Goals and Aspirations
Accumulate wealth
Control my own future
Be my own boss
Have free time for family, hobbies, leisure, and other interests
Live an adventurous and exciting life
Be recognized by family/friends for my accomplishments
Become and influential person
Have a steady paycheck (i.e. job and income I can count on)
Have financial security
Have peace of mind (i.e. peaceful and stress-free life)

Table 3: Nascent/Non-nascent questions
My ultimate goal is to be self employed
My goal is to start my own business
Having a job is more appealing than owning a business
I intend to strive for an idea to own my own business

This process allowed three distinct groups to emerge. These were actual entrepreneurs, students exhibiting high nascent entrepreneurial potential (referred to as nascent), and students exhibiting low nascent entrepreneurial potential (referred to as non-nascent). The entrepreneurially nascent students numbered 156. The entrepreneurially non-nascent students numbered 183. 161 students delivered scores of 3 and were considered too close to differentiate. Total students participating in the research were 500. These groups were then subjected to three combinations of a two way discriminate analysis using work goals and life aspirations as independent/predictive variables. The first analysis looks at the non-nascent student group compared to nascent student group. The second analysis looks at the non-nascent student group compared to actual entrepreneurs. The third and final analysis looks at the nascent student group compared to actual entrepreneurs.

RESULTS

Results from a discriminate analysis are found in Table 4: Analysis 1. Responses of students categorized as non-nascent are compared to those categorized as nascent. In this analysis our results showed that work goals and life aspirations correctly classified 75.5% of the two cross validated groups of students (nascent and non-nascent) in the analysis. This indicates a strong difference between these two types of students. This supports our assertion that there is a significant difference in work goals and life aspirations between students exhibiting strong nascent entrepreneurial qualities and those exhibiting weak or non-nascent entrepreneurial qualities. Perhaps even more relevant is that only 21% of non-nascent students were incorrectly classified as actual entrepreneurs, which is exactly the same as the percent of non-nascent students who were incorrectly assigned to the nascent group.

Table 4: Analysis 1 (Non-nascent compared to Nascent)

	Predicted Group Membership (% Correct)	
	Non-nascent	Nascent
Non-nascent	79.2%	20.8%
Nascent	28.8%	71.2%
75.5% of cross-validated grouped cases correctly classified		

Table 5: Analysis 2 (Non-nascent compared to Actual Entrepreneurs)

	Predicted Group Membership (% Correct)	
	Non-nascent	Actual
Non-nascent	79.2%	20.8%
Actual Entrepreneurs	15.0%	85.0%
82.7% of cross-validated grouped cases correctly classified		

Table 6: Analysis 3 (Nascent compared to Actual Entrepreneurs)

	Predicted Group Membership (% Correct)	
	Nascent	Actual
Nascent	48.1%	51.9%
Actual Entrepreneurs	17.8%	82.2%
70.1% of cross-validated grouped cases correctly classified		

Analysis two moves the discussion forward by comparing the non-nascent student group to actual entrepreneurs. Here the results are even stronger with 82.7% of cross validated grouped cases correctly classified in the analysis (Table 5). This indicates that there is a difference between the non-nascent group and the group of actual entrepreneurs and suggests that the non-nascent group of students may not be representative of or serve as proxies for the actual entrepreneur in entrepreneurial research.

Analysis three moves the discussion in a final step by comparing the nascent student group to actual entrepreneurs. Here the results are weaker with only 70.1% of cross-validated grouped cases correctly classified (Table 6). However, the separation becomes even more indistinct when it is noted that, of the nascent student group, the discriminate analysis was only able to correctly identify them 48.1% of the time. Furthermore, the discriminating variables are not only different from those that separate non-nascent from the other two groups but also different from those which are supported by theliterature as being a part of the entrepreneurial profile. This lack of discriminatory ability using questions previously identified as being a part of the entrepreneurial profile. This highlights the similarity of the nascent and actual groups and their dissimilarity with the non-nascent group thereby suggesting that nascent entrepreneurial students are very much like actual entrepreneurs and can serve as inexpensive and accessible proxies in their absence for both predictions of entrepreneurial activity and other forms of entrepreneurial research.

Table 7 shows the most discriminating questions found in the analysis. Reported are those questions with a factor loading of .2 or more. 18 questions were found to have a factor loading of .2 or greater in at least one of the three analyses. In fact, characteristics that most significantly discriminate between the actual/non-nascent and between the nascent/non-nascent subjects are virtually the same. Again highlighting the fact that actual and nascent entrepreneurs are very similar to each other and very dissimilar to non-nascent subjects. Twelve questions were found to have a factor loading in either or both of analyses one and two. In fact, both groups attach significantly more levels of importance to eight questions in particular. These questions have a factor loading of at least .25 in both analyses one and two (Table 7), and include; Be my own boss(high inclination), number one in both analyses; Be able to set my own working hours(high inclination), number two in both analyses; Have freedom to make my own decisions(high inclination); Be intimately involved in entire operation(high inclination); Had a role model owning business(high inclination); Have control over pace of work(high inclination); Have a job and income I can count on(low inclination); Have fixed working hours(low inclination); Father occupation (high inclination); and to have job security (low inclination).

Table 7			
Questions with most discriminatory power	**Analysis 1 Nascent/Non-nascent**	**Analysis 2 Non-nascent/Actual**	**Analysis3 Nascent/Actual**
	Question Rank (Factor Loadings)	**Question Rank (Factor Loadings)**	**Question Rank (Factor Loadings)**
Be my own boss	1 (-.534)	1 (-.586)	4 (.308)
Be able to set my own working hours	2 (-.456)	2 (-.410)	
Have freedom to make my own decisions	3 (-.392)	7 (-.329)	
Be intimately involved in entire operation	4 (-.365)	3 (-.369)	
Had a role model owning business	5 (-.342)	10 (-.233)	
Have control over pace of work	6 (-.295)		
Have a job and income I can count on	7 (.290)	9 (.248)	
Have fixed working hours	8 (.253)	4 (.367)	8 (-.212)
Father Occupation (Dummy Variable)	9 (-.239)		
To have job security	10 (.230)	6 (.339)	10 (-.205)
Be friends/liked by co-workers		5 (.348)	1 (-.605)
Control my own future		8 (-.285)	
Have opportunity for advancement			2 (-.376)
Live an adventurous and exciting life			3 (-.362)
Earn attractive pay and benefits			5 (-.273)
Socio-Economic family background			6 (-.265)
Have authority to influence others			7 (-.249)
Become an influential person			9 (-.210)
Group Centroid	Nascent (-.932)	Non-nascent (1.142	Nascent (-.709)
Groups Centroids	Non-nascent (.794)	Actual (-.731)	Actual (.387)

IMPLICATIONS

As previously mentioned, acting entrepreneurs are pressed for time, resource short, and suspicious of anyone asking sensitive questions which might give away their competitive edge. Our results indicate that students can serve as proxies for acting entrepreneurs as long as we separate those with high nascent entrepreneurial inclinations from those without such inclinations (referred to here as non-nascent). This can be done through the use of student responses to Questions

concerning their entrepreneurial inclinations (Table 3). As noted from discriminate analysis three, students registering high in the nascent entrepreneurial index are found to be quite similar to actual entrepreneurs with the analysis having difficulty discriminating between the two groups. On the other hand, students in the nascent group are found to be quite dissimilar to the non-nascent student group (Table 7: Analysis one). Students in the non-nascent group are found to be quite dissimilar to actual entrepreneurs as well (Table 7: Analysis two). Therefore, when using students as proxies for actual entrepreneurs, researchers would do well to distinguish between those who score high in nascent entrepreneurial inclinations and those who do not.

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BOOTSTRAPPING BUSINESS START-UPS: ENTREPRENEURSHIP LITERATURE, TEXTBOOKS, AND TEACHING PRACTICES VERSUS CURRENT BUSINESS PRACTICES?

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ABSTRACT

Existing scholarly research on bootstrapping is limited, despite the widespread use of bootstrapping strategies in actual practice among start-up entrepreneurs. Popular academic textbooks used in college and university entrepreneurship courses seldom provide in-depth coverage of bootstrapping; many devote just a few paragraphs or pages to the subject. In sharp contrast to the coverage given in these textbooks, bootstrapping in its various forms has been advocated in, and documented by, the popular business press as a widespread phenomenon. Given that textbooks in any established discipline often draw heavily upon that discipline's existing body of literature, it is not surprising that a lack of formal research by members of the entrepreneurship scholarly community reflects the possibility that textbooks, and courses (if they are based on those textbooks), may be out-of-step with entrepreneurial reality.

INTRODUCTION

Bootstrapping is entrepreneurship in its purest form. It is the transformation of human capital into financial capital. The overwhelming majority of entrepreneurial companies are financed through this highly creative process (Freear, Sohl & Wetzel, 1995), which typically involves the use personal savings, credit-card debt (Cole, Lahm, Little & Seipel 2005), loans from friends and family and other nontraditional forms of capital.

The entrepreneurship academic community has not fully recognized the effect of bootstrapping on entrepreneurial behavior and organizational success (or failure) through formal research. The above positioning statement is supported by the recent observations of other scholars such as Van Auken, (2005) who observed: "Although bootstrap financing commonly is used and is an important source of capital, few….studies comprehensively have examined the role of bootstrap financing in small firm financing" (p. 94). Winborg and Landstrom (2001) similarly observed that "bootstrapping is a phenomenon which deserves more attention in future research on small business finance" (p. 235).

We also submit a logical chain-of-events argument that suggests a lack of coverage in the literature, which also seems to be reflected in our review of popular academic textbooks, may

impact both teaching (if course content is anchored to assigned textbooks) and students' views about the realities that they will face as nascent entrepreneurs.

Bhide (1992) suggested that the success of an enterprise hinges on the ability of its owner(s) to create and leverage financial resources. This paper discusses methods which broadly address bootstrapping options such as bootstrapping product development, bootstrapping business development, bootstrapping to minimize the need for (outside) capital financing, and bootstrapping to minimize the need for capital; these have been previously identified by Freear, Sohl, and Wetzel (1995) and Winborg and Landstrom (2001). The aforementioned methods generally involve the acquisition and control of resources (both tangible and intangible) through creative means. Control also encompasses the efficient uses of those resources to finance the enterprise for growth.

REVIEW OF EXISTING LITERATURE ON BOOTSTRAPPING

A series of searches of the academic literature revealed that rigorous study of bootstrapping, as a serious variable in entrepreneurial success has been minimal. Besides the conclusions mentioned above from prior researchers who have pointed to a dearth of research, our search attempts conducted on databases used by Proquest also demonstrated the scarcity of scholarly research on bootstrapping. With parameters for the searches set to select only scholarly journal articles (with full-text availability), the low number of articles in search results from those Proquest databases suggested an opportunity for future studies of bootstrapping as an antecedent to entrepreneurial success or failure.

Subsequent search efforts resulting from a broader Internet search encompassing the business press, practitioner journals, and magazines revealed that the term, "bootstrapping" (which has different meanings in different contexts; homonymic variations may apply to computing, statistical methods, and meanings other than that which pertained to our interest in bootstrapping business start-ups), is often commingled with numerous subjects in search results. A Google search on the term "bootstrapping" returned 1,710,000 hits (retrieved September 9, 2005). It should be noted that the authors of this paper recognize the instability, bias, and imprecision of commercial search engines; for instance, the same search conducted a few months earlier produced 650,000 hits. Nevertheless, as we have indicated, the body of scholarly literature available for review is limited, yet bootstrapping is widely recognized as entrepreneurial reality.

BOOTSTRAPPING IN TEXTBOOKS AND CLASSROOM IMPLICATIONS

Bootstrapping is often characterized as a means to an end when other choices (i.e., traditional sources through venture capitalists, banks, and angel investors) do not exist (Van Auken, 2005). Popular academic textbooks used in college and university entrepreneurship courses seldom provide in-depth coverage of bootstrapping; many devote just a few paragraphs or pages to the subject. For example, even though credit cards (both business and personal) are widely used (Cole, Lahm, Little & Seipel, 2005; Report to the Congress, 2002), almost any indexed reference to credit cards in these text books is likely to lead the reader to a section on accepting cards as a merchant, as compared to using credit cards for start-up capital.

Writing a business plan has been described as "the sine qua non of modern entrepreneurship education" by Katz, Harshman and Dean (2000, p. 235). However, the explanation given by these authors as to "why?" suggests the need for far more discussion and research, as they also mention that the importance of these student-written plans is to address the requirements of "bankers, investors, and lawyers" (p. 235).

The above observations about textbooks and any teaching based on the content within those entrepreneurship textbooks (reasons for writing a business plan, and so forth), is in stark contrast with the reality faced by students as well as more seasoned professionals who may endeavor to start a business. To illustrate the aforementioned reality, we submit the instance of industry sponsored research commissioned by MasterCard (de Paula, 2003), which has indicated the increasing popularity of credit cards: "Of the 64 percent of small business owners who use plastic for business expenses, 57 percent use personal cards, with 33 percent using those personal cards exclusively and 24 percent using them in addition to small-business cards" (p.54). Indeed, Nixon (1997) observed that some entrepreneurs have in practice adopted credit cards as a new type of "venture capital card" (p. 33):

Many entrepreneurs perceive that the process of obtaining a commercial loan from a bank is too difficult, or that it would ultimately be a vain effort. In some respects, this perception is not far off the mark….A credit card, or multiple credit cards, can be obtained over the telephone or through the mail, although the interest rate likely is higher. The bottom line for the entrepreneur is that this source of credit is easier to tap. "Some [credit card issuers] just give you the mirror test"…."They hold a mirror up to your face and if you're breathing, you get a card." (p. 33).

Not only is it the case that business founders are using credit cards (Loftus, 2004; Hise 1998), credit cards are being aggressively marketed by banks (Streeter, 1996) "with little or no documentation required" (p.15). The authors of this paper are not arguing that students should be taught to use credit cards for start-up capital. Nor are we suggesting that any entrepreneur should use them, or attempting to otherwise enter that debate (Prince, 2003; Scully, 2002; Rosenfeld, 1999; Streeter, 1996), which is a separate issue. However, given that credit cards are being used by a majority of businesses as one popular form of bootstrapping among several alternative forms (McCue, 1999; Hyatt & Mamis, 1997; Mamis, 1992), entrepreneurship educators should at least address credit cards as well as other forms of bootstrapping more openly. A realistic review of current businesses suggests that bootstrapping is the norm, and that business founders are often operating on a shoestring budget (Rohland, 2000; Pell, 2004), substituting "ingenuity and a lot of gumption" (Fenn, 1999, p.43) for cash.

Scholars must proactively address reality in their efforts to construct a relevant and connected body of entrepreneurial literature in this important, yet emergent area of inquiry. The position advanced here is under the logical supposition that unless instructors are supplementing popular entrepreneurship textbooks with other resources drawn from practitioner-based materials to a substantial degree, it may be the case that contemporary courses underemphasize the likelihood that nascent entrepreneurs will engage in some form of bootstrapping (e.g., using credit cards as a source of start-up capital), as compared to obtaining traditional sources of start-up capital.

