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University of Portland

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LETTER FROM THE EDITOR

Welcome to the *Journal of Entrepreneurship Education*, a publication dedicated to the study, research and dissemination of information pertinent to improvement of methodologies and effectiveness of entrepreneurship education, including those principles of the free enterprise system necessary for the moral practice of entrepreneurship. The editorial board of *JEE* is comprised of both academic scholars and CEOs of many of America's best businesses. This bridging of theoretical excellence and applied excellence will result in a compilation of meaningful knowledge which will lead to excellence in entrepreneurship education.

The editorial board considers three types of manuscripts. First is empirical and theoretical research which examines the many facets of entrepreneurship and which expands the body of knowledge of entrepreneurship education. Second, case studies and applied research that have a demonstrated effectiveness and bring new perspectives to entrepreneurship education are considered. Third, manuscripts which document successful applied innovations in entrepreneurship education are solicited. Included in this issue are the first place award-winning educational activities selected from submissions from Students In Free Enterprise Sam M. Walton Fellows and their SIFE teams at the 2002 SIFE USA National Exposition. These educational projects are blind reviewed by editorial board members with only the top programs in each category selected for publication, with an acceptance rate of less than 5%.

A special thank you goes to Students In Free Enterprise for the funding of the *Journal of Entrepreneurship Education*. SIFE's mission is to provide college students the best opportunity to make a difference and to develop leadership, teamwork and communication skills through learning, practicing and teaching the principles of free enterprise. The *Journal of Entrepreneurship Education* is a component of the realization of that mission. I would also like to thank our reviewers: without your work, our mission could not be fulfilled. And, of course, a thank you to all of the authors that submit papers to our *Journal*, not only for your submissions but for the hard work you do in your field and in educating our students.

If you, as a professor, are interested in becoming a SIFE Sam M. Walton Fellow or, if your university does not have a SIFE team, you can learn more about SIFE at www.sife.org. Currently, I am assisting with the growth of SIFE operations outside of North America, with new national organizations in nearly 35 countries on more than 1400 campuses. SIFE is an excellent pathway for international research, faculty and/or university linkages and interactive student learning activities. In the next five years, we project more than 1,000 universities outside of the United States will have SIFE teams. If you have research and/or university connections outside of the US, we are interested in hearing about your activities as well as the potential for SIFE in your country of interest.

We are actively soliciting papers for the next volume of the *Journal of Entrepreneurship Education*. Recently, the process for submission of papers has been centralized through Allied Academies. All

submissions are now electronic and go directly to Allied Academies. You may learn more about this process at <http://www.alliedacademies.org/journal-instructions.html> We are working to streamline our processes and will strive to have all papers reviewed and authors notified within three months of submission.

We are also seeking to grow our Editorial Review Board. If you are interested in reviewing submissions for the Journal, please submit a request with a copy of your vitae to me (email is preferred).

Thank you for your interest in The Journal of Entrepreneurship Education.

Respectfully,
Robin Anderson
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CALL FOR PAPERS

Journal of Entrepreneurship Education
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To provide greater opportunities for Sam M. Walton Free Enterprise Fellows to publish their scholarly works, Students In Free Enterprise funds the publication of the *Journal of Entrepreneurship Education* through the Allied Academies, Inc. An independent Editorial Board exercises control over the editorial content and the current acceptance rate for manuscripts is 25%.

The *JEE* is a double blind, refereed journal which publishes manuscripts in entrepreneurship and entrepreneurship education as well as articles about award winning projects presented at the SIFE USA National Exposition. Its primary objective is to address the issues faced by entrepreneurs, small business owners and educators in their efforts to achieve a level of success for their businesses and their students. Authors of practical, theoretical or empirical papers may submit them for consideration. Subjects of interest to the Editorial Board include any area of entrepreneurship which would be of concern to practitioners and faculty involved in the more practical applications of knowledge in the field. Also of interest are articles of a broader nature, which encompass entrepreneurship in a free enterprise system and educational innovations that improve the quality of education in free enterprise as well as entrepreneurship topics. Applied and anecdotal papers are also reviewed, but all papers should document findings in a scholarly manner. Authors who wish to discuss potential interest in a manuscript should contact the Editor, preferably by e-mail.

There are two ways to submit manuscripts for consideration. First, authors are invited to make direct submissions at any time through the electronic process outlined on the Allied Academies web page at <http://www.alliedacademies.org/journal-instructions.html>. Manuscripts should be prepared in accordance with the American Psychological Association (APA) guidelines. Please list the paper title and author(s) name(s) on a front cover page only, with complete contact information of the primary author and please number all pages.

Secondly, authors may submit manuscripts for Award Consideration to either the Spring, Fall or Internet Conference of the Allied Academies, Academy of Free Enterprise Education Division. These manuscripts are simultaneously considered for the *Journal of Entrepreneurship Education*, as described on the web page at <http://www.alliedacademies.org/instructions.html>.

Individuals interested in becoming members of the Editorial Board should contact the Editor, preferably by e-mail. The *JEE* is actively interested in expanding its Editorial Board and invites expressions of interest.

THEORETICAL AND EMPIRICAL MANUSCRIPTS

Manuscripts which appear in this section of the *Journal of Entrepreneurship Education* represent literature extensions. The Editorial Board judges such manuscripts on their ability to advance the entrepreneurship education literature from a theoretical and/or empirical perspective.

Dr. Terry Noel with the Center of Entrepreneurship at Wichita State University shares his research with us concerning self-efficacy. In his paper, *Effects of Entrepreneurial Education on Intent to Open a Business: An Exploratory Study*, he writes that the number of university programs and courses in entrepreneurship has increased dramatically in recent years, but he questions the increased availability of entrepreneurial education and its impact on the entrepreneurial inclinations of graduates. His study examined whether entrepreneurship graduates from a mid-sized university currently own more businesses than other graduates. He also examined whether these students have stronger intentions to open new businesses in the future. Perhaps, he opines that these differences in starting entrepreneurial ventures might depend upon differing degrees of entrepreneurial and general self-efficacy. His study found that entrepreneurship majors have stronger intentions to open businesses within two to five years. However, the differences could not be explained in terms of either type of self-efficacy.

Winner of a Distinguished Research Award in the Academy for Students in Free Enterprise at the 2002 Allied Academies Spring International Conference in Nashville, TN, Drs. Darrell Parker and William Jones from Georgia Southern University and Martha Spears from Winthrop University, explored the topic of *Personality and Locus of Control as Determinants of Free Enterprise Attitudes*. They examined the question of what determines the attitudes that students have toward the components of our free enterprise system. They explored the issue by tying locus of control, personality types, and gender to individual economic beliefs. They used a test of economic conservatism to elicit measures of economic beliefs. Those beliefs were then correlated with locus of control responses, reported personality types, and gender. These findings demonstrate that such measures are important when considering the perceptions individuals have about economic systems. Since economic attitudes are influenced by these variables, then a concern for free enterprise educators is that the potential for learning is also influenced.