We would maintain the position stated above even if the message that students receive is an implicit one: "write a plan; go to the bank; get the money; start your business; live happily ever

after," as this message is tantamount to telling a fairy tale relative to the reality that most entrepreneurs face. Finally, we also acknowledge our own aforementioned supposition, and that future researchers (including the authors of this present paper) should investigate how closely scholarly research, textbooks arising from that research, and subsequently, classroom practices based on those textbooks are, or are not, in alignment.

THE WIDESPREAD USE OF BOOTSTRAPPING

While numerous articles appearing in periodicals such as Entrepreneur and Inc. tend to suggest bootstrapping can be risky, they nevertheless also emphasize that the vast number of start-up businesses utilize bootstrapping techniques. Interestingly, existing academic research has suggested that bootstrapping techniques can minimize risk because of the absences of outside venture capital investors (Carter, et. al., 2002). Although the percentage of start-ups that actually use bootstrapping quoted by Worrell (2002) in Entrepreneur magazine might be disputed as a figure of speech, he wrote:

> *Despite the dream of some entrepreneurs to meet a VC with deep pockets, the fact is that 99.9 percent of business owners will struggle alone, pulling themselves up by their bootstraps. That is not necessarily a bad thing. With a little luck and a lot of pluck, bootstrapping a business can be both financially and emotionally rewarding.* (p. 1)

McCune (1999) quoted Tom S. Gail's, executive professor at the University of Houston's Center for Entrepreneurship and Innovation, who estimated that "between 75 percent and 85 percent of startups use some form of bootstrapping to help finance themselves" (p. 1). Although the number of start-up businesses that rely on bootstrapping may be difficult to determine exactly (and may fluctuate based on economic conditions and other factors), it is evident that a substantial number, constituting an overwhelming majority, engage in the practice.

In the months prior to 911, the handwriting was on the wall and what had been popularly known as the "dot-com frenzy," was coming, or did come, to an end. In a July 21, 2001 article published in the Fedgazette (a publication of the Federal Reserve Bank of Minneapolis), Wirtz reported "nervousness" (p. 1) about the new economy and observed efforts to expand the availability of venture capital. The exact moment in time when the so-called "bubble" burst may be the subject of some debate among economists. However, what has transpired post-911, is a radical tightening of venture capital availability, and hence, even more bootstrapping efforts on the part of entrepreneurs. Hamilton (2001) has written about the culture of self-funded e-commerce firms. He identified self-funded entrepreneurs as "classic 'bootstrapping' types, often using credit cards, second mortgages, or retirement funds to bring a dream alive" (p.279).

Roberts (2003), in an article titled "Bootstrapping is back: Entrepreneurs dig deep and make personal sacrifices for their businesses," observed: "Entrepreneurs were spoiled during the dot-com era, often receiving funding before they had a business model or a customer, in the past two years, however, venture backers have become much stingier, especially with seed money" (p. 44).

Whatever the state of the economy is, has been, or will become, the use of bootstrapping among nascent entrepreneurs can be logically predicted, or observed through formal study. In other words, when there are no other sources of capital to be found, bootstrapping becomes the method of choice (Freear, Sohl & Wetzel, 1995).

Cole, Lahm, Little and Seipel (2005) observed the scarcity of academic research on the use of credit cards by entrepreneurs and small business owners, despite the widespread use of credit card financing in actual practice. The Federal Reserve Board has estimated that 46% of small businesses include credit cards as a source of start-up capital and provider of cash for ongoing operations (Report to the Congress, 2002). Some entrepreneurs parlay multiple cards to amass significant funds, such as a Los Angeles entrepreneur and his partner, who used 10 Visa and MasterCard accounts and accumulated $40,000 in debt (Deceglie, 1998). The entrepreneurs subsequently reported having a thriving business (that was also paying high interest credit card debt). An online article from morebusiness.com (Charge wisely, 2004) admonished that reliance on credit cards could be "dangerous," but then offered "nine rules" for using credit cards to finance a start-up business (p. 1). Besides leveraging credit cards, self- funded entrepreneurs tend to utilize personal resources (Longnecker, Moore & Petty, 2002) and whatever additional creative strategies may be at their disposal.

BOOTSTRAPPING METHODS

However one might approach a discussion of bootstrapping, simply put, there are only two basic methods employed by nascent entrepreneurs: 1) gaining control of resources, and 2) efficiently utilizing resources (e.g., minimizing expenses). Taken together, these two methods form the basis for an overall strategy. A bootstrapping entrepreneur's very survival may well depend on his or her ability to be highly adaptable and operate on a shoestring budget (Goodman, 1996; Pliagas, 2005; Willcocks, 2002).

BOOTSTRAPPING RISKS AND ADVANTAGES

"When everybody says 'no'--from the banker to the private investor--the tough small business owners turn to themselves….they raise money from within by bootstrapping" (McCune, 1999, p.1). Because bootstrappers have no choice except to be resourceful, they may have an ironic advantage over other individuals who hail from more resource-rich environments in terms of developing their managerial and entrepreneurial skill-sets. To a certain extent, being deprived of resources forces (Bhide, 1992) the entrepreneur to find other inventive ways to make-do (Lahm, 2005), or do without. For instance, a traditionally funded organization with more assets is in a better position to offer open credit terms to its customers. Bootstrappers, not being in the same position to bankroll the operations of customers, may conversely be compelled to negotiate for payments (or a portion thereof) in advance (McCune, 1999). For anyone who has experienced the not so pleasant situation of having to collect on a past due account, the sound of "ching-ching" in advance is most reassuring.

Bootstrappers may also consciously consider strategies that can actually reduce risks associated with their entrepreneurial pursuits. By purposely opting to create a business that provides services and requires little or no inventory, the entrepreneur, who does not have access to traditional (i.e., external) funding sources can make the business more "bootstrappable" than others (Mamis, 1992). However, bootstrapping entrepreneurs may tend to cut corners too close in areas such as property insurance (Sekula, 2005) and by foregoing health insurance. Another pitfall of being in a constant "do-it-yourself" mode is that the entrepreneur may spend too much time learning to perform or performing tasks that are worth less than other tasks. For instance, if meeting with a prospective customer could possibly generate a $5000 sale, and yet the entrepreneur is too busy performing a more menial task such as bookkeeping or copying documents (tasks that could easily be farmed out), then the business may not ever realize its full revenue potential.

There are manifestations of bootstrapping that are not high risk at all; indeed, these methods-properly envisioned and executed-may actually reduce risk to a bare minimum. Publishers' of Who's Who-type directories have employed this tactic successfully. The scenario works as follows: (1) identify a special interest group or category; (2) solicit individuals for inclusion in an upcoming directory; (3) congratulate or otherwise flatter the individual for his or her achievements (and thus, eligibility for inclusion); (4) offer a pre-publication discount for ordering an advance copy of the directory; (5) collect the money for the purchase(s); (6) pay the printing bill (supposing 5,000 advance copy sales at $125.00 each, paying the printing bill is easily attainable); (6) ship the printed book; (7) repeat the process with more prestigious or alternate books. According to book industry consultant John Kremer (1998), other directories "come in at least 57 varieties" (p. 53) and can "form the foundation for an entire line of related books" (p. 52); these books may also require annual updating, and thus create a perennial sales cycle. Accordingly, risk is reduced as a result of a business model under which money is collected in advance of the service being provided.

METHODS FOR GAINING CONTROL OF RESOURCES

A hybrid of selling a product or service up-front is to pre-sell a promise of performance, and a specific example would be the sale of gift certificates, prior to providing (or even having the capacity to do so) a product or service. Detamore-Rodman (2003) chronicled the instance of entrepreneur and founder of The Chocolate Gecko, Lissa D'Aquanni, who employed the tactic:

> *In 1999, the cash-strapped chocolatier needed molds and a temperer for the Christmas rush. Recalling a strategy she had seen in a magazine, she sold discounted gift certificates to raise capital. D'Aquanni offered customers $25 in free chocolates for every $100 in gift certificates purchased. Within two weeks, she had $5,000 for the equipment purchase. 'A lot of folks mailed them as gifts to friends, family and co-workers,' D'Aquanni says. 'And most of those people ordered chocolates. My customer base exploded'....D'Aquanni routinely barters to pay for professional services for her business; both her accountant and Web site designer accept chocolates in exchange for their services.*

Another method that bootstrappers can utilize is to identify those individuals or organizations that stand to gain, and enlist them as participants in the enterprise. Small businesses, especially those started from a home-based location, often suffer from an image problem. Mamis (1992), writing for Inc. Magazine, wrote about an entrepreneur who satisfied this problem in a unique way, by trading office space in exchange for potential gain that the host business might incur:

> *'One thing I realized very quickly is that people want to see fancy offices, fancy letterhead, fancy everything,' says founder Michael Kempner of MWW/Strategic Communications Inc., in River Edge, N.J. He did not have fancy anything, but he had a friend in advertising who did. Kempner moved into the friend's office at no expense, on the quid pro quo understanding that his public-relations firm would steer advertising in the friend's direction. He even moved in on the ad company's name: 'I put a slash on it, added "Strategic Communications," and looked like I was part of a big company. It was all a mirage at the beginning. As far as my clients knew, here I was with a fancy name in a fancy office. Those were important, or people would not hire me. This way, they came upstairs and saw 40 employees, and thought they were working for me. I never told clients those people didn't work for me, and they never asked.'* (p.7)

Bootstrappers do not just concentrate on ways to raise cash through leveraging financial resourcefulness (such as by using credit cards, home equity loans, and so forth), they often think of clever ways to bring a plethora of resources into their businesses. Mamis (1992) identified these practices as "the distinction between capital-dependent and wit-dependent commerce" (p. 1). Manifestations might mean gaining access to people and their talents, inventory (e.g., on consignment), shared office space, and just about anything else through bartering. Local media are accustomed to bartering advertising with small and large companies, and many do it so often that they have standard contracts and are ready to trade on a moment's notice-they also trade with one another.

Bootstrappers may find help in the form of labor by trading on skills (the combinations are virtually endless) or banding together to form larger teams. For example, small advertising agencies frequently employ this technique by hiring out video production, design, market research, and numerous other services. Even three-way trades are possible: a magazine may provide advertising for a resort property or restaurant on trade; after accumulating trade credits, that magazine might in-turn satisfy one of its payment obligations by offering a stay at the property or dinner in lieu of cash payment. (Some crossover between gaining control of resources and minimizing expenses as discussed in this paper is unavoidable.)

METHODS FOR MINIMIZING EXPENSES

Arora (2002) suggested, "Dedicate yourself to becoming a frugal minimalist, and you'll be well on your way." The popular author of the "Guerilla" series of books (seminars and ancillary products) Jay Conrad Levinson (2005)observed:

> *By understanding that economizing does not mean saving money, but investing it wisely, guerrillas test their investments on a small scale before plunging headlong into any kind of marketing. They have no fear of failure, providing the failures are small ones and knowing that even one success in ten tries means discovering a path to wealth and profitability. They know in their hearts that money is not the key to happiness or success, but that enough of it enables them to have a key made. Real frugality is more about priorities and results than just saving money. (p. 1)*

As Levinson suggests, bootstrapping companies can reduce risk and minimize expenses (by taking smaller chances and making better decisions) in the same ways that large organizations ensure their successes, through research--before charging headlong into anything, not just marketing. Montana State University has created a program administered through its Center for Entrepreneurship for the New West that assigns student interns to technology businesses at the incubation stage of their development. The executive director of TechRanch, an associated organization that implements the incubation program stated: "If you are a young company in a heavy bootstrapping mode, getting pro-bono research is a big deal….the student interns get credit and real world experience. Our clients get free research. It is a good match" (Schmidt, 2004).

An initial reaction to the dictum to save money is to pay a lower price for purchases. It is obvious that one should obtain quotes and provide a vendor with a general idea of a needed end result for a manufactured product (or a service) and ask for design specifications, pricing, projected delivery schedules and terms. One should also negotiate terms for purchases from vendors and sales to customers carefully.

Notwithstanding the above, and while buying cheaper may have its benefits, spending wisely and purchasing with scalability and longevity in mind can be another way of economizing (and in our view deserves tremendous emphasis). For instance, regarding the preparation of marketing communications materials, Levinson advised: "When you say in a brochure that you've been in business five years, you must update that brochure next year. When you say you've been in business since l995, that's always going to be the truth" (p. 1). Following Levinson, business founders may wish to develop business communications and media skills. Being worthy of media attention (i.e., being newsworthy) due to a unique product, company history, team, or even aspiration can generate tremendous advantages and momentum that begets stories in hindsight of "being at the right place at the right time."

On the spending side of the equation, nascent entrepreneurs may minimize expenses by being taught to think differently about various business models. On the Internet, there are single-person businesses using technologies such as auto-responders, fully automated shopping carts with merchant processing, automated affiliate programs, drop shipping of tangible goods or

digital delivery of intangible goods, and additional outsourced services (e.g., Web hosting). Some of these individuals are generating significant incomes, often by selling or reselling information products "twenty-four hours a day without any intervention on…[their] part" (Kremer, 1998, p. 338). Entrepreneurship courses (and the stories told by entrepreneurs) may tend to portray a one-size-fits-all, life-consuming image of entrepreneurship relative to business models, business plans, and notions of bigness and growth; it might be argued that "micro, self-sufficient, virtual, part-time (or non-labor intensive), and automated" are desirable characteristics of a business model for undercapitalized entrepreneurs (including students).

Bootstrappers should probably avoid capital investment in virtually any item that can be outsourced. Common advice is to lease, not buy (Arora, 2002). However, advice that is more practical may be to minimize any long-term obligation if external production resources are available. Any kind of hardware is notorious for depreciation, yet entrepreneurs often buy or lease expensive copy machines, computers, phone systems, and other capital items that might be outsourced through a copy center, secretarial service, and answering service, respectively. A perfect example is Web hosting, which is available for less than five dollars per month, thereby making the purchase, or lease, of a server costing in excess of $2,000 hard to justify.

Hence, start-up entrepreneurs with little capital should be advised to strongly consider a business model that entails compensation prior to the delivery of a product or service (e.g., consulting, mail order, or niche oriented Internet businesses that do not require a glitzy Web site). An agency or brokerage-type business: connecting a party who needs to sell, with a party who needs to buy is consistent with the above notion.

An emphasis on pre-launch preparations, perhaps several years in advance may also be wise. For instance, an aspiring entrepreneur might stockpile non-perishable business assets over a long period of time. Businesses that have resulted from a hobby often start out with many of the necessary tools, contacts, sources, and skills on the part of the owner to be well equipped from their inception. A long-range approach also allows would-be business founders to conduct enormous amounts of research: library research, bookstore research, Internet research, and especially field research (the non-scholarly translation of field research: network, network, network, with prospective suppliers, customers, advisory board members, and other potential friends of the business). A greater emphasis on a long range process such as that which is described in general terms above would serve to minimize other risks by identifying stakeholders, economic development dollars, co-location opportunities or other cohorts with synergistic potential relative to the founding of a business.

CONCLUSION

What we are able to conclude is that: 1) beyond our own search efforts, previous scholars who have studied the use of bootstrapping (Van Auken, 2004) as well as differences among firms and consequences of various start-up financing strategies (Van Auken & Neely, 1996) have noticed a lack of scholarship pertaining to bootstrapping. Van Auken observed a "serious gap in the literature" (in apparent concurrence with the authors of this paper) and stated that "research on the use of bootstrap financing is limited" (Van Auken, 2005, p.95), even though "bootstrap financing

is a common source of financing" (p. 146); 2) textbook authors often do (and should) draw upon the existing literature in a given discipline in framing their content; 3) the popular textbooks that we have examined seemed to mirror the lack of coverage we found in the literature; 4) students' views and understanding in a given course should be informed in terms of depth, breadth, and a realistic view of their given subject area(s) after they have processed the content of their assigned textbooks.

More education and training are needed for would-be entrepreneurs such that they are more familiar with traditional sources of capital and non-traditional sources. Bootstrapping should perhaps be a course unto itself as an addition to university level entrepreneurship programs (Mamis, 1995). Mamis (1992) observed, "there's no course book of bootstrapping techniques, but there ought to be….the approach has much to teach--and even companies that have progressed beyond their bootstrap days would do well to relearn some of the proven tactics" (p. 2).

Van Auken (2005) has suggested that small business owners lack familiarity with sources of capital, and this influences their capital structure. However, it is also evident that raising capital from banks, venture capitalists, and other traditional sources for initial capitalization can at the very least, be difficult (Van Auken & Neely 1999) in the absence of a substantial inducement to join the entrepreneur's cause in the form of investors' potential for gain (Fried & Hisrich, 1995), collateral (Van Auken & Carter 1989), or both. Conversely, it does not seem adequate to send would-be entrepreneurs an abstinence message with respect to some of the more risk-prone methods that they might employ, or simply admonish that bootstrapping is fly-by-night and less than respectable (Rosenfeld, 1999) as compared to conventional wisdom (i.e., write a business plan, impress a banker).

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A PROPOSED EXAMINATION OF SELF-EFFICACY AS A MEDIATOR BETWEEN EXPERIENTIAL ENTREPRENEURSHIP EDUCATION AND VARIOUS PERFORMANCE OUTCOMES

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ABSTRACT

An important goal in higher education is to give students the tools needed to help them to be successful in their future endeavors. Traditionally, in business schools, these tools included teaching students the functional areas such as finance, accounting and marketing. As increasing numbers of schools begin to add more experiential entrepreneurship courses, students may begin to see benefits beyond the traditional preparation, including increases in self-efficacy beliefs and performance outcomes. Bandura (1986) describes the four primary influences on self-efficacy beliefs as the following: accomplishing the task (mastery), seeing others succeed (modeling), getting encouragement (social persuasion) and changes in emotional states. Students who go though the process of new venture creation will possibly see an impact from at least three of these influences. This paper examines the possible impact of experiential entrepreneurship education on various types of self-efficacy and the effect on academic and business performance outcomes. Finally, a formal model of the described relationship is offered as well as testable propositions.

INTRODUCTION

Many entrepreneurs will say that they were taught business skills such as accounting and marketing in college, but they truly learned these skills in the operation of their business. Undoubtedly, learning by doing (using real money with real customers and real problems) adds a critical element to the educational experience. To date, very few universities offer students the opportunity to start, run and manage real firms. Providing this option to students increases the student's knowledge about the functional areas of business, such as marketing, accounting and finance, but will also likely increase the student's belief in their ability to actually start and run a business. There are unique pedagogical aspects of entrepreneurship that make a compelling argument for experiential learning.

Teaching entrepreneurship is unique and challenging in numerous ways; including the difficulty of trying to teach something that almost certainly would be better offered with hands on experience. Although there are many experiential activities that can be taught in the classroom, until students actually start a business, they may not believe in their ability to do so. In fact, entrepreneurship may be one of the most difficult to teach, similar to teaching someone to drive

using a manual or how to swim on dry land. Experiential learning is based on the fundamental belief that individuals can learn better by doing. The philosophy that experience may provide a better education permeates the academic community, especially in the graduate business schools that require prior business experience prior to acceptance into the school. The prevailing philosophy being that once these students have work experience they can then reflect back on their own knowledge, apply it to situation and use it to understand the problem. However, many undergraduate students don't have the opportunity to obtain valuable business experience other than summer jobs and internships, thus denying the student a valuable learning opportunity (many students will attest to the fact that not all summer jobs and internships are a value creating proposition). However, Lewis & Williams (1994) suggest that experiential learning is taking a more prominent role in education.

This increase in experiential learning may offer benefits to the students beyond the pure pedagogical role. Specifically, the students who are engaged in experiential learning may see increases in self-efficacy and other performance outcomes. Bandura (1986) specifies that some of the keys to increasing self-efficacy are accomplishing the task (mastery), seeing others succeed (modeling), getting encouragement (social persuasion) and changes in emotional states. The most influential of these factors is derived from one's previous performance, or mastery experience, which is a large component of experiential learning. However, modeling, social persuasion and physiological impacts are also possible influences in the experiential entrepreneurship learning model.

This paper will explore the potential influences of experiential entrepreneurship learning on various types of self-efficacy as they relate to performance outcomes and offer testable propositions.

ENTREPRENEURSHIP AND EXPERIENTIAL LEARNING

Bygrave (1989) defined entrepreneurship as a "process of becoming rather than a state of being" (p21). This definition supports the idea that creating entrepreneurs is not about identifying entrepreneurial traits and characteristics or teaching them to write a business plan, rather it is a process of venture creation. Gartner's (1989) article " 'Who is the Entrepreneur' is the Wrong Question" epitomizes this definition arguing that entrepreneurs are not defined by their traits, rather by the process they engage. The majority of entrepreneurship courses in higher education tend to focus on the planning of a business rather than the actual process of new venture creations. This paper will first examine the value of experiential learning, followed by a review of self-efficacy in the business environment and discuss the possible relationships between venture creation, self-efficacy and performance outcomes.

EXPERIENTIAL LEARNING

Research in learning and experiential learning has grown in recent years. Many corporations have looked to learning as a source of competitive advantage (Probst & Buchel 1997). Brookfield (1984) and Kolb (1984) described learning as "the process whereby knowledge is

created through the transformation of experience". Experiential learning is any learning through the actual experience. Kolb (1984) describes experiential learning in the following manner: students engage in some activity, then reflect upon the activity, derive insight from the analysis, and incorporate the result through a change in understanding. In experiential learning, the individual uses their experience to transform activities into knowledge and development (Kolb, 1984; Torbert, 1972). Although experiential learning is taking a more prominent role in education, that is not necessarily the case in entrepreneurship curriculum.

The primary pedagogical tool for most universities is to develop a business plan in entrepreneurship classes. Hills (1998) surveyed entrepreneurship courses and found that writing a business plan was identified as being the most important course feature of entrepreneurship courses. Despite the heavy use of business plans, not all agree that there is sound justification for this approach. This point was articulated by Honig (2004) who argued "…neither the teaching of business plans, nor the plans themselves, are sufficiently justified on the basis of theoretical or empirical literature." Writing a business plan does not likely give students the belief that they can then go and start a business. In order to give students that belief, self-efficacy theory dictates that the student has some mastery experience or possibly sees others succeed in the venture.

Experiential learning is generally utilized as a pedagogical tool to enhance learning, but when viewed in a cognitive perspective, it appears that experiential learning will have a significant impact on specific self-efficacies. When one looks at the influences related to self-efficacy beliefs, it becomes apparent that entrepreneurship experiential learning should be highly related to these beliefs.

SELF-EFFICACY

Self-efficacy can be defined as the belief of "how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982 p.122). There are clear distinctions between the construct of general self-efficacy and specified self- efficacy. General self-efficacy is trait-like and therefore more immune to influence and may not be affected as much by the creation of a business. Contrarily, specific self-efficacy is more state-like and susceptible to influence.

Self-efficacy research would predict that higher levels of certain self-efficacy beliefs should help students to be able to achieve greater success and be motivated to do better. As Bandura (2001) stated "unless people believe they can produce desired results and forestall detrimental ones by their actions, they have little incentive to act or to persevere in the face of difficulties" (p. 10). When faced with a task, an individual will evaluate the task and make decisions about their belief in their future performance. Following this evaluation, the individual's level of self-efficacy will impact the decision to undertake the specific task, the amount of effort that will be expended in performing the task and the level of persistence in trying to accomplish that task. The full explanation of self-efficacy theory is beyond the scope of this paper, but briefly described, self-efficacy is rooted in social cognitive theory (SCT). Included in SCT is self reflection, which is the ability to look back at prior experiences, cognitively process what occurred, evaluate the success of the task and determine the probability of success in the future (Bandura 2001).

In this paper, it will be proposed that various types of self-efficacy be measured, including a generalized self-efficacy, entrepreneurial self-efficacy and a business acumen self-efficacy. Therefore in the context of this paper, unless otherwise specified, the term self-efficacy can be taken to mean any one of the above listed contexts.

SOURCES OF SELF-EFFICACY

There are multiple known influences on self-efficacy. Bandura (1986) postulates that the most influential component in forming beliefs about individual levels of self-efficacy is mastery experience. A second source of forming self-efficacy beliefs is through vicarious learning (seeing others accomplish the task). In the classroom, students who observe others succeeding may experience this vicarious learning and see increases in their efficacy beliefs. Often in entrepreneurship courses, students band together to help each other overcome obstacles and make their projects work. The environment is less focused on achieving a certain grade and more centered on helping each other tackle the myriad of challenges that arise from new venture creation, whereby the students offer verbal and other support.

Verbal or social persuasions, although less influential, do play an important part in levels of self-efficacy. This feedback may act to either increase or decrease self-efficacy, depending on the content of the verbal and/or social persuasions. Positive feedback that is specific and genuine, will likely lead to increases in self-efficacy and the opposite for negative feedback. In the an entrepreneurial classroom setting, students may be exposed to brutal feedback particularly when outside observers are used to evaluate student business plans, such as a business plan competition. However, the students also have the opportunity to overcome many of the critiques and apply the suggestions to the upstart of a business; therefore the negative feedback from reviewers may not necessarily negatively impact self-efficacy. A final source of self-efficacy comes from physiological and psychological arousal (how the individual feels, physically and emotionally).

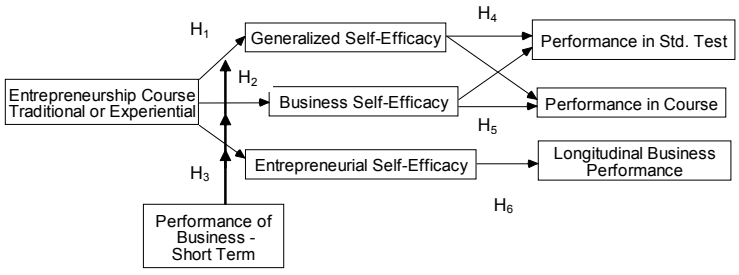
THE IMPACT OF SELF-EFFICACY ON WORK OUTCOMES

Put simply, a higher level of self-efficacy is related to higher levels of performance. People with higher levels of self-efficacy tend to work harder, have more interest and stay on task. The "belief in their ability to perform makes them less vulnerable to on-the-job conditions that aren't always supportive. It helps them to survive rejections. It helps them to persevere in the face of obstacles and setbacks" (Mager, 1992 p. 36). In organizations, self-efficacy has been shown to be strongly positively related to performance. Stajkovic and Luthans (1998) meta-analysis examined 144 studies and found there was .38 weighted correlation between self-efficacy and work performance. This correlation represents a 28 percent increase in performance related to self-efficacy (Stajkovic & Luthans, 1998). One positive attribute of self-efficacy beliefs is that because it is state-like, it can be influenced and specifically it may be influenced by an experiential learning environment in entrepreneurship.

SELF-EFFICACY AND EXPERIENTIAL LEARNING

Although some researchers have treated self-efficacy as a trait, this treatment is more commonly associated with generalized self-efficacy, whereas specified self-efficacy is considered more state-like and therefore malleable and potentially trainable. Given that task mastery is the strongest influence on self-efficacy beliefs, an entrepreneurship course that is experiential in nature will likely lead to increases in different types of self-efficacy. This paper proposes a multifaceted model in which entrepreneurship courses will lead to increases in self-efficacy. Chen, Greene, and Crick (1998) found that entrepreneurs have higher levels of self-efficacy than their counterparts in other areas. What this paper proposes to address is whether or not different types of entrepreneurship courses (experiential vs. traditional) will lead to increases in various types of self-efficacy and ultimately influence performance outcomes. It is also predicted that the relative success or failure of the business in the short run (the course semester) will act as a moderator influence on self- efficacy beliefs. The moderating effect of the short term business is discussed later in this paper. Figure One below shows the general model that is being proposed.

Figure One



PROPOSITIONS

This paper makes distinctions between generalized and specific self-efficacy, but there is also an argument that both types of self-efficacy should be tested. As stated prior, generalized self-efficacy is considered to be more trait-like and therefore may possibly be immune to interventions. Therefore it is predicted that the effects on generalized self-efficacy will be less than

those of the specified (entrepreneurial and business) self-efficacy. Nevertheless, a successful business may have some spillover effect insomuch that the individual who has overcome numerous obstacles in the creation of a new venture may see some increase in self-efficacy beliefs. Consequently, it is predicted an individual's generalized self-efficacy may increase when the businesses are successful. This belief is reflected in Proposition One.

Proposition One - Students who start new ventures may see significant increases in generalized self-efficacy.

Many small business owners will testify that true business knowledge came to them only after they had started and operated a business. A look at the primary influences on self-efficacy beliefs would indicate that an experiential course that involved the actual creation of a business should lead to an increase in business self-efficacy. Students who have successfully mastered the steps required for start-up will have achieved the required mastery experience. Once students have started up a new venture, it's possible that they will likely have the belief that they can replicate this action in the future and therefore have higher business self-efficacy beliefs. In addition to the mastery experience, the individuals should experience vicarious learning as they observe other businesses in the course having success. Finally, it's also possible that the verbal and social persuasion that often accompanies an entrepreneurship course could lead to increases in business self-efficacy (keeping in mind the moderating effect of the short-term business success). This relationship between experiential learning and business self-efficacy is reflected in Proposition Two.

Proposition Two - Students who start new ventures will see significant increases in business self-efficacy.

Starting a business and running a business are distinct, but related, propositions. The skill set related to starting a business involves scanning the environment, planning, and researching among other skills. Running a business involves hiring quality employees, training, selling and understanding financial concepts. Consequently, entrepreneurial self-efficacy beliefs will likely represent a unique construct versus business self-efficacy beliefs. To that end, a student who has taken a traditional entrepreneurship course that involves writing a business plan may see an increase in their entrepreneurship self-efficacy, but not necessarily a significant increase in business self-efficacy. The predicted relationship between traditional entrepreneurship learning and entrepreneurial self-efficacy is reflected in Proposition Three.

Proposition Three - Students who are enrolled in a traditional entrepreneurship course will see increases in their entrepreneurial self-efficacy.

SELF-EFFICACY AND PERFORMANCE

As stated in Proposition One, students who create a new venture may see an overall increase in their generalized self-efficacy beliefs. Given the strong evidence of the relationship between self-efficacy beliefs and performance outcomes, it is possible that students who have higher levels of generalized self-efficacy will see better results in their courses and/or standardized testing. This belief is reflected in Proposition Four.