EFFECTS OF ENTREPRENEURIAL EDUCATION ON INTENT TO OPEN A BUSINESS: AN EXPLORATORY STUDY

Terry W. Noel, Wichita State University

ABSTRACT

The number of university programs and courses in entrepreneurship has increased dramatically in recent years. But has the increased availability of entrepreneurial education actually had an impact on the entrepreneurial inclinations of graduates? This study examined whether entrepreneurship graduates from a mid-sized university currently own more businesses than other graduates. It also examined whether they have stronger intentions to open new businesses in the future. It was proposed that any such differences might be explained in terms of differing degrees of entrepreneurial and general self-efficacy. It was found that entrepreneurship majors have stronger intentions to open businesses within two to five years. However, the differences could not be explained in terms of either type of self-efficacy.

INTRODUCTION

The recent proliferation of entrepreneurship programs (Kuratko & Hodgetts, 2001) carries with it the implicit assumption that entrepreneurship, or at least certain aspects of it, can be taught. If that is the case, then entrepreneurship education should logically result in behavioral and cognitive differences between entrepreneurship graduates and other graduates. The present study tested whether entrepreneurial education results in stronger intentions of engaging in entrepreneurial activity in the future. It also tested whether entrepreneurship graduates currently own more businesses than their counterparts, irrespective of whether they purchased those businesses or started them.

Recently, a study by the Eller College of Business and Public Administration at the University of Arizona revealed that entrepreneurship major graduates are three times as likely to start a new business as other graduates (Charney & Libecap, 2000). This study may prove to be a watershed event in entrepreneurial scholarship. For the first time, there is conclusive evidence that entrepreneurial education can significantly influence entrepreneurial activity.

THEORETICAL BACKGROUND

However, knowing that entrepreneurship majors open more businesses is only a start. As entrepreneurship scholars, we also want to know why some people open businesses and some do not.

We want to understand the process entrepreneurs go through in conceiving, refining, and opening a new business. And, we want to know how to educate potential entrepreneurs more effectively.

Early attempts to give theoretical footing to these kinds of questions were largely misguided. One reason for the false start in entrepreneurship research was researchers' fascination with personal and demographic variables as predictors of entrepreneurial activity. Endless studies on personality have revealed little of value in predicting entrepreneurship (Herron, 1994) or other work-related behaviors (Barrick & Mount, 1991). Demographic and attitudinal variables have met the same fate (Krueger, Reilly, & Carsrud, 2000). Gartner has suggested that this lack of support for personal and situational variables is to be expected. "Who" is the wrong question. The right question is "What does the entrepreneur do?" (Gartner, 1988).

It is hard to disagree with Gartner's logic here. However, a complete understanding of entrepreneurship must include more than the directly observable behaviors entrepreneurs exhibit. Were we literally only to observe what entrepreneurs actually do, we would be leaving out a critical part of the theoretical explanation for those activities - the mental life of the entrepreneur. In order to explain the entrepreneur, we have to enter his/her mind. The fields of psychology and organizational behavior provide promising theoretical foundations for research of this type (Baum, Locke & Smith, 2001; Shaver & Scott, 1991).

In the present study, Ajzen's Theory of Planned Behavior (TPB) was used as the theoretical foundation from which to explore education's effects on both the behaviors and the intentions of entrepreneurship graduates relative to graduates from other disciplines (Ajzen, 1991).

THEORY OF PLANNED BEHAVIOR

Unlike personal and situational variables, intentions have proven to be good predictors of behavior, especially when those behaviors are rare or take place over a long period of time. The reason is that intentions serve as a mediator between attitudes and beliefs about behaviors and the behaviors themselves -- there is not a direct link (Ajzen, 1991). TPB thus offers a robust framework for the analysis of entrepreneurial intentions. Opening a new venture is a relatively rare event - one is likely to open only a few new businesses in a lifetime. Each new venture opening also takes a large period of time as entrepreneurs conceptualize, acquire the resources for, and eventually open new businesses. Lastly, the theory lends itself to the explanation of a wide variety of phenomena, not just one or two (Ajzen & Fishbein, 1980). This is a distinct advantage in entrepreneurship research where entrepreneurial activity tends to be a cluster of widely varying activities.

Entrepreneurial activity is also not reflexive behavior - it is intentional (Krueger et al., 2000). Even if the intent to open a business is not made explicit to others, or if the entrepreneur's intentions are not completely conscious, the sub-behaviors that make up the broader act of "opening a business" most certainly are intentional (Krueger, 2000). For example, one does not "just sell something." One must intend to sell something. Even conceiving of a new product or service is a conscious act, requiring the creator to engage in willful thought.

But what are the antecedents of such intentions? According TPB, there are three general types of such antecedents (Ajzen, 1991). *Behavioral beliefs*, that is, beliefs about how one's actions

are connected to outcomes, influence attitudes toward the behavior in question. *Normative beliefs*, beliefs about how significant others view the desirability of the behavior, influence how one places the behavior in a social framework. Lastly, *control beliefs* are beliefs about the kinds of things that influence one's ability to actually initiate the behavior in question. The focus of this study is self-efficacy, a specific control belief.

SELF-EFFICACY

Self-efficacy is an individual's perception of his/her ability to accomplish some task (Bandura, 1997, 3). Entrepreneurial self-efficacy can be thought of generally as the belief that one can successfully open and run a new business. Self-efficacy has been established as a powerful predictor of performance on numerous work-related tasks. A recent meta-analysis indicates a weighted average correlation between self-efficacy and work-related performance to be .38, translating into an average performance improvement of 28%. (Stajkovic & Luthans, 1998). This exceeds the predictive power of performance gains from goal setting (Wood, Mento & Locke, 1987), feedback interventions (Kluger & DeNisi, 1996), or organizational behavior modification (Stajkovic & Luthans, 1997).

Traditionally, measures of self-efficacy have targeted very specific behaviors. It is usually conceptualized as being comprised of two components: magnitude and strength. Subjects are asked to assess the probability (strength) of attaining each of several specific levels of performance (magnitude). The components are converted to z-scores and summed to attain an overall rating (Locke & Latham, 1990).