Proposition Four - The increase in generalized self-efficacy will be related to better performance on a standardized test and/or classroom performance.

Having mastered the steps required to start a business, it is expected that students could use these real world experiences to understand the workings of the business beyond that of students who have not had such coursework. The experience of running a business should help student understanding as they progress through other courses. This understanding should exist independent of the short term performance of the business, as many business people can attest to the fact that one can often learn more from a failure than from a success. Therefore, the self-efficacy increase should lead to higher performance in the classroom and/or a standardized test, regardless of the businesses performance. This relationship between business self-efficacy and higher academic performance is reflected in Proposition Five.

Proposition Five - The increase in business self-efficacy will be related to better performance on a standardized test and/or classroom performance.

The evidence of the role of self-efficacy on performance in the workplace is strong. As stated prior, Stajkovic and Luthans (1999) meta-analysis indicated that self-efficacy beliefs accounted for a 28% increase in performance. It is predicted that students who have mastered the process of new venture creation and the running of small businesses will likely have increases in their self-efficacy. They will also possibly see better performance in their eventual businesses they create. This idea is reflected in Proposition Six.

Proposition Six - The increase in entrepreneurial self-efficacy will be related to better long-term business performance.

MODERATORS

Considering that self-efficacy research points to mastery of the experience as a major influence in increasing self-efficacy levels, failure to master the experience (i.e. business failure) could possibly have a negative effect on entrepreneurship self-efficacy. Performance or relative performance may be an important moderating variable in the levels of entrepreneurship and business self-efficacy, however it should be noted that entrepreneurship is a multi-step proposition. The financial performance is only one outcome in the process. In the creation of a new business

in an academic setting, the entrepreneur will have likely written and presented a business plan, filed articles of incorporation, obtained federal taxes, opened bank accounts, bought and sold products, learned accounting software and created profit loss statements using real money. Consequently, they will have mastered many of the task-specific requirements related to business formulation, even if the financial performance is considered a failure. Therefore, even in the presence of failure, students may believe that although they failed "this time", they may have the confidence that they can succeed in future endeavors. Nevertheless, financial performance should be considered as a mediating factor between business creation and entrepreneurial self-efficacy.

CONTROL VARIABLES

Propositions Four and Five address measurement of academic performance, therefore incoming standardized tests such as the SAT or ACT and/or college GPA could be used to control for predisposed differences in academic achievement. Additionally, one would have to consider the impact of those that self-select into entrepreneurship courses. When the course is voluntary, there may be a self- selection bias, where the students enrolling in the course have higher levels of self-efficacy from the start. Therefore, careful attention should be paid to those students who chose to take the course versus those who took the course as part of a curriculum requirement.

CONCLUSION AND IMPLICATIONS

Research in entrepreneurship has often focused on trying to predict who will become a successful entrepreneur. However, as Hatten (1997) succinctly stated "the conclusions of 30 years of research indicate that there are no personality characteristics that would predict who will be a successful entrepreneur" (p. 40). Consequently, recent attention in entrepreneurship research has turned to a more cognitive approach (Baron, 1998). This cognitive approach to entrepreneurship research, which includes self-efficacy, offers potential benefits in understanding performance. When combined with an experiential approach, it may lead to new approaches for increasing success rates in new venture creation.

To date, very few universities offer students the ability to actually start, run and manage real firms. It is anticipated that the experience will likely have positive outcomes in addition to pure educational aspects including increasing a student's self-efficacy. Bandura (1997) wrote that self-efficacy is the belief "in one's capabilities to organize and execute the courses of action required to produce given attainments", which has been linked to increased performance. Using this premise, this study proposes to examine the relationship between new venture creation and various cognitive outcomes in the belief that performance outcomes may be increased.

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IMPROVING ADULT CREATIVITY USING THERAPEUTIC MODELS

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ABSTRACT

This study examined changes in creativity among undergraduate students at a major southeastern United States university. The focus was on the interactions between 36 students and their professor within the context of the requirements for their coursework on organizational behavior. The student-teacher relationship was designed within the framework of a college classroom environment, specifically: (a) the level of Professorial Concern (PC) and (b) the climate of Affiliation (AF) as measured by student responses.

Each student was asked to produce a creative nametag at the beginning of the semester and then again, at the end of the semester. Analysis of variance showed a sig-nificant change (i.e., increase) in student creativity from pretest to posttest measures. This change was considered reliable when using Pearson r to measure the ratings of the 21 creativity judges (5 expert/16 peer). The two quantitative scales measuring the classroom environment, Professorial Concern (PC) and Affiliation (AF), produced a statistically significant increase in creativity from pretest to posttest. There was also a significant increase demonstrated in creativity change based on the beginning (pretest) level of creativity; the lower the starting level, the more increase that was experienced.

Creativity is "the most complex of human behaviors"
(Runco & Sakamoto, 1999, p. 62)

INTRODUCTION

There are several assumptions about the field of creativity. Some theories assume that you are just born with innate genes to be creative. Other assumptions indicate that you can create an environment and thus influence the creativity of individuals. When one observes a small child when he/she enters a school building for the first time, one observes an individual uncontaminated by many previous assumptions. In most cases, students who are ready for first grade are intrinsically motivated by the many different stimuli that they encounter in a learning environment. For the most part, many students are eager to learn and eager to try new and interesting ventures.

Public schools are not established to deal with this kind of creative thinking and sometimes unrelated learning. Schools are designed to teach a highly structured myopic view of the world and to teach it in a confining, stable environment. By the time the bright child reaches the third grade,

they have learned that creativity is not rewarded and in most cases not tolerated in the classroom. Therefore, the student conforms to school related norms and proceeds with his/her life.

The next major change in the student's life is when he or she leaves the elementary grades and enters the high school grades. Here again, the learning environment is struc-tured around disciplines. Very few cross-disciplinary activities take place. The student learns a concept or idea within the framework of a particular course and not in the framework of the world environment. The student adapts and finally moves on to the university. The university has the opportunity of providing the student with an intra dis-ciplinary approach to learning. But, in most cases, it does not do so. The student learns to solve problems frequently in a one-dimensional arena and learns facts and figures.

At last, the student finishes his/her formal education and enters the work world. He/she may take a job with a Fortune 500 company, with an international company, with a mom and pop organization or may start their own business. Now, not only is the individual faced with the structure and culture of a new company but also with government regula-tions and bureaucratic structures. (Clouse, 2004).

This research is about the development of learning environments that encourage creativity and stimulate the learner to investigate the unknown. While all children may begin life with similar levels of inherent creative potential (Guilford, 1967), many factors can shape the creativity levels used as adults. Biological, biographical, psychological, and sociological elements of each individual's life all have significant influence on if, when, and how much each person uses creativity. Creativity may be the major distinguishing feature in human behavior which most significantly con-tributes to excellence in all aspects of life (Torrance, 1974).

For teachers responsible for instructing learners, it is one of teaching's greatest challenges to help people use their creative potential. Since so much of one's creativity potential is established during childhood, there are fewer opportunities in which to influ-ence the creative process among adult learners. Therefore, many of the main tools im-pacting creativity are not within the adult-learning facilitator's sphere of control. The opportunity to learn about one's own creativity is analogous to psychotherapy in that, creativity requires learning more about one's internal self than about an external subject matter.

Since most facets of intelligence, personality, and talents are well established in adults, education and training are the most valuable factors impacting a person's increased use of creativity (MacKinnon, 1978). The good news is that, beyond a certain level of moderate intelligence, more intelligence is not necessary to substantially increase an adult's use of additional creativity (Simonton, 1999). The areas of most creativity influ-ence for an educator center on the strength of the student-teacher relationship and the quality of the classroom environment in which most of the learning interactions take place. Creativity is one of the highest orders of thinking skills. As a process, it is acutely con-cerned with broader and deeper concepts such as idea generation and problem solving while being less concerned with particular fact and data regurgitation. Today and tomor-row, creativity is a key component of intellectual capital, a measurement of a person's worth to society (Stewart, 1997). Stewart asserted that creativity is a primary raw material used as the source of innovation and regeneration for all kinds of organizations. As teachers prepare students for these mental rather manual roles doing society's needed work, using brains creatively will make

a person more valuable in the marketplace of life. Fur-thermore, the abilities provided from creativity may have more application to the issues that will undoubtedly face everyone in the future.

PURPOSE OF THIS STUDY

The focus of this research study was to address those specific areas of the stu-dent-teacher relationship within the classroom environment that may be able to exert in-fluence on changing an adult's creativity. As facilitators, we strive to inspire an increase in creative productivity or instill some appreciation for creative processing from adult par-ticipants. The role of facilitating the creative process may demand different qualities than for traditional instruction. Creativity development requires more than merely conveying information about a specific subject matter. General but powerful forces such as intrinsic motivation, courage, trust, faith, and risk taking are all significantly involved. In effect, the goal of facilitating creativity is to "put people in touch with their values, put people in touch with their purpose and to celebrate diversity" (Lynch & Kordis, 1988, p. 137).

Facilitating creativity goes beyond merely conveying information to either be remembered or forgotten. By helping students to develop their own latent creative resources, teachers are helping to formulate attitudes and abilities which will enable people to better solve unforeseen life problems in the future (Rogers, 1964). In metaphysical terms, "life is about invention, not survival. We are here to create, not to defend" (Wheatley & Kellner-Rogers, 1996, p. 11). These authors went on to say that creativity is inexorably linked to providing well-organized working solutions to the opportunities pro-vided by the issues of a continually evolving world.

One of the challenges of this study was the limited amount of influence that any one person can have on another's creativity. So much of the creative blueprint for individuals is formulated during childhood that it can be difficult to bring about a change (i.e., increase) of creativity in adults. It is generally agreed that there are four components of the creative discipline: person, process, product, and press (Isaksen, 1988). The following briefly de-scribes each of these four aspects and suggests how teachers/teaching may interact with or influence these elements of creativity.

Person

Each person's creative disposition is constructed from their own individual ances-tral background, life circumstances, and temperament (Guilford, 1975). It seems unlikely that, any common formula exists in which to precisely define groups of people. Much like a person's DNA, individual potential for using creativity is unique. Creativity can be de-scribed by criteria variables such as fluency, flexibility, originality, and elaboration (Tor-rance, 1962a) and everyone falls somewhere between zero and infinity on each dimension. People are likewise dissimilar in how they measure up on things such as willingness to take risks, tolerance for ambiguity, divergent thinking ability, independence, perseverance, intuition, sensitivity, and expressiveness. These variables form the basis of personality theory, which is beyond the scope of this study. By their very nature, however, these qualities are so subjective that it would seem impossible to classify

them for a general classroom learning situation. Yet, in combination, they form the basis for a preliminary understanding. Multidimensional student-teacher relationships can be better indicators of creative potential than any single factor taken alone.

Process

It is generally accepted that the four steps of creativity are preparation, incubation, illumination, and verification (Wallas, 1926). Each of these four steps has a very wide range of interpretation and application as determined by both the teacher and the student. Without factoring for individual student differences, the creativity process would not be optimized (Tumin, 1962). Therefore, it seems essential that teachers tailor each of the steps to the learning style of every student in order to maximize the effect of each one of the four steps along the way.

Products

Creative products are defined as those assessed to be novel by the expert judges in the specific field in which they operate (Jackson & Messick, 1978). Creative products can be construed to be as unique as one's fingerprints and therefore not subject to standard interpretation or categorization. It is more likely that a teacher can serve as a vital liaison by knowing domain expert expectations and understanding student circumstances for creativity generation. While products can be grouped by conventionally-accepted terms for types (e.g., systems, theories), producers (e.g., masters, makers), or creative outputs (e.g., services, ideas), products are usually maximized through an effective, although in-efficient, one-on-one relationship like mentoring or apprenticeship.

Press

This is the most influential element of creativity in which the classroom can create a climate supporting creativity by the personal interaction between the instructor/ facili-tator and the students/participants. "Environmental factors play a critical role in blocking or aiding the creative process" (Stein, 1974, p. 9). Since there is such a wide variety of social settings in which people find themselves, there is a corresponding wide variety of individual personality traits in which people use creativity (Freedman, 1976). Teacher influenced conditions most contributing a positive creative atmosphere are: respecting individuals, exhibiting confidence in people's abilities, collaborating with students, ex-posing people to a variety of experiences, encouraging creative activities, supporting ef-forts with appropriate resources, and recognizing/rewarding creativity (MacKinnon, 1966).

It is within this classroom context and favorable above-mentioned environment that the one-on-one relationship of the student and the teacher can have the most impact upon creativity output. While the literature is replete with studies about this area, there are a few aspects yet unexplored. For this research study, I have defined some specific teaching characteristics, which are ascribed to increase creativity in students and then verify any actual increase.

Society must provide systems for the support of creativity (Mockros & Csik-szentmihaly, 1999). Individuals need continual outside encouragement to pursue creative endeavors but society in general, falls short in that regard (Torrance, 1962b). Therefore, family, friends, and especially teachers must provide constructive feedback in order to advance any creative growth (Mockros & Csikszentmihaly, 1999). It is primarily a teacher's influence that permits individual development within the creative domains (Al-bert & Runco, 1999). Unfortunately, many classroom environments may suppress creative pursuits by not rewarding the extra work it takes for its teachers to support student crea-tivity (Dacey & Lennon, 1998).

Teachers provide a crucial link to the creative process of their students. Role modeling is one of the most effective ways to encourage creativity from students. By being available for mentoring both in class and outside of the classroom, teachers send a sup-portive message for creative expression (Harter, 1999). When students witness creativity from their teachers, they are likely to acquire creativity for themselves (Cattell & Butcher, 1968). Innate creativity is a very personal matter and it requires that students engage in their own exploration of that creativity in a very supportive teaching atmosphere (Perrone, 1991). In order to accept, understand, and foster student creativity, teachers must develop high student-individualized concepts of teaching.

The first step in delivering tailored teaching to maximize individual creativity is recognizing the different learning needs and abilities of each student. Learning style varies from person to person in terms of interests, capabilities, and manner of absorption (Gardner, 1993). There are different types of intelligence that people apply to idea generation and problem solving. Once a student's dominant intelligence is identified, good teachers adjust their teaching methods to appropriately connect with each student's learning style. Indi-vidualized instruction plans are imperative for excellence in this discipline since creativity can touch every specific aspect of learning (Gardner, 1993).

Once individualized instructional plans are developed for each student's particular mode of intelligence, it is critical that a student be intrinsically motivated. Since creativity is an ongoing process, task motivation is by far, the best predictor of success in this area. Motivation is more important than either knowledge of a specific domain or even creative talent (Amabile, 1996). Even more significantly, motivation can be the most leveraged of the three by the student-teacher relationship. It is a student's internal drive for satisfaction that brings about task achievement, not extrinsic reward or external recognition. It is a teacher that can best inspire using that internal drive.

Teaching can provide the psychological support and social influence that will affect a student's internal motivation, which will have more impact on their creativity (Amabile, 1996). Although individuals vary tremendously in their potential for creativity, according to Amabile, teaching has numerous possibilities to increase motivation and in turn, in-crease creative performance. Teachers must use their expertise to work with each student's desire to make improvements and with the many different ways they try to do their relative best.

When a person is sufficiently internally motivated and is supported strongly by the teaching climate, he or she will have passion for his or her chosen activities. When a person is motivated by intrinsic satisfaction, so much so that there is no difference between work and play, that person is called "autotelic" (Csikszentmihaly, 1975). People operating in this state of optimal intrinsic

motivation are said to reach a state of 'flow' which is a peak, zone, or even transcendental experience. It is a holistic sensation reached when a person has total involvement with a creative activity.

As a foundation for my teaching philosophy, this study uses a Humanistic orienta-tion strongly patterned after psychotherapists Carl Rogers and Abraham Maslow, who placed their faith in the human ability to solve their own problems using creativity. In this approach, the teacher's role is to nurture the individual talents of each student in order to foster the most ideas and the best solutions that they can generate (Albert & Runco, 1999). Many humanists believe that each person is considered unique, all creativity is multidi-mensional, and everyone is an evolving creative system (Gruber & Wallace, 1999). Gruber and Wallace further believed that creative self-expression is life's most important purpose; freedom of creative expression is everyone's right; and each creative event is unique and singular.

With these humanistic beliefs as a philosophical foundation, teachers, trainers, instructors, and facilitators can develop creativity stimulating techniques (Stein, 1974). The power of efforts to nurture creativity stems from teachers who can recognize the unique abilities in other individuals and help them to utilize those strengths in their own way of producing creativity (Treffinger, 1993). This potential clearly rests squarely on the quality and quantity of the interaction between the facilitating teacher and the participating student.

CONCEPTUAL FRAMEWORK

This study demonstrates a direct influence between the nature of the stu-dent-teacher relationship and any corresponding change in creativity. In this study, a teacher will employ the posture and disposition similar to that of a 'therapist' when fa-cilitating the creative process. Likewise, the treatment of the student in this study will be similar to that of a 'patient' when concerned with generating creative products.

Carl Rogers (1959) pioneered two basic conditions that are essential for an at-mosphere conducive to creativity. "Psychological freedom" exists when all symbolic expression is welcomed. "Psychological safety" exists where all individuals can be un-derstood, have unconditional worth/value and can receive empathic nurturing without fear of external evaluation.

In these states of psychological freedom and safety, therapy patients (as well as creativity generators) have responsibilities to respond in very helpful and healthy ways beyond the clinical setting. For example, they must be open to new experiences and not be rigid or controlling in any way. They also must develop an internal locus of evaluation whereby they work to satisfy their own standards of credibility and not the determinations of others. Finally, patients (and students) need to have the ability to experiment insofar as they are comfortable with elements and concepts that can be ambiguous, unpredictable, unstable, or even chaotic. These are the inner conditions of therapy that I hope to replicate for creativity in the classroom between student and teacher.

Rogers (1964) asserted that there are four practices that must be consistently en-acted for a favorable relationship to exist between a patient and a therapist (and I hy-pothesize will parallel between a student and a teacher):

1. The therapist (teacher) must relate in a genuine manner,
2. The therapist (teacher) must relate with unconditional positive regard,
3. The therapist (teacher) must relate with accurate empathy, and
4. The therapist (teacher) must be more congruent and more emotionally healthy than the client (student).

According to Rogers, these dispositions translate very well to student-centered teaching. As self-awareness increases, creative awareness can also increase. Since a lot of learning about self happens in therapy, this approach will help a student begin to naturally change in ways that will make he or she much more willing for the creative process and products. Patients or students will begin to feel like mature people who are able to openly accept themselves and others more readily while being more confident to better express feelings. Students can become flexible enough to self-direct towards realistically per-ceived objectives without the maladjusted behaviors that can limit achievements. For these reasons, they can open up to much more creativity production.

Since so much happens in good therapy, Rogers (1964) saw strong parallels be-tween therapist-patient learning and the counseling model of good teacher-student learning:

1. Both deal directly with real problems,
2. Both must be accurate in awareness and real in experience,
3 Both use unconditional positive acceptance and empathic understanding,
4 Both relay on honest, authentic communication to help achieve self-actualization, and
5 Both generate new ideas in an attempt to solve problems.

Others who have followed Rogers (1959) have built on these ideas. "Listening as a therapist listens" (Ray & Myers, 1986, p. 82), has become a good model for teacher-student creativity work. Therapeutic listening involves actually experiencing the student's reality by giving up one's own mind's chatter. Also, it is essential to quell one's own desire to talk, which can block the ability to effectively listen. It is necessary to suspend all judgment while listening.

It is critical to pay particular attention to what is important to the speaker: identify, empathize, have compassion, focus on one main event at a time; what is really happening now? Finally, intentionally ask "dumb" questions to produce new beginnings; develop insights; initiate meaningful answers/actions and to produce more creativity (Ray & Myers, 1986). By treating the teacher-student relationship like a counselor-patient relationship, complete with a strong reliance on intuition, I hypothesize that creativity can be signifi-cantly increased.

Another important offshoot of Rogers' (1964) work, which promotes constructive changes for the betterment of the student-teacher relationship, is Carkhuff's Helping Model (Carkhuff, Pierce, & Cannon 1977). This common sense approach has a very strong connection to creativity. This model consists of the following elements: A teacher prepares to become totally involved in a particular task with each specific student. A teacher uses his or her intuition to explore all possibilities. A teacher understands from exactly where the student's ideas are emanating. A

teacher mediates necessary changes through honest, constructive feedback. Finally, the process culminates with the appropriate action necessary to successfully complete the task (Carkhuff, 1977).

Carkhuff's (1981) process involved four separate but interconnected phases:

1. *Attending*--this is when both parties get to know each other using active listening, good eye contact, and acknowledgment of each other's physical presence.
2. *Responding*--this is when both verbal and nonverbal communication takes place to check out the content of all messages and feelings.
3. *Personalization*--this is the relationship-building stage when the meaning of the bonds is established and problem identification is made.
4. *Initiation*--this is the phase where goals are stated, agreed to, and a schedule for a course of action is made along with a program of practice and feedback.

While Rogers' (1964) work serves as the ideological inspiration for the conceptual framework of this research, Carkhuff's (1981) work serves as the practical manual for the classroom procedures. In all teacher facilitation initiatives, learning must begin with the student's frame of reference. The learning environment must be comfortable and natural for the student. Instruction must be delivered in small steps building upon comprehension of the previous lesson. The teacher must transfer much of his or her knowledge to the student through giving of his or her authentic self. Finally, learning must culminate in the successful achievement of an agreed-upon goal (Carkhuff, Berensen, & Pierce 1976).

In summary, the conceptual framework rests on two pillars of mutually-supportive theories in order to make a direct connection between the interaction of an extremely competent teacher/therapist/helper and the improved creativity output of a willing stu-dent/patient/learner.

From these two foundational theoretical constructs, the following operational assumptions in the research design are made regarding the teacher-student relationship during the 4-month intervention:

1. A congruent, understanding, humanistic relationship interaction like that between an authentic, empathic counselor and a vulnerable but trusting and accepting patient. This is most like the Therapeutic Communication model as developed by Carl Rogers (1964) and represents the "office" aspect of the framework
2. A constructive, helping, learning interaction between a student-centered teacher and a self-actualizing student. This is most like the Helping model as developed by Carkhuff et al. (1977) and represents the "classroom" aspect of the framework

Since there does seem to be a strong framework from which to build a bridge be-tween teachers who can facilitate creativity and students who have potential to generate creativity, what is the key to solidifying that relationship? This is considered a daunting challenge for instructors of all kinds because very few people will ever reach their creative potential (Nickerson, 1999).

This burden will fall upon teachers to be adaptive and flexible since there appears to be no single method for increasing creative productivity from learners. Policies, pro-cedures, and

programs must be tailored for different types of students who possess dif-ferent learning styles and needs. Creativity is not so much taught as it encouraged and supported by teachers who do so by example. Teachers model creative problem solving and idea generation in their subject matter methodologies and by allowing students to know and identify with their personal values, philosophies and behaviors (MacKinnon, 1978).

Teachers, at their best, can be talent developers who inspire students to use a mul-tiplicity of their abilities and allow creativity to be the processes by which knowledge unfolds. By manifesting individual working styles appropriate for each circumstance, teachers can nurture creativity tremendously. By using creative instruction techniques, teachers practice what they teach. Finally, by eliciting creativity from their students, they foster acceptance and toleration that enables those students to experiment without fear of risk or reprisal (Taylor, 1975).

RESEARCH QUESTION

If the theories previously described in the conceptual framework can produce positive results regarding therapeutic helping and patient learning, then my hypothesis is: Will those very same techniques be able to facilitate an increase in creativity on behalf of my students? Can the demonstrated creativity level of students be significantly increased over a period of a 4-month long semester by using teaching techniques that combine the Therapeutic and Helping models?

It was essential to create a classroom environment free from any kind of authoritarian leadership. In an atmosphere with a high level of dogmatism, the less likelihood there is for creativity to flourish (Rokeach, 1973). Rather, the objective would be to help students become intrinsically motivated to produce more creativity in their class work. Challenging students but giving them a lot of latitude to develop a feeling of guided autonomy can best help them accomplish this. They must be provided with free access to the necessary teacher controlled resources of time, caring, and materials to feel secure on their journey. Finally, personal encouragement and organization support must be available to make them feel that creativity, rather than conformity, can be pursued in a very safe place (Amabile, 1998).

METHODOLOGY

Since my research question sought to elicit specific relationship attributes that foster creativity, the design of this study attempted to: (a) measure any change in creativity from the pretest to the posttest and (b) identify what teaching intervention factors, if any, may have caused or, at least contributed of said creativity changes. A quantitative meth-odology was employed in order to help understand the effects of any creativity change from the beginning of the semester (pretest) to the end of the semester (posttest) as a result of the 4-month teaching intervention. This quantitative instrument was used to measure each of the two creativity outputs and to assign a creativity score for each example of the students' work. Another quantitative instrument was used to measure key components of the classroom environment and the teacher impact on that environment.

TEST SAMPLE COMPOSITION

The subjects for this research were 36 students from a course in the Human and Organizational Development program at Vanderbilt University's Peabody College. The course is an introduction to organizational theory and behavior. It is a required course for HOD majors and an approved elective for Arts and Sciences students, especially those pursuing a minor in Managerial Studies. Most students take this course during their sophomore year and most are 19-years-old.

The demographic factors of major, class year, and gender for the test group are shown in Table 1. The majority of the test subjects were women (77.8%) who were sophomores (58.3%) and HOD majors (61.1%).

Table 1: Demographic Factors

	N	%
Undergraduate major		
HOD	22	61.1
A & S	9	25.0
Dual w/ HOD	5	13.9
Total	36	100.0
Year in School		
Sophomore	21	58.3
Junior	13	36.1
Senior	2	5.6
Total	36	100.0
Gender		
Women	28	77.8
Men	8	22.2
Total	36	100.0

PRETEST MEASUREMENTS

Individual Nametag Exercise

On the first day of class, students were given an assignment that was designed to measure their creativity prior to the teaching intervention. Students were asked to con-struct their own nametag that would serve as a vehicle for self-introductions 2 days later during the following class period. No specific instructions, directions, or guidelines were given other than "to be as creative as you can and want to be in the visual representation of your name." No methods, media, or materials were suggested or restricted. Any student questions about the exercise were answered in exactly the same manner, "there are no particular rules, expectations, or limitations to do the exercise. In short, anything done will be totally acceptable." It was also made clear that there would be no grades assigned to this project.

The next meeting of the class was begun with the explanation of each individual's nametag. Each student presented his or her own nametag one-at-a-time. Most of the students stood up and directed their attention towards the entire class. When all of the presentations were completed, I collected all 36 nametags to be permanently mounted on white foam-core boards and then locked away for safe keeping until the end of the se-mester.

TEACHING INTERVENTION

During the course of the 4-month semester, I worked to create the kind of learning environment that would foster the natural creativity that every person possesses. By working to incorporate many of the teaching/facilitating techniques espoused in the lit-erature, I wanted to enable the students to access as much of their creative potential as possible. I was expecting the students would demonstrate more creativity in the posttest exercise than in the pretest exercise. Furthermore, I was suggesting that the practices utilized during the teaching intervention would have some positive effect on the students' change (increase) of creativity expression.

In order for students to use their own individual creativity, a condition of support must exist for the student in the classroom (Mockros & Csikszentmihaly, 1999). The most influential factor in that support is for the instructor to serve as the role model for leading the creative process of the students (Harter, 1999). The teacher can create an atmosphere that can motivate the students to risk being open to their own creativity. In that role, teachers can be creative themselves in their own working style; use highly creative methods of instruction; and bring a form of creativity to those whom they lead (Taylor, 1988). My goal was to bring all three facets of creativity to my students during the se-mester.

I was very conscious of encouraging the students to use creativity every chance that they could. I mainly tried to convey this to them by modeling creativity in the presentation style of my own lessons as well as in the methodologies employed to convey the course material. I always attempted to be open and honest with my feelings, thoughts, and beliefs while encouraging then to do the same with me. I tried to nurture any and all ideas that students brought to me and would steer them towards problem solving using new and in-novative answers.

I was always willing to help any student in any way possible. For example, stu-dents were encouraged to call me at home any time of the day or night if they needed to talk to me. Likewise, I was in my office mostly all day, every day and students never needed an appointment to meet with me nor were they restricted by specific office hours if they wanted to see me. By being available to the students all of the time and by being willing to see the possibilities in mostly anything that they brought to me, I was trying to develop a relationship of trust, respect, confidence, and affection between myself and my students. It felt as if anything could be possible emanating from the classroom experience as long as we were able to collaborate for our mutual interests.

In trying to apply Rogers' (1959) work on the atmosphere conducive to fostering constructive creativity, I wanted the students to feel both psychological freedom, where symbolic expression is encouraged, and psychological safety, where individuals are ac-cepted as having unconditional worth and value. This is best achieved when teachers can use empathic understanding without the pressures of external evaluation. While it must be acknowledged that grading always will cause pressure for classroom performance, I be-lieve that our class environment seemed very safe and free from outside forces. The College Classroom Environment Scales was used to measure this.

I also tried to follow the research findings on intrinsic motivation from Amabile (1996). According to Amabile, students are less likely to respond to extrinsic stimuli when engaging in creative behaviors. Her research indicated those things like money, prizes, rewards, and grades might have a negative effect on creative expression. By allowing each student to have as much autonomy as possible with regard to his or her own unique learning interests and style, I believed that I was supportive of their own creativity. By giving them a level of comfort needed to be vulnerable enough to get more in touch with their own individual creative "reservoirs," I hoped that they would share more of them-selves with me and with their classmates.

Since my conceptual framework is partially based upon the Therapeutic Learning Model, many of my classroom techniques were based on a paradigm of helping students as they needed and wanted. For example, I always tried to "listen as a therapist would listen" to student concerns (Ray & Myers, 1986). This would include trying to be open-minded, suspending judgment, having compassion, focusing on one event at a time, trying to limit my own talk (no easy task by any means), and asking probing questions whenever possible. This required always reacting in a genuine manner with students, giving as much positive regard as possible, remaining very precise with my feedback, and as authentic as possible with my own creativity.