A scale characterized by this level of precision has not been developed for entrepreneurial self-efficacy, though there have been attempts to do so (Chen, Greene & Crick, 1998). De Noble and colleagues (1999), for example, developed a 34-item scale with six subscales that successfully distinguished between entrepreneurship graduate students and other business students (Chen et al., 1998; De Noble, Jung, & Ehrlich, 1999). Their scale was partially validated in a later study involving students participating in an international business plan competition (Neupert & Krueger, 2000). This particular scale, however, does not include both the magnitude and strength components described above, relying instead on Likert-type items to tap self-perceptions of overall ability on various types of entrepreneurial activities (De Noble et al., 1999).

Recently, it has been argued that such specificity may not be necessary to assess self-efficacy anyway. Chen and his colleagues argue that General Self-Efficacy (GSE) captures one's overall sense of his/her own self-regulatory ability and should be used in conjunction with task-specific scales (Chen, Gully & Eden, 2001). They propose using an 8-item scale containing such questions as, "I am confident that I can perform effectively on many different tasks." It is thought that this more general construct may capture much of the variance in performance on a wide variety of tasks (Chen et al., 2001).

EDUCATIONAL INFLUENCES ON SELF-EFFICACY

Education and training can positively influence self-efficacy (Eden & Kinnar, 1991; Frayne & Latham, 1987; Gist & Mitchell, 1992). If we can understand how self-efficacy influences the tendency to open new businesses and run them successfully, we can: 1) trace the personal, behavioral, and environmental factors that either encourage or discourage people to open businesses, and 2) refine entrepreneurial education to include not only knowledge about opening and running new businesses, but also confidence in being able to apply that knowledge effectively. Though evidence that entrepreneurship education affects later entrepreneurial efforts (Charney & Libecap, 2000) has been put forward, little is known about how self-efficacy may influence the decision to engage in that type of activity.

The TPB has already been used with some success in entrepreneurial contexts (Krueger et al., 2000). For example, Krueger et al. tested two competing models of entrepreneurial intentions. While the competing Shepero-Krueger model was found to fit the data marginally better than TPB, both models found strong support. Of particular relevance to the present research, self-efficacy was shown to be related to intent to open a business.

The purpose of the present study was threefold. First, it attempted to confirm the relationship between self-efficacy and intentions found in Krueger, et al. (2000). Should these findings be confirmed, it would be a good indication that self-efficacy is an important cognitive component in the individual-level process of deciding to start a business. Further, since self-efficacy is a malleable characteristic (Gist & Mitchell, 1992), such a finding might indicate ways to instill the requisite knowledge and confidence in students to go it on their own.

Second, this study attempted to determine whether there are differences between self-efficacy levels among entrepreneurship graduates and other graduates. Though other scholars have compared entrepreneurship graduates to other business graduates, this is the first study in which non-business majors were included. Confirmation would indicate that the university program being examined might have made a difference in instilling "start up" confidence in its graduates. It might also indicate the degree to which general business education increases entrepreneurial self-efficacy over other disciplines.

Third, an attempt was made to find out if these three groups differ in their intent to open a business. Respondents were also asked whether they have ever owned a business, a question designed to detect any inclination toward business ownership irrespective of whether the business was created "from scratch" or purchased.

HYPOTHESES

<i>Hypothesis 1:</i>	<i>Both GSE and ESE will be positively correlated with intent to open a business.</i>
<i>Hypothesis 2:</i>	<i>Entrepreneurship graduates will have higher GSE and ESE than non-entrepreneurship graduates.</i>
<i>Hypothesis 3:</i>	<i>Entrepreneurship graduates will have stronger intentions of opening a business within one/two/five years than non-entrepreneurship graduates.</i>
<i>Hypothesis 4:</i>	<i>Entrepreneurship graduates will own more businesses than other types of graduates.</i>

METHOD

Survey Administration

The sample consisted of graduates of a mid-sized university with a well-established undergraduate program in entrepreneurship. First, alumni records were searched to generate a list of students having graduated with an entrepreneurship major since the university began offering it. That period of time was eight years (since the first major was graduated). Graduates from the same time period were identified and a random sample taken of business majors with degrees other than entrepreneurship. Another random sample was generated of non-business majors from that same time period. There were 84 identified targets from each group. Response rates were as follows:

15% overall response rate
15 responses from entrepreneurship graduates
13 responses from business non-entrepreneurship graduates
11 responses from non business graduates

The average age of the respondents was 30.8 years and the sample consisted of 55% males and 45% females.

Measures

GSE was measured using an 8-item scale from Chen et al. (2001). Reliability (Cronbach's alpha) was .96. Scale items were 5-point Likert-type (Strongly agree to Strongly disagree) and included such statements as, "In general, I think I can attain outcomes that are important to me."

ESE was measured using modified items from a scale developed by De Noble, et al. (1999). Five-point Likert-type "agreement" items were used on this measure as well. All reliabilities for the six dimensions of the scale were above .80.

Intent to open a business was measured as the subjective probability that the respondent would open a business within one/two/five years. Respondents were asked to assign a percentage ranging from 0% to 100% reflecting the likelihood of their opening a business within a certain specified period of time. Example: "I am (0-100%; ten evenly spaced choices) confident that I will open a new business within one year."

RESULTS

	Mean Ent.	Std. Deviation Ent.	Mean Bus. Non-ent.	Std. Deviation Bus. Non-ent.	Mean Non-bus.	Std. Deviation Non-bus.
Own a Business Now (0=no; 1=yes)	.4	.51	.23	.44	.26	.44
Probability I will Open a Business Within One Year	39	45	17.5	22.21	16.36	28.38
Probability I will Open a Business Within Two Years	55.33	40.02	19.17	26.78	22.73	37.71
Probability I will Open a Business Within Five Years	74.67	29.24	35.45	42.28	51.35	40.43
General Self-Efficacy	4.4	1.00	4.67	.34	4.77	.20
Overall Entrepreneurial Self-Efficacy	4.12	.78	3.99	.65	4.11	.45

Hypothesis 1 predicted that both GSE and ESE would be associated with intent to open a business. It was not supported. There was no significant correlation between GSE and intent or ESE and intent.

	General Self-Efficacy	Overall Entrepreneurial Self-Efficacy	Probability I will Open a Business Within One year	Probability I will Open a Business Within Two Years
General Self-Efficacy	-			
Overall Entrepreneurial Self-Efficacy	.773*	-		
Probability I will Open a Business Within One Year	-.231	-.011	-	
Probability I will Open a Business Within Two Years	-.128	.112	.888*	-
Probability I will Open a Business Within Five Years	-.088	.192	.742*	.918*

*Correlation is significant at the $p < .01$ level.

Hypothesis 2 predicted that entrepreneurship graduates would have higher self-efficacy. No differences were found among the three groups for either type of self-efficacy.