Carkhuff (1981) also built on Rogers' (1959) work with his Helping Model for learning. This model influences my teaching style tremendously in that I always try to do the following: I attend to each individual student's needs and wants. I respond to their feelings and to their communication. I build personal relationships that are meaningful. I initiate learning from their beginning frame of reference step-by-step until they reach their ultimate goal. These steps can keep both my students and me highly involved exploring any opportunities together in an effort to understand the creativity that can culminate from the total learning.

Tenenbaum (1968) suggested a methodology for optimal creativity in the classroom and I tried to use most facets in my teaching. He advocated total acceptance of students as worthwhile human beings so I always tried to be tolerant. He suggested that animated discussions are highly

valuable so I tried to have spirited groups. He encouraged diverse points of view in class thinking so I tried to include everyone. He felt that people should sincerely be interested in being in class together so I tried to be sensitive. Finally, he thought that much of the course should be unstructured so I tried to use resources creatively. In short, I let students co-create the curriculum. (Not that they always em-braced such ambiguity.)

POSTTEST MEASUREMENTS

Towards the end of the semester and without prior notice, I asked the class to make another nametag to be presented during the next class period. Once again, in order to not influence the exercise, no specific instructions, directions, or guidelines were given other than "to be as creative as you can and want to be in the visual representation of your name." Even though no methods, materials, or media were suggested or restricted, the students probably knew a little more about the exercise since it was the second such type effort of the semester.

Each of the 36 students explained their new nametag to the entire class. Once all of the presentations had been completed, I collected every nametag in order to be mounted on foam-core boards and locked away for safe keeping with the those original nametags from the beginning of the semester.

CLASSROOM ENVIRONMENT EVALUATION INSTRUMENTS

In an effort to quantify the impact of the teaching intervention vis-á-vis standardized norms for such classroom climates, the College Classroom Environment Scales (CCES) (Winston et al., 1994) was given to all 36 students on the last day of class. The purpose of this survey was to measure two specific aspects of the classroom atmosphere, which may relate to an impact upon student creativity. Each of these subscales utilized a 5-point Likert scale.

Professorial Concern (PC)

This measure uses 12 questions to determine student perceptions of their instruc-tor's [i.e., my] personal concern about them as individuals and as striving to foster their education and own achievements. The professor is seen as being friendly, caring and open, as showing empathy in his or her interactions as well as respecting students' ideas. (Winston et al., 1994, p.12)
Scores ranged from a low of 1 to a high of 5.

Affiliation (AF)

This measure uses six questions to determine what students see as "promoting in-formal interactions and as being highly supportive, friendly and student-centered. Coop-eration and development of mature interpersonal relationships are perceived by students as being valued" (Winston et al., 1994, p. 12). Scores ranged from a low of 1 to a high of 5.

Both of these subscales were evaluated against the norms established by three other major studies (Winston et al., 1994) in order to compare the effect of the teaching inter-vention for this research project to those historical Professorial Concern and Affiliation measurement levels. The purpose of this comparison was to identify any significant im-pact of the teaching influence upon the total classroom environment for this particular research study. Once established, any difference to historical norms was compared to any changes in creativity output over the course of the 4-month, semester-long study.

ADDITIONAL QUANTITATIVE COMPONENTS

Since creativity is a highly subjective concept which is defined by experts in any given discipline (Jackson & Messick, 1978), the nametag exercises were evaluated by individuals with expertise and/or interest in the field of creativity in an academic milieu. It was decided to use two different groups of judges for this research as follows:

1. The expert judges were five faculty members from various schools within the university, all of whom have considerable experience with regard to assessing creative products from student populations.
2. The peer judges were 16 undergraduate students currently studying creativity together within the context of a course. It was determined that they also bring a similar perspective of those students whose work is being judged due to very similar demographic character-istics.

Process for Peer Judges

Both the pretest and posttest boards of mounted nametags were brought into the classroom where these 16 undergraduates were concluding their course on creativity. The nametags were not identified other than by a coded number and the peer judges were blind with regard to the pretest and posttest distinctions insofar as the boards were randomly placed and not labeled.

The students were given two blank scoring sheets each numbered 1 through 36 (corresponding to the labeled mounted nametags) on which to record their scores. The scoring sheets had a rating from 1 to 5 for each of the 72 nametags to be evaluated. The judges were asked to circle only one score for each of the entries from 1 for a least creative nametag through 5 for a most creative nametag.

The 16 judges were then free to walk around the boards for the next 30 minutes or so in order to get a good look at each of the 72 nametags and assign a rating from 1 to 5 for each one of the entries. They were able to do this in an unsupervised manner and where they were able to record their scores confidentially.

When they were all finished, the rating sheets were collected and the scores were entered in SPSS for statistical evaluations. The boards were then returned to their locked storage.

Process for Expert Judges

Both the pretest and posttest boards of mounted nametags were randomly set up in a conference room on campus for evaluation by the five expert judges. Like the peer judges, the experts were given two scoring sheets of 36 numbers each, to record their rat-ings of between 1 through 5 for all of the 72 nametags. The same scoring system of 1 for a least creative nametag through 5 for a most creative nametag was employed. All of the nametags were unidentified as to creator and pretest/posttest but only included numbers 1-36 on one set of boards and numbers 37-72 on the other set of boards.

The expert judges made their rating determinations independent of one another and were free to take as much time as they need in a private and confidential manner. Once the scoring was completed, I collected the rating sheets in order to enter the data into the SPSS computer program for statistical evaluation of any statistically significant quantitative changes between the pretest and posttest exercises.

RESULTS

The primary purpose of this research was to gain better insight into how a teaching environment might influence creativity. Would factors such as trust, comfort, respect, acceptance and affinity help facilitate a change in students' creativity during one semester of 4 months?

RELIABILITY

In order to determine the consistency and compatibility of the judges' ratings on the 5-point Likert scale, I ran alpha-scale reliability analysis for both the pretest and the posttest scores. I evaluated the expert judges as a group, the peer judges as a group, and the 21 total judges as a group (see Table 2). Alpha scores over .85 are considered reliable for this type of study. Table 2 summarizes rater reliability.

Table 2: Reliability Scores

Judges	Pretest alpha	Posttest alpha
5 expert	.91	.87
16 peer	.97	.96
21 total	.96	.96

As shown in Table 2, the five expert judges had an alpha of .91 for the pretest ratings. The posttest alpha for the expert judges is .87. Both the pretest and posttest data is considered very reliable for this analysis of the expert judges' ratings. As also shown in Table 2, the 16 peer judges

had an alpha of .97 for the pretest ratings. For the posttest ratings, the alpha was .96. The inter-rater reliabilities were consistent for both judge groups.

Combining the two groups produces an alpha of .96 for the pretest ratings of the 21 judges and an alpha of .96 for the posttest scores. This further suggests a very high level of reliability of the creativity scoring data.

SIGNIFICANCE

Pretest and posttest instruments were administered to measure creativity at the beginning of the semester and again at the end of the semester. Each of the test scores was analyzed using the four-part (Pillai's Trace; Wilk's Lambda; Hotelling's Trace, and Roy's Largest Root) multivariate tests to determine if any changes in creativity could be detected during the 4-month testing period. For purposes of this study, it was determined that, a level of .05 would be considered significant. A difference was found between pretest and posttest at the .005 level indicating a significant difference in creativity.

JUDGES' RATINGS

Expert

These five judges gave a pretest mean rating for the 36 students of 2.34. The expert judges' mean rating for the posttest scores was 2.94 or, an increase in creativity of 0.59. This change represented a .003 level of significance as measured by the paired samples test.

Peer

These 16 judges gave a pretest mean score of 1.99 for the 36 students and 2.49 for the posttest creativity mean scores. This change represented a 0.50 increase in the mean creativity scores or, a .011 level of significance as measured by the paired samples test.

Additionally, I chose to evaluate the similarity between the 5 expert judges' ratings and the 16 peer judges' ratings. As measured by the Pearson test, a .70 is considered to be a reasonable level of similarity. Since there was a .90 level of correlation between the expert judges' creativity ratings and the peer judges' creativity ratings, for purposes of this analysis, the 21 total judges can be confidently used as one body of evaluators with a very high level of creativity rating similarity.

The total group of 21 judges showed a pretest creativity rating of 2.17 and a posttest mean rating of 2.71. This increase of 0.55 on the 5-point Likert scale resulted in a .005 level of significance. Table 3 summarizes these findings.

Table 3: Significance Level--Judges' Ratings				
Judges	**Pretest**	**Posttest**	**Change**	**Significance level**
5 expert	2.34	2.94	+0.60	.003
16 peer	1.99	2.49	+0.50	.011
21 total	2.17	2.71	+0.54	.005

CLASSROOM ENVIRONMENT

As a method to measure the climate of this teaching intervention, the College Classroom Environment Scales (CCES) (Winston et al., 1994), were employed. More specifically, the subscales of Professioral Concern (PC), which measures individual teacher involvement with student achievements and, Affiliation (AF), which measures conditions for a student-centered atmosphere, were utilized.

Professorial Concern (PC)

The maximum score for this 12-question instrument is 60 for its 5-point scale. Based on three, separate studies involving 1,318 respondents, the norm for this subscale is 46.6. The mean score from the 36 students for this teaching intervention is 57.2.

As measured by the one-sample t test, two-tailed significance is .000. This is not surprising since the very lowest PC rating (49) for the instructor during this intervention is actually 2.4 points higher than the average (46.6) for all of the previous studies. Therefore, there was a significant difference in the impact of PC during this teaching intervention vis-á-vis historical measures of the same effects. Table 4 summarizes the frequency dis-tribution for PC scores.

Table 4: Creativity Ratings--Professorial Concern (PC)				
PC rating	**N***	**Pretest mean**	**Posttest mean**	**Change**
60	12	2.15	2.52	+0.37
59-57	11	2.27	2.58	+0.31
<57	13	2.10	3.05	+0.95
57.2	36	2.17	2.71	+0.54
Note. Norms = 46.6. *N = 1318				

In an attempt to discover any possible correlation among PC frequency distributions for this intervention and the increases between pretest and posttest creativity scores, both ANOVA and Non-Parametric tests were conducted (see Table 5). Both tests were used as a double check against either normal or nonnormal frequency distributions. Using each method, there was no significance to the differences in the pretest or posttest crea-tivity changes when correlated to PC ratings for this classroom teaching intervention.

Table 5: Significance Level--Professorial Concern (PC)

Professorial Concern test	Significance level
ANOVA (linear)	.30
Kruskal-Wallis (nonparametric)	.36

The PC ratings were collected at the end of the semester. Quite simply, the PC rating distribution was extremely skewed towards the high-end scores with very little frequency variation and therefore, had no statistically significant effect.

Affiliation (AF)

The maximum score for this six-question instrument is 30 for its 5-point scale. Based on three separate studies involving 1,318 respondents, the norm for this subscale is 21.9. The mean score from the 36 students for this teaching intervention is 26.1.

As measured by the one-sample t test, two-tailed significance is .000. This is not surprising since the very lowest AF rating for this teaching intervention (21) is only 0.9 point lower than the average (21.9) for all of the previous studies. Therefore, there was a significant difference in the impact of AF during this teaching intervention vis-á-vis his-torical measures of the same effects. Table 6 summarizes the frequency distributions for AF scores.

Table 6: Creativity Ratings--Affiliation (AF)

AF rating	*N	Pretest mean	Posttest mean	Change
30-28	12	2.46	2.82	+0.36
27-25	13	1.97	2.32	+0.35
<25	11	2.12	3.04	+0.92
26.1	36	2.17	2.71	+0.54

Note. Norms = 21.9. *N = 1318.

In an attempt to discover any possible correlation among AF frequency distribution and increases between pretest and posttest creativity scores, both ANOVA and Non-Parametric tests were conducted (see Table 7). Both tests were used to account for the possibility of either normal or nonnormal frequency distributions. Using each method, there was no significant difference in pretest or posttest creativity changes when correlated to AF ratings for this classroom teaching intervention.

Table 7: Significance Level--Affiliation (AF)

Affiliation test	Significance level
ANOVA (linear)	.35
Kruskal-Wallis (non-parametric)	.42

The AF ratings were collected at the end of the semester. Once again, the AF rating distribution was extremely skewed towards the high-end scores with very little frequency variation and therefore, had no statistically significant effect.

BEGINNING LEVELS OF CREATIVITY

At the start of the semester, creativity levels were measured (pretest) for all 36 students. It was thought that these initial creativity levels might somewhat influence the changes in creativity measured at the end of the semester (posttest).

Table 8 summarizes the frequency distribution of those students who began the teaching intervention with lower creativity scores (1.00-2.49) and those students with higher creativity scores (2.50-3.99). Tables 8 and 9 summarize those findings.

Table 8: Creativity Ratings--Beginning Levels of Creativity

Pretest level	N	Pretest mean	Posttest mean	Change
1.00-2.49	23	1.56	2.47	+0.91
2.50-4.00	12	3.16	3.24	+0.08
Total	35*	2.11	2.74	+0.63

*One student fell outside of these parameters. The pretest rating for this student was 4.26 and the posttest score was 1.88, a decrease of (2.39). For purposes of assess-ment, this individual was excluded from the calculations since it is the only such student to ex-hibit such a performance (outlier).

Table 9: Significance Level--Beginning Levels of Creativity	
Pretest creativity level	**Significance level**
ANOVA (linear)	.02
Mann-Whitney (nonparametric)	.02

To allow for both normal and nonnormal frequency distributions, ANOVA and Non-Parametric tests were used. There was a statistically significant change between pretest creativity ratings and posttest creativity ratings depending of the level of the crea-tivity scores at the beginning of the intervention. It would appear that students who began the semester with lower creativity levels (pretest) demonstrated statistically significantly higher creativity increases (posttest) after the teaching intervention than do those students who began the semester with higher creativity scores.

REFLECTIONS, CONCLUSION AND DISCUSSION

The focus of this research is to address those areas of the student-teacher rela-tionship and the corresponding classroom environment which may be able to exert an in-fluence on changing an adult's creativity.

Reliability

Reliability is that measure that enables us to have confidence in the evaluation ratings that the judges assigned to each creative exercise. Since creativity is such a sub-jective quality to measure, the reliability tests were an important statistic for our level of confidence in the judges' ratings. Each person brings with them his or her own expecta-tions, perceptions, definitions of creativity and evaluation of products. It can easily be-come a highly individualized scoring exercise with very little standard of validity. The reliability tests that were conducted indicated a high level of similarity in judgments re-sulting from the ratings process.

As one might expect, the 16 peer judges were a fairly homogenous group and therefore, displayed very high levels of reliability and a small range for both the pre-test and the post-test scores. As shown in Table 2, the alpha score was .97 for the pre-test and .96 for the post-test. Even the inter-rater reliability, as measured by one of the judges' scores to account for any abnormalities, manifests very little variance. This would suggest that, as peers of the test participants, very similar standards of creativity must have been used for this judging.

The 5 expert judges form a more heterogeneous group in terms of age, race, eth-nicity and life history background but still demonstrated high reliability for their creativity ratings. Also shown in Table 2, the pre-test alpha score for this group of expert judges was .91 and was .87 for the post-test scores. In the case of the expert judges' inter-rater reliability, however, there was a substantial deviation from one of the judges. If the scores from judge 'LN' are removed from the reliability test, the alpha increases to .94 for the pre-test and .90 for the post-test ratings. This judge

seemed to have more stringent criteria for evaluation. Interestingly enough, this expert judge was the professor for the group of peer judges.