		Sum of Squares	df	F	Sig.
General Self-Efficacy	Between Groups	.997	2	1.131	.33
	Within Groups	15.861	36		
Overall Entrepreneurial Self-Efficacy	Between Groups	.127	2	.146	.86
	Within Groups	15.662	36		

Hypothesis 3 predicted that entrepreneurship majors would have stronger intentions of opening a business within one/two/five years. This hypothesis was supported for a two and a five-year horizon. It was marginally supported for a one-year horizon.

		Sum of Squares	df	F	Sig.
Own a Business Now	Between Groups	.619	2	1.635	.21
	Within Groups	6.817	36		
Probability I will Open a Business Within One Year	Between Groups	4419.007	2	1.846	.17
	Within Groups	41889.545	35		
Probability I will Open a Business Within Two Years	Between Groups	10856.292	2	4.266	.02
	Within Groups	44533.182	35		
Probability I will Open a Business Within Five Years	Between Groups	13713.645	2	5.167	.01
	Within Groups	45118.788	34		

Hypothesis 4 predicted that entrepreneurship graduates would own more businesses. That was found to be the case, but the differences were significant (marginally) only between entrepreneurship majors and non-business majors.

DISCUSSION

Overall, it was found that entrepreneurship graduates have stronger intentions to open a business, and that this intention is more pronounced the longer the time horizon. Having an

entrepreneurship major also appears to have resulted in more actual businesses being owned, though the differences were between only two of the groups and only bordered on statistical significance. These differences in levels of intention and actual ownership do not appear to be related to self-efficacy.

Failure to corroborate the Krueger et al. (2000) findings on the relationship between self-efficacy and intent to open a business is intriguing. Neither type of self-efficacy (specific or general) bore any relationship to intentions in the present study. One explanation may be the small sample size, since larger samples have generated significant correlations in other studies (Neupert & Krueger, 2000).

However, it is also noteworthy that Neupert and Krueger (2000) used students participating in a business plan competition as subjects. It is possible that people with a few years of business experience have a more realistic apprehension of their intentions to engage in entrepreneurial activities. They may believe they have the requisite skills, but still not want to experience the inevitable stress and disappointment associated with being an entrepreneur. Students may downplay, or simply be unaware of, the realities of entrepreneurial life. Further study into possible differences between students and other populations is warranted.

Interestingly, the correlation between GSE and ESE was very high $r = .77$; $p < .001$), suggesting that GSE may indeed explain much of the variance in the ESE measure. Caution is in order here given the small sample size, but should the shorter, less cumbersome GSE scale prove to have essentially the same predictive power as the ESE scale, it may behoove researchers to use it in cases where the total number of survey items needs to be minimized. In the meantime, it may be prudent to include both measures in studies of entrepreneurial self-efficacy.

This study corroborates and extends the work of Charney and Libecap (2000). Whereas their research focused on students from a graduate entrepreneurship program, the present study looked at undergraduate majors. It was found that undergraduate entrepreneurship majors are (marginally) more likely to own a business than their non-business counterparts. It was also found that they have stronger intentions to open a business than both non-entrepreneurship business majors and non-business majors at two and five-year time horizons.

LIMITATIONS

Like other studies, though, this one fails to answer the question of whether it is the entrepreneurial education that results in higher start up rates or the self-selection by students with entrepreneurial intentions into entrepreneurship programs. One way to find this out is to do longitudinal studies comparing the GSE, ESE, and entrepreneurial intentions of entrepreneurship and non-entrepreneurship majors early on in the educational process before they are exposed to entrepreneurship classes.

Extending that point, concurrent studies are easy to administer and require minimal resource investments. They are also extremely limited in their ability to uncover what we really want to know about entrepreneurship education or the entrepreneurial process in general. We need to track students over long periods of time to see whether or not they increase in self-efficacy through our

efforts and if those increases lead to intentions, which in turn lead to the actual opening of new businesses.

Another limitation of this study is its focus on only one part of the Ajzen (1991) model. Other precursors to intentions from the general TPB model may be important in addition to self-efficacy. For example, attitudes toward opening new businesses may be quite distinct from one's perceived ability to open one. One may be quite capable of opening a business, but dislike it tremendously. Such persons are unlikely to develop strong entrepreneurial intentions.

Perceived social norms may also impact desire to open a business. History is replete with examples of societies and cultures that hold commerce in contempt. Parents and others with significant impact on a child's view of the world of business may positively or negatively influence the formation of entrepreneurial intentions. It would be interesting to know specifically how these normative beliefs affect intentions and behaviors later in life.

Lastly, the role of actual behavioral control has not been explicitly addressed in this or other studies. Self-efficacy is a component of perceived behavioral control (Ajzen, 1991). This is a very important distinction. One may believe sincerely that he/she possesses the knowledge, skills, and abilities to open a business, yet be profoundly wrong.

For example, anyone who has taken flying lessons knows that straight-and-level flight looks easy from the right seat. After all, you just have to fly in a straight line. Put yourself at the controls, however, and your perception changes dramatically as you find that altitude must be managed moment to moment, the wings constantly realigned with the horizon, and airspeed kept within safe limits.

FUTURE RESEARCH

Larger and more varied samples are in order for this type of research. Different types of entrepreneurship programs may net different results in terms of the rates at which graduates of these programs open businesses. There may also be differences in the success rates of these ventures depending upon the content and delivery methods of various programs.

Additionally, almost nothing is known about how entrepreneurial intentions develop over time. Early life experiences, non-business schooling, work experience, and a multitude of other factors may play a role in how nascent entrepreneurs come to the point of "pulling the trigger" on a new venture. Longitudinal studies will go a long way in helping us gain insight into the intention formation process.

To date, we do not know nearly enough about the skills that contribute to new venture success (Herron, 1994). Aside from the mindset of budding entrepreneurs, we want to know what skill sets are complementary to new venture success. Many of these may be subtle or even counterintuitive. We need to focus on building confidence along with applicable skill sets that actually enhance success in new ventures. Now that we have learned that entrepreneurship education makes a difference, it is time to find out why.

AUTHOR'S NOTE

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PERSONALITY AND LOCUS OF CONTROL AS DETERMINANTS OF FREE ENTERPRISE ATTITUDES

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ABSTRACT

What determines the attitudes that students have toward the components of our free enterprise system? This paper addresses that question by tying locus of control, personality types, and gender to individual economic beliefs. This study uses a test of economic conservatism to elicit measures of economic beliefs. Those beliefs are then correlated with locus of control responses, reported personality types, and gender. These findings demonstrate that such measures are important when considering the perceptions individuals have about economic systems. Since economic attitudes are influenced by these variables, then a concern for free enterprise educators is that the potential for learning to also be influenced.