When combining the two groups, the 21 judges' creativity ratings produce a pre-test alpha score of .96 and a post-test alpha score of .96. For purposes of this research, the most important aspect is that we have confidence in the fact that these subjective creativity ratings are an accurate reflection of changes in creativity over the four-month teaching intervention and consistent across each group of judges and in total. As a result of this consistency, there is a predictable relative relationship among all of the judges' ratings. (Table 2)

Since there is no objective measure in creativity evaluation, it is necessary to assess any changes during the research study period. It seems plausible that the more homogenous peer judges, (similar age, self-selected elective course in same university), could be more consistent in their rating profiles while the more heterogeneous expert judges, (more di-verse demographics), could possess a slightly more variance in their interpretations of creativity. While this is only conjecture on my part at this point, it might warrant some future exploration.

Significance

Since the post-test creativity ratings measured a statistically significant increase when compared to the pre-test ratings, the research project would seem to indicate a certain level of success. The challenge with this project, however, was to identify those factors which may have contributed to the change in creativity scores as a result of the teaching intervention which transpired over the duration of the four-month semester. Creativity is subjectively defined in the eye of each beholder so, our goal was to obtain individual in-terpretations which would translate into each judges' own evaluation scale.

Although both the panel of expert judges and peer judges recorded significant levels of creativity rating changes from pre-test to post-test, there were some differences between the groups of judges. When the scores of all 21 judges are combined, there is a level of significance of .005 for the changes in creativity scores over the course of the four-month semester. The difference for each group is measured by a .003 significance level from the evaluation of the 5 expert judges and a .011 significance level from the evaluation of the 16 peer judges. (Table 3)

Each of the expert judges was a faculty member with extensive experience evalu-ating various creative products within a wide variety of contexts. It is plausible that their greater professional experiences gave them a different perspective on the changes between the pre-test and post-test exercises. It is possible that these judges might be more aware of the subtle differences that occurred during the four-month test period than their peer judge counterparts and thereby, reflected more change in their ratings. Or, it just might be a function of numbers with only five expert judges versus sixteen peer judges.

Another interesting difference between the expert judges and the peer judges is in the absolute creativity scores for each group. While both judging groups rated the post-test scores about 25% higher than the pre-test scores, the expert judges had absolute numbers that were 18% higher than their peer judge counterparts. Specifically, as shown in Table 3, expert judges' average had pre-test scores of 2.34 for the 36 test participants while the peer judges' average for the pre-test

scores was 1.99. For the post-test scores, the expert judges' average was 2.94 as compared to the peer judges' average of 2.49 for the same 36 post-test participants.

These differences may have to do with the fact that the older, expert judges, while experienced with subtle differences in creativity, might be more easily impressed working with the creative expressions of new and different ideas of the younger students. The peer judges, as contemporaries of the student participants, might distinguish as many subtle changes in creativity over a four-month semester but may not be as impressed with the work that was done for either the pre-test exercise or the post-test exercise, therefore ex-plaining lower absolute scores.

A weakness of this research identified from the very beginning was the absence of a control group and complete randomization, thereby making it a quasi-experimental design. It was determined early on that creating a control group for this study would present two potential dilemmas. First, in order to control for those factors of 'good' teaching that should facilitate creativity increases, we would need to identify an individual whose teaching style and methods do NOT facilitate creativity and therefore, might not have the qualities to be considered for 'good' teaching. It was felt that it did not seem politically feasible to label a colleague as somehow potentially deficient as an instructor of our stu-dents. In the future, it might be possible to use a population that would allow the use of totally random sample selection and a control group to enable a true experimental design.

Another aspect of creating a control group of students who did not receive the benefit of those factors hypothesized to foster creativity seemed equally undesirable. In this scenario, the same instructor would attempt to treat a different group of students in an entirely different manner, without the benefit of the teaching intervention. Even if it were possible to deliberately withhold those elements, which supposedly facilitate creativity within the same classroom environment, it would hardly seem ethical to that control group of students. After all, they paid the same amount of tuition for the course expecting the same teaching traits from the same instructor for whom they enrolled.

As a result of our concerns for both the students who take these courses and our professors who teach them, we were not able to examine the creativity changes for a con-trol group of students. This group would not have had the benefit of those factors, which are hypothesized to facilitate increases in creativity. Therefore, while we were able demonstrate a significant change in creativity ratings from pre-test to post-test, we cannot say that the change was entirely due to the teaching intervention. A control group would be the most important aspect that would help to isolate those specific teaching factors in future research.

Classroom Environment Scales

Using this instrument to measure student assessment of the teaching environment against historical norms proved to be both a positive and negative component to this study. On the plus side, it gave established parameters for how the measure comprises different facets of a teacher's interaction with students as well as the climate created within the classroom. On the minus side, the scores for this particular study were so far above the normal range that, they may have created a possible ceiling effect. Therefore, it was hard to correlate the Classroom Environment ratings

with any corresponding changes in crea-tivity scores. Specifically, in the sub-scale measure for Professorial Concern (PC), which evaluates the student's relationship with his or her teacher, the mean scores for this particular teaching intervention was 57.2 out of a possible 60.0. This is a significant difference (.000) from the historical norms of four previous studies, which averaged 46.6. Since the absolute lowest individual score of this study (49) is actually higher than the norms, it was very hard to obtain a valid point of difference for comparison purposes. Furthermore, the frequency distribution for the PC scores for this teaching intervention was so restricted (Table 4 and Table 5) that there was no statistical significance in the creativity changes when compared to different PC scores.

One interesting observation was that the greatest change in creativity (+0.95) re-sulted from the group of 13 participants who had the lowest PC scores (less than 57). While these scores are still much higher than historical norms, this increase in creativity was about three times the creativity increase (+0.34) of those 23 participants who had PC scores of 57 and above. This would seem to suggest a level of causal impact that reaches a point of diminishing return beyond a certain level of the PC subscale.

There is a similar story for the Affiliation (AF) sub-scale scores. Out of a possible 30.0, the mean score for this study was 26.1, which represented a highly significant (.000) difference from the norms of 21.9. Likewise, the frequency distribution for the AF scores is again sufficiently restricted (Table 6 and Table 7) to not provide any significant differ-ence between the changes in the creativity ratings and the AF scores. While these differ-ences may not be quite as dramatic as the PC scores, the elements that comprise Affiliation (e.g. friendly, supportive, student-centered) are more varied as compared to Professorial Concern which is just basically a one-on-one indicator of the relationship between a teacher and a student. This environmental measure seems consistent with the objectives of the Human and Organizational Development program at Peabody College.

There was a similar pattern with the AF frequency distribution in that, the 11 stu-dents with the lowest AF scores (below 25) produced the greatest change in creativity (+0.92) over the course of the semester. The remaining 25 students, whose AF scores were 25 and above, experienced creativity increases that were only one-third of the other group at +0.36. Once again, this would suggest that the most significant opportunity for crea-tivity change is among the lower third of this group.

On the one hand, it can be asserted that I have developed such a strong relationship bond with the students and developed such a healthy classroom atmosphere that some benefits to the students and possible their creativity are certainly indicated. Unfortunately, without enough variety to the PC/AF scores, (might have been provided by a control group), it is extremely difficult to identify with certainty any specific factor relationship between the environmental measures and changes in creativity. This is an area that would be strongly recommended for future research and could be addressed primarily through the control group research design, which could identify external variation factors. The as-sumption is that a teacher with lower PC/AF scores would produce different creativity changes than one with higher PC/AF scores. By comparing a wider range of PC/AF fre-quency distribution scores to corresponding changes in creativity, a better factor effect may be able to be established regarding the classroom environment.

Beginning Levels of Creativity

Since each person brings his or her own unique biological, biographical, psycho-logical and social disposition towards creativity, we know that each participant began the semester at a unique, individual level of creativity. This is part and parcel of the Peabody HOD culture whereby every student has a different personal experience and set of expec-tations. This was evidenced by the wide range of pre-test creativity rating means from 1.00 to 4.26 (out of 5.00). We wanted to determine if, those students who began the study with lower pre-test scores (1.00-2.49), would exhibit more significant creativity increases than those students who began the semester with higher pre-test scores (2.50-4.00).

As shown in Table 8, the 23 students who began the semester with the lower crea-tivity ratings, exhibited almost a 60% increase in creativity while those 12 students who began the study with the higher creativity ratings produced just over a 2% increase in creativity. This represented a statistically significant difference as reflected in Table 9. If the proportions of lower score/higher score beginning levels of creativity is representative of general student population creativity scores...i.e. two-thirds low versus one-third high...there seems to be a greater opportunity for this kind of intervention to have more impact on the majority of young adults.

People with lower inherent creativity levels may be able to achieve greater relative growth in their creative potential than those who may, for one reason or the other, have already approached their maximum output. The 'ceiling effect' may have influenced the creativity potential of this exercise. People may have a certain individual threshold for how much creativity that they are willing and/or able to display. Once they reach that self-imposed level, they may max out or shut down. Therefore, those starting lower have more room to move up than those who start out nearer to their own limit. This would seem to be a very interesting facet for more in-depth study in the future.

IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

For such a subjective measure as creativity, it is essential that 21 individuals from two, distinct category groups (expert, peer) provided consistent judgments from which to evaluate the data collected from this study. The high reliability scores suggest that people can agree on the numerical definition for different levels of creativity ratings even if it may be hard for them to describe or explain their choices. Quite simply, they seem to know the relative qualities of better and worse when they see it.

Furthermore, they can agree on what makes the creativity difference between each rating on the scale, even if it may be hard to define. This was a critical component to this study since each one of the judges brings a completely different background of experiences to the task and as a group, they had never worked together before. These findings might suggest that future panels could be assembled for judging creativity with a good probability of producing agreement of judgment criteria.

Additionally, we have shown with a high degree of certainty that a significant change in creativity had occurred from the pre-test to the post-test. The less certain aspect of the study is

trying to determine if any of the creativity increases were as a direct result of the semester-long teaching intervention. In future research, use of the aforementioned control group would help to isolated any external factors resulting from the student-teacher interaction and allow for a direct comparison of those factors. By designing a study where various facets of teaching style and method are differentiated, more conclusions can be reached about how each facet might directly translate into student creativity changes. This is particularly important within the context of the classroom environment objectives for the department and the college studied.

The control group or groups would also be of crucial importance in validating the frequency distribution of the College Classroom Environment Scores. Without a control group set up for comparison purposes, this study produced no significant difference be-tween creativity changes and either sub-scale of Professorial Concern (PC) or Affiliation (AF) based on historical norms. Since I was employing those traits in this research that were hypothesized to facilitate creativity, most of the PC and AF ratings were concentrated at the very high end of each scale. This did not allow for the accurate measurement of any possible effect of poor, fair or even average teacher facilitation on creativity changes. By using a control group in the future, one would expect a wider range of PC/AF scores, which would be more consistent with norms from the four previous studies. This could enable a better connection between specific teacher-student relationship effects and ensuing changes in creativity during a given test period.

A very promising potential seems to exist for the area of beginning level of crea-tivity. This study identified a statistically significant difference when comparing lower pre-test creativity scores to increase differences in post-test ratings. A more comprehen-sive study could include a greater number of starting creativity levels and not just the "low" and "high" parameters used in this research. Instead of the 5-point Likert Scale used in this study, a 7-point or 9-point scale would provide more dimension intervals possibly miti-gating any potential ceiling effect. Furthermore, a larger and more diverse sample (not only college students) should be much more representative of adults and in general, al-lowing for those factors that may influence any changes (increases) in their creativity.

A corollary to the above hypothesis could also parallel the impact of different levels of PC/AF scores. Future research can be structured in order to determine if more creativity increases can be achieved among those students who rate the teacher and the classroom environment lower than those students who give the classroom environment higher PC/AF scores.

In the future, I would use video taping of the nametag presentations in order to produce a more accurate and longer-lasting record of any subtle differences from pre-test to post-test. Additionally, I would definitely use a random placement of the nametags when mounted on the judging boards. It is conceivable that judges could have determined a recognizable pattern of the pre-test and post-test exercises of the same students. Finally, future study could reveal more differences between the peer judges and the expert judges to determine if any additional criteria from these two, different subjective rating groups is warranted.

It would certainly seem that a student-teacher relationship existed during this study whereby a natural environment for co-creation was established (MacKinnon, 1978). Some of the qualitative responses indicated a positive role modeling by the instructor resulting in a safe and supportive experience for the students (Harter, 1999). For many of the students, the Professorial Concern

responses indicated a motivation to be creative and the provided freedom to do so without fear or risk (Amabile, 1996). The Affiliation scores would suggest that the classroom was a place where any intrinsic motivation could be demon-strated (Dacey & Lennon, 1998).

If the students are neither bored nor anxious, the hope is that, over a period of time, they can experience that state of creativity 'flow' that most teachers strive towards (Csik-szentmihaly, 1975). I believe my efforts to use the Therapeutic Learning Model (Rogers, 1964) were manifested as the climate of "psychological freedom" and an atmosphere of "psychological safety" seemed to be present during the semester (Rogers, 1959). In order to accomplish this conducive environment, I attended to my students carefully, I responded to their every request, I was very personal in my relationship to them and I initiated ac-tivities with them on a regular basis (Carkhuff, 1981). I truly believe that this provided the level of trust, comfort, respect and affinity that produced the significant levels of creativity as manifested during the study (Graen & Scandura, 1987).

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COLLABORATIVE TEACHING BETWEEN ENTREPRENEURSHIP AND SPORT MARKETING CLASSES

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ABSTRACT

Two different classes in two different academic departments attempted a collaborative teaching effort at a Midwestern state university. Previous research was used to create the class, specifically Michael Morris' SEE model, and recent research was used again to evaluate the collaborative effort. The results expose advantages, disadvantages and future potential in interdisciplinary education efforts.

Interdisciplinary teaching has impact on both the instructors and the students. In our experiential learning experience, the instructors, students and client benefited immensely by working in an interdisciplinary environment to create a workable business model and marketing plan. Such learning does not come without a price and the highest cost is instructor coordination. Instructors in an interdisciplinary experiential teaching situation must first recognize their common goals and then recognize that students and client will be active participants with how these goals are created, worked towards and hopefully achieved.

As instructors of Entrepreneurship and Sport Marketing, we have five specific recommendations to make when creating an interdisciplinary experiential learning environment Our goal is to build upon research and present our experience as one more case study of what to do and what to avoid when creating an entrepreneurial interdisciplinary experiential learning environment.

INTRODUCTION

Entrepreneurship by its very history is an interdisciplinary science. Course structure, instruction methods, textbook content, and multimedia tools seem to be in a constant state of flux as scholars work out the content of each as applied to various courses; courses such as entrepreneurship, small business management, small business finance and so on. This content overlap and delineation struggle is made even more troublesome when post-secondary schools create entrepreneurship programs or want an entrepreneurial component within a department and in the name of cost savings, assign these new duties to existing faculty or hire new graduates to create programs. Such was the situation at the author's institution when one of us was assigned the goal of bringing an entrepreneurial component into a new class called Sport Marketing while the

other was a new Ph.D. and the first tenure track professor with the charge of teaching all entrepreneurship and small business classes. The result was a collaboration based upon mutual need, a small amount of panic, and the desire to bring entrepreneurship education to the forefront of our respective departments.