INTRODUCTION

The economics profession has recognized for some time that the study of economics can have an impact on beliefs and attitudes. Advocacy of the free enterprise system emphasizes the functioning of private ownership and competitive markets to allocate resources in an efficient manner and limit private power. Stigler (1959) outlines economic conservatism related to the study of economics as student beliefs and attitudes on these issues. Boulding (1969) recognizes that economic and political attitudes are not independent of the social process and considers this to be an important topic for economic education research. Since those beginnings, a good deal of research has studied the impact of economic education on beliefs and attitudes.

A lesser amount of research has been done on understanding how the beliefs and attitudes about economic institutions are formed a priori. Since markets reflect the control of economic activity, an individual's attitudes toward issues of control may influence beliefs as to the functioning of economic systems. In addition, personality and gender are important influences on individual economic decision-making. (Parker, Spears 2002). This paper asks to what extent do these types of individual differences influence perceptions and attitudes about the free enterprise system?

A factor analysis of survey responses is used to identify alternate attitudes about the free enterprise system. One set of factors reflects beliefs about the market allocation of resources and the efficiency of the free enterprise system. Another set of factors captures beliefs about private ownership and private power in a capitalist system. A separate factor analysis is conducted to identify components of locus of control attitudes. Regression analysis is then employed to

investigate the correlation between attitudes as reflected in the free enterprise factors and locus of control factors, individual personality types, and gender.

LOCUS OF CONTROL, PERSONALITY TYPE, AND GENDER

Links have been found between locus of control and behavior patterns in a number of different areas. The concept of locus of control (Rotter, 1966, 1990) was devised to assess the extent to which an individual can deal with or control events that affect them. The Internal-External Locus of Control Scale (I-E) forces choices between statements conveying internal locus of control and those conveying external locus of control. People with a strong internal locus of control believe that they have a command over their environment. They see a reasonable chance of success and are not troubled by change. Even if change is seen as being from external causes, they believe they can influence the impact of change and feel confident with their coping skills. Those with a strong external locus of control are more inclined to believe that success is from luck, accident or coincidence. The locus of control scale with a more economic perspective was developed to assess behavior in employment/organizational situations (Blau, 1993; Orpen, 1992; Spector, 1982, 1988). Although agreed that psychologists expect a person's locus of control, or general outlook on life, to play a primary function in developing a person's conception of self, Goldsmith, Veum, and Darity (1997, p822) contend, "economists have taken the position that personality is either unobservable or unmeasurable".

According to Jungian psychological theory, information is received and processed differently by different personality temperaments (Jung, 1971). Personality types have been linked to economic decision-making and are correlated with the social dimension of market exchange (Peitrykowski, 1995). Being able to determine an individual's personality type gives some insight to how they will react in certain situations, how their temperament, character, and personality are configured, and how they are predisposed to certain actions and attitudes. When linked to economics, the theory of market power and individual personality determines communication practices through which individual needs are shaped and decisions are made.

One of the more common approaches to measure personality is the development of Myers-Briggs Type Indicators: Extravert or Introvert, Sensor or Intuitive, Thinker or Feeler, and Judger and Perceiver. Myers-Briggs Type Indicators, based on Jungian psychology type theory, is used as a framework to discuss personality types and their potential to influence decision making under risk and uncertainty (Myers 1962; Myers and McCaulley, 1989).

The Extravert-Introvert index (E or I) is the most likely misunderstood of the personality indicators. These indicators do not reflect the life of the party or the wallflower, but recognize the internal or external attention or source of energy. Extraverts tend to be sociable, risk takers, and have a variety of interests. Extrovert students often answer quickly and have a need to "hear" themselves think by talking out loud. Introverts look inward for energy and tend to be more private and inward turning. Introvert students need time for reflection and tend to be more silent in class.

The Sensor-Intuitive index (S or N) reflects how a person chooses to gather information or perceives the world. Sensors trust their own senses to gather information about the world around them and as students focus on detail and prefer experiential learning. Intuitives gather information

by intuition or hunches and as students want to see the larger picture instead of details. They like solving problems and are innovators.

The Thinker-Feeler index (T or F) reflects how a person prefers to make judgments or decisions. This does not imply intelligence or emotion, but how an individual evaluates information. Thinkers tend to make decisions with emphasis on analysis and fairness. Students who are thinkers are the debaters and persuaders of the classroom. Feelers, on the other hand, are harmonious and base their decisions on personal values. Feeler students prefer collaboration and need a relationship with fellow students.

The Judger-Perceiver index (J or P) reflects how a person prefers to deal with the world. Judgers are goal oriented, orderly and structured. They tend to need closure and are uneasy until decisions are made. Students are very organized in their work and tend to finish work before deadlines. Perceivers are spontaneous and like flexibility. They like to keep their options open and are uncomfortable with making decisions without investigating all alternatives. Perceiver students require flexibility in classroom assignments and often have a "just-in-time attitude with required deadlines. (Borg and Shapiro, 1996; Myers, 1975; Keirse, 1998)

Personality types are also related to economic education. Borg and Shapiro (1996) and Ziegert (2000) show that personality types influence the success of students in the understanding of economic decision-making. Their analysis into learning and teaching styles asks not only which personality types may be suited for studying economics, but also considers the impact of student and teacher personality types clash.

Gender is one of the most important independent variables that should be investigated when looking at decision-making (King & Hinson, 1994). Women communicate and make decision differently than men. Brown states that "gender begets gender roles" (1996, p 243) and in decision-making, behaviors consistent with gender roles are most likely to be affected. Using personality type indicators, women tend to be more F (feelers) than T (thinkers). The feeler person bases decisions on personal values and harmony. Their decision making style is subjective and empathic (Center for Application of Psychological Type, 1993). One of the most evident manifestations of gender roles is in the risk women are willing to take in making decision. Recent Literature concludes that women have a lower preference for risk than men (Hyde, J.1990; Powell, M., and Ansic, D. 1997; Sonfield, M., Lussier, R., Corman, J., and KcKinney, M., April 2001) but no differences in decision-making values or styles (Powell 1990). In recent studies, no significant gender differences have been found in locus of control (Legua, 2000; Trentham, 1998).

METHODOLOGY

A survey instrument was developed to capture perspectives on the free enterprise system, attitudes about control, and personality measures. Thirty questions on free enterprise were taken from Jackstadt, Brennan and Thompson (1985). These questions capture views on the market allocation of resources, efficiency of the free enterprise system, the role of private ownership, and the ability of competition to limit abuses of private power. Coefficient alpha was used to estimate the survey reliabilities for the free enterprise questions. For a given instrument, coefficient alpha calculates all possible correlations of subsets of questions on that exam to determine whether

response patterns of the examinees are consistent. Higher coefficient alpha estimates are indicative of more reliable exams. The free enterprise questions yielded an alpha score of .8552. This was comparable to the score when the instrument was originally introduced. A ten-question instrument was incorporated to measure locus of control (Locus of Control - Short, user Survey, 2001). Measuring the individual's personal preferences and disposition, self-reporting dimensions were used to classify people by Myers-Briggs Type Indicator terminology. The survey was administered to an introductory economics class yielding twenty-six usable responses. Demographic information on age, gender, and undergraduate major was also collected.