THE DEPARTMENT OF BUSINESS

Fregetto and Fry, at the 2002 USASBE conference, found a struggle between entrepreneurship and small business management class content. Upon returning from the 2002 USASBE conference as a first time attendee, the Department of Business Chair asked for a one-page summary delineating these two course offerings. Up until this time, the courses had been in the University catalog as such:

> *Small Business Management* - deals with all major aspects of starting and managing a small business. Includes factors in success and failure, methods of becoming a small business owner, capital requirements, sources of finance, employee and supplier relations, sales promotion, and control.
>
> *Entrepreneurship* - the problems, opportunities, and methods of beginning a new business or new type of business. Examines the special needs of entrepreneurs regarding forecasting and planning, venture capital, trade finance, marketing, staffing, budgeting, and cost control and operations.

After review of the existing literature, including Fregetto and Fry, the following was adopted as a working model for the 2003 academic year. These delineations were based upon conference discussions, most prevalent texts at the time, and my research interests and discipline expertise.

> *Small Business Management* - create a useful knowledge base of the interdisciplinary skills needed to successfully operate a small business. SBM is a skill-focused class in comparison to Entrepreneurship.
>
> *Entrepreneurship* - provide a structure for understanding entrepreneurship as both a discipline and a process. Entrepreneurship will have a strong focus on theory, discipline history and business plan development.

The Fregetto and Fry article referenced Gorman et al at (1997). This article was retrieved and presented the following themes from which the experiential entrepreneurship class would attempt to answer.

> *Distinguish entrepreneurship and small business management* - this goal had been achieved as presented above; however, while Small Business Management could take advantage of case studies, Entrepreneurship needed to focus on business plan development, a task best done with a single local business. This experiential component was still missing.
>
> Differentiate each class from traditional approaches to business management education using teaching strategies and curricula - given the originality of both classes within the existing Department of Business, this

goal had also been achieved. Prior to Entrepreneurship, working with integrating a business into the class curriculum had not been attempted.

More specifically, active student participation via experiential learning integrating various functions of entrepreneurship - a worthy goal that is assumed to happen once the entrepreneur is integrated into the class; however, the amount of learning and level of thinking is simply unknown at this point. Yet, goals can be established and the results provide valuable feedback.

Remarkable lack of a multidisciplinary approach - interestingly enough, I am a graduate of an interdisciplinary doctorate program, but had been unable to bring a true interdisciplinary class to our University. Certainly a worthy goal, but how this would be accomplished had me stymied at the moment. .

Overcome strong evidence of entrepreneur resistance to education and training - this was not a concern given the traditionally strong support the University enjoys in the local community. Rarely was there any mention of resistance to University efforts in working with businesses, tax-exempt organizations, service groups or individuals.

Furthermore, the paper by Strempek and Paul at USASBE 2003 also presented the long-term merits of experiential and interdisciplinary entrepreneurship education at other institutions. To begin to achieve the success of other programs that had integrated experiential learning and an interdisciplinary approach to entrepreneurship education would require both components.

In addition, the Department of Business is in the pre-candidacy phase of AACSB accreditation. AACSB's guidelines regarding creative approaches to instruction and learning combined with the academic rigor AACSB requires put added pressure on the me as the new terminally degreed and tenure track faculty member to produce a new type of offering for our department. At the same time, our new University president was making a major push across the curriculum for experiential learning. According to the University's Five Year Strategic Plan, developed under the direction of our new president, experiential learning and student development was one area of opportunity addressed as important to a student's education. More specifically, goals were set to, "Provide students, by graduation, the opportunity to blend academic knowledge and applications in and beyond the classroom….Provide students with co-curricular opportunities to grow and develop to be productive community members" (12).

Given the already existing intern and practicum programs within the Department of Business and their respective success in the community, how then to offer some sort of experiential learning opportunity within the class structure while not conflicting with existing programs. The Entrepreneurship class would somehow have to answer the call of scholars in the discipline of entrepreneurship as well as the University administration.

By the now the question of how to structure the Entrepreneurship class was becoming almost overwhelming with both information and desired goals. The temptation was there to just fall back on the previous class format and wait a year to develop the class; however, this bordered on admitting defeat. The answer came purely by chance when Ms. Linder called asking for business plan assistance with her Sport Marketing class in the Department of Health, Physical Education and Recreation.

THE DEPARTMENT OF HEALTH, PHYSICAL EDUCATION AND RECREATION

The classes in the Department of Health, Physical Education and Recreation (HPER) are naturally more "hands-on" than other disciplines. In addition, students spend a great deal of time working in and leading group activities to learn more effective group membership and leadership skills.

In addition to leading groups, HPER students must also learn the business aspects of organizations; including strategic planning, environmental scanning, problem solving, decision-making, and business proposal and marketing plan writing. Students are also exposed to the concepts of selling products, services and ideas. All the above is done in the context of recreation and sport. These areas must be carefully woven together into an interdisciplinary program; however, HPER was lacking recreation and sport management marketing.

The course of Sport Marketing was added to the HPER program due to increasing enrollments in sport management and student lack of marketing knowledge upon graduation. Most students received an introductory marketing education, but a class applying that knowledge to recreation and sport management was unavailable. With increasing numbers of students graduating in HPER degree programs and attaining administrative jobs in the field, faculty and administration agreed a sport marketing course needed to be offered.

Following the experiential learning focus of our campus, Ms. Linder encouraged collaborative learning in the classroom, always seeking opportunities to expand student experiences. While having taught the Sport Marketing class at another institution, a collaborative learning project had yet to present itself at her current school. Ms. Linder maintained the course description of defining and analyzing the fundamentals of marketing in the sport and recreation fields. Emphasis is placed on the development of a marketing plan and a sponsorship proposal. The Sport Marketing course was intended for students who had previously taken an introductory marketing course. The following course objectives were utilized in conjunction with the hope for client:

Define each component of a marketing plan in relation to the sport and recreation fields.

- Utilize market research techniques.
- Differentiate marketing strategies.
- Develop a comprehensive marketing plan presented to the client.

Teaching the Sport Marketing class was not knew for Ms. Linder, although the class was original to our current institution; however, creating a collaborative small business project would be new for all involved. The potential was then there for the classroom to become a dynamic learning experience where students from different disciplines can share with one another.

THE CLIENT

Tranquility Day Spa and Therapeutic Massage came to both our departments the same week seeking assistance with their expansion plans. Unable to use them for an intern or practicum placement in the Department of Business since the semester was already underway, but wanting

to utilize the opportunity in some way, Tranquility mentioned they had also talked with the Department of Health, Physical Education and Recreation. Luck once again stepped in when the two professors Tranquility contacted were both new hires having gone through campus orientation together. Calls were exchanged and the idea arose of conducting some sort of joint project between our two classes. Tranquility agreed and we began the semester planning two new preps with two new foci while attempting to integrate a client project.

Tranquility is owned by a remarkable woman named Lea. Lea began her cosmetology career after ending an abusive first marriage and with two children. She quickly grew her clientele until she was able to open her own salon. Eventually she became one of the largest full service cosmetology salons in our community limited only by her building space. She then met Ted who was interested in offering massage therapy services. Having had some experience in this field, Lea was concerned about the confusion many potential clients would have in our more rural, conservative area regarding massage therapy. To prevent this, Lea mentioned to one of her regular clients, a state senator, that licensing of massage parlors and service providers was long overdue. In a remarkably quick time, the state passed licensing regulations for massage therapy businesses, service providers, and schools as well as setting up a state licensing board for all three. One of the first to be licensed as a business and as service providers was Tranquility.

Tranquility simply could not handle the potential business in their present location. To this end, land was optioned and building plans created to make Tranquility a cosmetology school, full service day spa and massage therapy salon, and massage therapy school. At this point, Lea and Ted contacted our institution seeking a business plan for their loan and a detailed marketing plan for their new facility.

COMBING THE CLASSES WITH BUSINESS MODELING

As Michele and I took a look at our respective classes and began the structure process, we kept returning to one idea, that of business modeling. Having attended Michael Morris' session at USASBE 2003, I was intrigued by the concept of business modeling and felt that in an interdisciplinary environment, creating a business model for our client may offer the solution to three issues:

1. How best to serve our client.
2. How best to instruct HPER students.
3. How best to instruct entrepreneurship students.

We were dealing with three distinct populations with a common educational need, but not common learning styles; in addition, Michele and I came at the situation with different backgrounds and teaching styles.

To explore this idea further, the USASBE article was reviewed, Dr. Morris was contacted by phone, and the full business model article was sent by Dr. Morris for our use entitled The Entrepreneur's Business Model: Theoretical, Conceptual and Empirical Foundations. From my discussions with Dr. Morris and readings the articles, the business model concept was defined by six questions or core components:

1. How does the business create value?
2. Who does the business create value for?
3. What is the source of the firm's internal advantage?
4. How does the firm differentiate itself from others?
5. How does the business make money?
6. What are the firm's time, scope and size ambitions?

Michele and I believed that by working with a business model, the students would arrive at a better understanding of the entrepreneurs as individuals, their business culture and future objectives. For the Sport Marketing class, the result should be a more thought-out marketing plan and for the Entrepreneurship class, the result should be a more accurate and concise business plan.

CLASS COORDINATION

With an agreed upon plan, the Sport Marketing and Entrepreneurship classes set out to create the marketing plan and business model. Michele and I set three dates in the semester, four weeks apart, to bring the classes together and share information. The goal in combining the classes was for the students to share information as they progresses to keep the other class updated, avoid duplication of efforts, and work to develop the business model. At these joint class periods, the Sport Marketing class would share their market research, educating the Entrepreneurship class on market research, while the Entrepreneurship class would share all other components of the business model, educating the Sport Marketing class on Tranquility as a business and culture. The focus would thus be on the inherent strengths of the class.

At the end of the semester, each instructor reviewed the semester with their class for feedback. The positive experiences for students and instructors were:

> Sharing of information was important in developing each class component.
>
> With a division of labor regarding the business model and marketing plan, each class was able to focus on their respective strengths. At the same time, on a regular basis, the classes came together to share their progress and provide information that was useful to the other class, which leads to the second significant positive aspect.
>
> Each class was pleasantly surprised by how students in the other class viewed their project and Tranquility. The different perspective was useful and fueled the creative process. As we discuss below, there was also a negative to mixing these two class cultures, but this also provided fodder for class discussion after we met as a joint class. Both classes spent significant class time processing their joint meetings. These class discussions were far from simply venting emotions, but provided a launching point from which to discuss diverse work environments and working relationships, including co-workers and clients.

The cons, while more numerous, were not overwhelming. The cons were:

> The clash of cultures between our two departments was immediate upon our first joint class. While their was no overt hostility, the students were unsure how best to communicate to each other. The Entrepreneurship students preferred facts, spreadsheets, data and so on while the Sport Marketing

class was content to intuitively believe aspects of the model would or would not work without asking "why?". Instead of talking with one another, the students quickly shut down, forcing the instructors to divide the classes, meet in two different rooms and direct and structure the classes far more than we were anticipating.

Hindsight is always 20/20, but as instructors, we underestimated the time we should have spent together coordinating our class efforts in support of one another and student learning. Involving the client at some of these meetings would also have aided in coordinating student efforts and insuring the projects moved roughly parallel to each other. When one class felt they were getting ahead of the other class or felt they were dong more of the work, accusations flew very quickly.

Joint meetings were held on Sunday evenings. This was the best of times and the worst of times. Few students work Sunday evenings, so we rarely had any conflicts, but no one, including the instructors, seemed to really enjoy coming out to campus for two hours on a Sunday evening.

The Entrepreneurship class did not seek out Sport Marketing students, and vice versa, outside of the joint sessions as much as we anticipated. We assumed the students would be e-mailing groups in the other class at a minimum to gain information and coordinate their efforts. This simply did not happen. Setting up a WebCT component, or some sort of electronic sharing/discussion format, would have strongly encouraged this. In addition, if group members were assigned from each class, instead of within each class, each group meeting would by default be a mini joint class meeting and would have aided in coordination.

Visiting the spa was a good idea to understand the services the spa provides, however, we did not anticipate that the students would ask so many questions at their visit. This led to nearly 50 students asking the same basic questions at their visit, annoying our client to a small degree. Fortunately, Tranquility was pleased to be part of this exercise, and did not appear to be upset to the point of canceling the project or student visits. Having the client come to class after the students had their initial visit to the spa for a joint question and answer period would have eliminated this duplication. Again, this would have required more coordination on the instructor's part.

Overall, however, the cons did not outweigh the positive take-away the students experienced from the interdisciplinary approach that we have begun. The students in each class viewed the experience as positive and worth supporting in the future by each academic department and the instructors.

IMPLICATIONS FOR PRACTICE

Entrepreneurs are by their very nature, interdisciplinary. Teaching entrepreneurship should follow the same model. In combining the two classes of Entrepreneurship and Sport Marketing, the students and authors make the following suggestions:

Instructor coordination. We thought we had coordinated our efforts adequately. We were wrong. Planning for joint classes, along with an experiential component, requires hours of planning before the semester even begins to create common goals and an agenda between all three parties. In particular, the client needs to understand how the educational component will function and the instructors need to understand how best to work with the client. Such understanding would aid in bridging the gap between student learning in the academic arena and the client's business.

Joint classes/joint groups. Joint classes are good, joint groups would have been better. The barrier here is the culture clash between disciplines, instructor styles, and student time. None of these are insurmountable, but barriers need to be acknowledged before hand, shared with the students, and dealt with accordingly.

Electronic platform. An electronic classroom, such as WebCT, is an addition to joint teaching that may assist in information dissemination and knowledge sharing. Interestingly, while such electronic platforms are used freely in both our departments, neither our students nor ourselves suggested creating an electronic platform for the joint class.

Joint meetings. Joint meetings times were outside our normal class time (joint classes were held on Sunday nights). A more convenient and "normal" meeting time was strongly recommended by the students. Two of the three joint classes fell on major sporting event days and there was a strong undercurrent of resentment by the sports fans throughout the evening. While we do not recommend putting sports above academics, taking into consideration external events when scheduling is always a good idea.

Invite the entrepreneur and inform the students. The entrepreneur should attend one of the initial joint class meetings after the students have experienced the business but before all the research work proceeds. This would avoid the client being interviewed and questioned with the same questions repeatedly by large numbers of students. Lea and Ted were more than considerate with our students and their questions. Not all clients may be so patient or understanding. Timing here would be crucial. The students must experience the client's business before they can ask fully informed questions and the entrepreneur must be available at the critical juncture between experience and research. Both students and entrepreneur need to understand that the joint session is where questions and answers will take place before more in-depth research can occur.

CONCLUSION

Interdisciplinary teaching has impact on both the instructors and the students. In our experiential learning experience, the instructors, students and client benefited immensely by working in an interdisciplinary environment to create a workable business model and marketing plant. Such learning does not come without a price and the highest cost is instructor coordination. Instructors in an interdisciplinary experiential teaching situation must first recognize their common goals and then recognize that students and client will be active participants in how these goals are created, worked towards and hopefully achieved.

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