Table 1: Factor Analysis of Market Allocation of Resources and Efficiency					
Free Enterprise Attitudes Questions: Market Allocation of Resources and Efficiency	Component				
	1	2	3	4	5
The amount of profit made by business ought to be regulated by government.	.048	.026	.800	-.024	.396
Prices should be set by supply and demand, in markets free from government control.	.815	.008	-.0003	.025	-.115
The best means of setting prices is to let buyers and sellers seek their own interests in a market free from government interference and control.	.320	.761	-.116	-.077	.070
Most government programs involve a great deal of waste.	-.234	.624	.082	-.340	-.083
The government should set a ceiling on interest rates.	-.148	-.068	.330	.676	.260
The government should play a larger role in U.S. economic affairs.	-.160	-.036	.175	.814	-.246
Private enterprise is responsible for the high living standards of most Americans.	.104	.695	.012	.051	-.187
The government should not attempt to limit profits.	-.354	.285	-.765	-.139	.195
Government should control the price of gasoline.	-.724	-.083	-.057	.404	.053
Free enterprise has been responsible for most of the evils in our society.	-.157	.046	.714	.153	-.032
A free enterprise economic system is generally more productive than a centrally planned economic system.	.590	.303	-.242	-.066	.491
Federal price supports for farmers should be eliminated.	-.072	.064	.022	-.144	-.838
This country needs less government regulation of business.	.346	.824	-.073	.026	-.002
Our most important industries ought to be closely regulated by government, for the good of all people, rather than by private business seeking profits.	-.175	-.118	-.069	.720	.328
Government should keep its hands off private business operations.	.559	.304	-.342	-.119	.042
When a business gets big, it should be controlled by government.	-.146	-.337	.349	.087	.730
A "free" economy is better than a "planned" economy.	.803	.224	.244	-.093	.090
Extraction Method: Principal Component Analysis. Rotation Method: Quartimax with Kaiser Normalization. Rotation converged in 7 iterations.					

From the survey responses three sets of factor analysis are conducted. First two sets of factor analysis are applied to the thirty questions on economic attitudes and free enterprise. The first set of factors is determined for the seventeen questions dealing with market allocation of resources and economic efficiency. The second set of factor analysis is estimated for the remaining thirteen questions on private ownership and power. A quartimax rotation with Kaiser normalization is applied. The five extracted principal components from the first estimation are presented in Table

1. The four principle components from the second estimation are presented in Table 2. The interpretations of this analysis are discussed in the following section. The same procedure is then used to analyze the locus of control portion of the instrument. These results follow in Table 3.

Finally a regression analysis is performed to examine the correlations from the locus of control factors extracted, the personality traits reported, and gender on each set of component factors that represent these students' free enterprise attitudes. A stepwise regression analysis is used since no a priori expectations are expressed as to which of the four personality type indices, gender, and the locus of control factors will be the most significant categorization. The stepwise regression process adds variables in sequentially, including only those variables above a stated significance level. The regression results are presented in Tables 4 and 5.

ATTITUDES TOWARD FREE ENTERPRISE

Student beliefs on the market allocation of resources provided by the free enterprise system and on its ability to operate efficiently are captured through seventeen of the survey questions. A factor analysis was conducted and five principal components were extracted. A quartimax rotation with Kaiser normalization was performed with the factor scores saved as variables. The quartimax rotation minimizes the number of factors needed to explain each variable and hence simplifies the interpretation of variables. The rotation converged in seven iterations with the rotated component matrix reported in Table 1.

The categorization suggested in Table 1 identifies five underlying types. Component one captures those attitudes focused on economic freedom. These individuals believe prices should be set free of economic control and government should keep hands off. The second component loads heavily on issues of economic efficiency. Private enterprise is seen as providing high living standards while government programs involve waste. Reducing government regulation is favored. The last three components take a dimmer view of the free enterprise system. Component three represents the view that government should be actively limiting profit and that the free enterprise system is responsible for the evils of society. The fourth component captures the view that close government regulation is for the good of all people. The final component is loaded heavily on controlling big business. This grouping also objects strongly to reducing price supports for farmers.

The remaining thirteen free enterprise questions reflect student views on private ownership and competitions ability to limit abuses of private power. A similar factor analysis was performed and four principal components were extracted. The rotation converged in six iterations with the rotated component matrix reported in Table 2.

The components related in Table 2 are divided in their reflection of the free enterprise system. Components one and three represent contradictory views on ownership in the economy. Component one advocates a socialist ownership of basic industries and resources. The free enterprise system is seen as exploitive of workers. In contrast component three recognizes private ownership as necessary for economic progress and competition as a form of consumer protection. Both components two and four have somewhat mixed messages about economic attitudes. Component two recognizes limits to individual power from competition, but also advocates public ownership of utilities. Component four reflects some fears of individual power believing that private

enterprise leads to monopoly and that consumer protection laws are needed. However the suspicion is not limited to private activities. Government ownership is recognized as leading to bureaucracy and inefficiency. Perhaps component four represents a fear of power abuses from any source.

Free Enterprise Attitudes Questions: Private Ownership and Private Power	Component			
	1	2	3	4
Private ownership of property is necessary for economic progress.	-.126	.112	.829	.171
Competition among businesses is the best form of consumer protection.	-.365	-.234	.634	-.058
The government should own the railroads established in the United States.	-.017	.257	-.645	.525
Competition keeps corporations from making "too much" in profit.	.316	.801	.014	.073
People would not do their best, if government owned all industry.	-.476	-.832	.373	.161
Private enterprise usually leads to monopoly and exploitation of the consumer.	.406	.351	.126	.531
More socialization of basic U.S. industries such as steel, coal, oil and transportation is necessary for the economic well-being of the nation.	.824	.238	.064	.016
The government should own and operate all public utilities	.148	.624	.062	.228
Free enterprise exploits workers by failing to give them full value for their productive labor.	.602	.453	.025	-.334
The consumer is at the mercy of the producer and needs government protection.	.762	-.022	-.137	.174
Government ownership and management of business leads to bureaucracy and inefficiency.	-.376	.117	.288	.605
Since consumers can refuse to buy products that are of poor quality or are harmful, there is no need to have laws to protect the consumer.	-.070	.058	.114	-.801
I favor public ownership of oil and other natural resources.	.715	.090	-.251	-.085

Extraction Method: Principal Component Analysis.
Rotation Method: Quartimax with Kaiser Normalization. Rotation converged in 6 iterations.

FACTOR ANALYSIS FOR LOCUS OF CONTROL

Attitudes about how students deal with or control events are captured through the short ten question locus of control survey. A factor analysis was conducted and four principal components were extracted. Again a quartimax rotation with Kaiser normalization was performed with the factor scores saved as variables. The rotation converged in nineteen iterations with the rotated component matrix reported in Table 3.

The first component reflects a view that external forces are hostile. Success reflects tasks that are easy, otherwise nature is always crossing your plans. Component two reflects the belief that realistic goals can overcome obstacles. Although component two encompasses a belief that intelligence is given, here success is more closely correlated with socioeconomic factors. Component three captures the view that heredity and chance are the keys to success. Component four expresses a strong disbelief in a controlling destiny, but sees the timing of being in the right place at the right time as critical to success.

Locus of Control Questions	Component			
	1	2	3	4
Heredity determines most of a person's personality.	-.338	.196	.718	.038
Chance has a lot to do with being successful.	.293	-.268	.776	-.111
Whatever plans you make, there is always something that will cross them.	.740	-.204	-.126	-.012
Being at the right place, at the right time is essential for getting what you want in life.	.206	.313	.277	.642
Intelligence is a given and cannot be trained or become stunted.	.465	.699	-.215	.110
If I successfully accomplish my task, it's because it was an easy one.	.622	.162	.414	-.314
You cannot fool your destiny.	.024	.156	.200	-.814
School success is mostly a result of one's socio-economic background.	.115	.520	.474	.367
People are lonely because they are not given the chance to meet new people.	.725	.112	.059	.252
If you set realistic goals, you can succeed no matter what.	-.303	.858	.078	-.152

Extraction Method: Principal Component Analysis.
 Rotation Method: Quartimax with Kaiser Normalization. Rotation converged in 19 iterations.

REGRESSION ANALYSIS

The previous discussion applied factor analysis to identify a categorization of components for free enterprise attitudes as well as attitudes concerning control. The factor scores for each factor analysis were saved as variables. This permits us to use regression analysis to analyze the correlation between the categorizations found from the factor analysis of locus of control with those found for free enterprise attributes. Given that locus of control is treated as a psychological trait, the locus of control variables and personality types are treated as independent variables as is gender. Nine separate regressions are run to reflect the determinants from these factors on the dependent variables the free enterprise attributes.

The regression results on the market allocation of resources and economic efficiency are presented in Table 4. No results are reported for Free Enterprise factor three the view that free enterprise is evil, since none of the variables met the test for inclusion in the model. That viewpoint is apparently determined by factors not included for analysis in this study. Each of the other four factors is correlated with at least one of the variables extracted from the locus of control analysis. Furthermore each of the four locus of control factors is correlated with at least one of the free enterprise variables. The locus of control view, captured in factor one, that the world is hostile apparently is compatible with an understanding of the free enterprise arguments for economic freedom and efficiency. This factor is positive and significant in both of those equations. The second control component that places a heavy emphasis on socio economic factors is positively correlated with free enterprise factor five the concern for controlling big business. Perhaps it is this common thread of socio economic categorization that placed a high emphasis on protecting farmer's price supports within that free enterprise component. The third control variable, representing a reliance on heredity and chance is negatively correlated with the free enterprise view of economic freedom. The final control factor grouping based on timing not destiny is negatively correlated with

both economic efficiency and government regulation. Perhaps this represents a rejection of the belief that successful outcomes are systematic whether through the performance of economic efficiency or the controlling hand of government.

Market Allocation of Resources and Efficiency	Free E. 1: Economic Freedom	Free E. 2: Economic Efficiency	Free E. 4: Gov't Regulation	Free E. 5: Control Big Bus.
Constant	-.526** (.229)	1.818* (.323)	.09179 (.170)	.02006 (.201)
Control Factor 1: A Hostile World	.338** (.156)	.351** (.133)		
Control Factor 2: Socio-economics and Goals				.441** (.200)
Control Factor 3: Heredity and Chance	-.641* (.164)			
Control Factor 4: Timing not Destiny		-.429** (.168)	-.728* (.179)	
Gender		-1.378* (.311)		
Judger/Perceiver	1.101* (.336)	-1.772* (.292)		
Adjusted R ²	.535	.674	.427	.156
Note: no variables were entered for Free E. 3: Free Enterprise Evil				
* Significant at .99 level				
** Significant at .95 level				

The judger perceiver personality index is significant for the alternate free enterprise factors of economic freedom and economic efficiency. The goal oriented judgers with their preference for order and structure are more likely to be advocates of the economic efficiency captured in free enterprise factor two. Perceivers on the other hand still support the free enterprise system. However their preference for flexibility is attracted to the economic freedom attributes reflected in free enterprise factor one. Gender only enters as significant for one of the free enterprise factors. The attitudes toward economic efficiency are significantly more masculine than feminine.

The regression results on private ownership and private power are presented in Table 5. Again each of the four locus of control factors is correlated with one of the free enterprise underlying components. Those who view the world as a hostile external force are not turning to government for assistance. They do recognize the competitive market's ability to limit the abuse of private power as represented by the significant positive coefficient for free enterprise component two. Each of the three factors, Socio economic and goals, heredity and chance, and timing not

destiny, are negatively correlated with the fear of power. This may in part explain the composition of this factor. This may be capturing fears of power and its abuse that stem from a variety of contradictory beliefs and perspectives. An intriguing insight comes from the recognition that those who reject the role of destiny also reject the belief in more socialism. Believing that destiny drives your success is correlated with believing that a socialist government can be counted on to provide for your economic welfare. The free enterprise factor of private ownership is significantly more masculine and significantly negatively correlated with a belief in heredity and chance as the determining controls. It is reasonable to suspect that those who believe that heredity determines success would object to private ownership and those who are born with more initial opportunities.

Private Ownership and Private Power	Free E. 1: Socialist	Free E. 2: Limited Power	Free E. 3: Private Ownership	Free E. 4: Fear of Power
Constant	-0.005301 (.175)	-.09491 (.196)	.753* (.257)	.003765 (.158)
Control Factor 1: A Hostile World		.506** (.211)		
Control Factor 2: Socio-economics and Goals				-.629* (.157)
Control Factor 3: Heredity and Chance			-.458* (.160)	-.352** (.156)
Control Factor 4: Timing not Destiny	-.654* (.188)			-.298*** (.169)
Gender			-1.202* (.330)	
Adjusted R ²	.336	.215	.453	.474
* Significant at .99 level				
** Significant at .95 level				
*** Significant at .90 level				

CONCLUSION

Advocacy of the free enterprise system highlights the functioning of private ownership and competitive markets to allocate resources in an efficient manner and limit private power. Since markets reflect the control of economic activity, an individual's attitudes toward issues of control may influence beliefs as to the functioning of economic systems. Consequently different aspects of the free enterprise system may generate a stronger response with different audiences. The results reported in this paper link individual attitudes about control to individual economic beliefs about

the free enterprise system. In addition, personality and gender are shown to be important influences on individual economic decision-making.

Attitudes about the market allocation of resources and economic efficiency yielded underlying components that focused on economic freedom, economic efficiency, the evils of free enterprise, advocacy of government regulation, and the control of big business. Attributes on the ability of competition to limit individual abuses of power and the role of private ownership yielded factors that were socialist, favored private ownership, believed that competition limits power, and feared power from both private and governmental sources. These attributes were analyzed relative to control views that reflected a hostile worldview, a view based on socio-economics and goal setting, heredity and chance, and timing not destiny. Each of the control factors was correlated with some enterprise attribute.

One of the clear findings from this study is that most individuals perceive the different subscales of economic conservatism quite differently. Thus free enterprise advocates may reach different target audiences with different elements of economic education. That is, how an individual perceives the world influences which elements of the free enterprise system appeals to them most. For example, the personality index of the judger perceiver is a significant factor in determining economic attitudes. For the perceiver who values flexibility the characteristic of economic freedom is important. For the Judger who values order and structure the key element is economic efficiency. Both personality types can appreciate free enterprise education, however they need different emphases.

The type of relationships found indicates that the linkages between traits such as personality and control and economic attitudes are significant but complex. Hence further research along the lines begun in this paper should prove rewarding. This study was limited in size and the instruments were initially designed for other related questions. No doubt a larger study with refined attitudinal measures that focus clearly on the underlying economic themes could provide additional insight. A clearer understanding of the linkages between psychology based attributes and economic attitudes can provide answers to individual responses to economic education, economic institutions, and economic decision-making.

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APPLIED MANUSCRIPTS AND CASE STUDIES

Manuscripts which appear in this section of the *Journal of Entrepreneurship Education* represent educational applications. The Editorial Board judges such manuscripts on their ability to provide information of practical value to entrepreneurship educators.

Winner of a Distinguished Research Award in the Academy for Students in Free Enterprise at the 2002 Allied Academies Fall International Conference in Las Vegas, NV, *Service-learning and Entrepreneurship: Students Teaching Students* is the description of an active learning workshop where Students in Free Enterprise presented a realistic and relevant way for high school students to become entrepreneurs. Drs. Anne Macy and Jean Walker of West Texas A&M University, were the Sam Walton Fellows who were responsible for the project in which the students presented different economic and finance concepts in order to find a profitable solution to the energy deregulation in California. The SIFE students taught the high school students how electricity-producing windmills could increase farm and ranch income. Wind is a local and abundant commodity. A Kruskal-Wallis test is employed to compare pre and post exam results of the high school students. The results indicate a statistically significant increase in correct responses on the ex-post exam indicating that the SIFE students were able to teach challenging material.

E-commerce Curriculum and Pedagogy for Entrepreneurs by Russ Ray, University of Louisville offers a curriculum and pedagogy for teaching e-commerce to students of entrepreneurship. After discussing the need for future entrepreneurs to learn this new model of business, the paper offers a methodology and course calendar for teaching this critical subject to entrepreneurs. Exhibits to the paper direct the reader to e-commerce textbooks, syllabi, tutorials, slides, case studies, and the major academic e-commerce centers. Throughout, emphasis is placed upon free and low-cost internet resources for entrepreneurs engaging in e-commerce. The paper is offered as a road map for academics who want to teach, "E-Commerce for Entrepreneurs."

Winner of an Honorable Mention Award in the Academy for Students in Free Enterprise at the 2002 Allied Academies Spring International Conference in Nashville, TN, *The Stock Market Game in Economics Instruction* by Dr. Larry R. Dale, Arkansas State University, describes a Stock Market Game [SMG] designed to help motivate students to learn about the American economic system through the stock market. In Arkansas, the SMG is distributed exclusively through the Arkansas Council on Economic Education [ACEE]. The Center for Economic Education and Students in Free Enterprises [SIFE] programs at Arkansas State University

[CEE-ASU] have been using this simulation to introduce regular college students enrolled in economics courses and in-service teachers to the stock market and the enterprise economy. The ASU SIFE team has been involved with the project in three ways: 1) the team has written two major publications and ten special activities' sheets distributed to students grades three through 12 participating in the program; 2) the second publication, entitled *The News Cookbook Journal*, presented the stock market in the framework of corporate activity and simulated a real company, which students could emulate in the classroom. This guide incorporates the role of the stock markets in with a simulation that can make real money for the class; 3) the SIFE team members set up play stations on the Internet version for students on the ASU Campus in formal class settings and informal student conferences providing additional services to students.

Drs. John Fulmer, University of Tennessee at Chattanooga, Howard Finch, Florida Gulf Coast University and Amy Frost of Hazlett, Lewis & Bieter, offered a case study in their examination of *A Demonstration of the Effect of Sales Growth on Cash Flow*. They determined that the goals of small businesses are survival and prosperity. Therefore, the twin objectives may be accomplished through successful growth strategies, but focusing solely on revenue growth is a mistake. Students of entrepreneurship need to understand and appreciate the effect of sales growth on cash flow. They illustrated the impact that sales growth has on the monthly and cumulative cash flow of the firm. They developed a spreadsheet exercise to allow students to observe alternative scenarios for a growing firm. By analyzing the effect of sales growth on the cash flow of the firm, students are impressed by the fact that sales growth must be financed and that exclusively focusing on revenue growth may allow the firm to literally grow itself into bankruptcy.

Drs. James Bogert, James Bagwell and Gregory Kordecki, all of Clayton College and State University, presented an exercise entitled, *Financial Forecasting for Business Success: An Interactive Strategy for Students and Entrepreneurs*. They demonstrate an interactive methodology for teaching financial statement forecasting. They use an Excel spreadsheet template with prompts to guide users through the process of forecasting using historical financial statements and a set of account assumptions. The resulting forecast is plausible and can be easily modified by changing the assumptions. They suggest that accounting and auditing relationships are often easier to grasp if a user understands how period assumptions generally affect related account balances in integrated financial statements.

Given the ever-changing business environment, long-term organizational viability is tied to the successful pursuit of new market opportunities. For business education to be relevant, schools must be market-oriented to educate students to operate in a dynamic economy. This paper entitled, *Development of a Course in*

Market Opportunity Analysis: a Market-orientation to Business Education, by Drs. Jeanne Munger, Warren Purdy and Nancy Artz, all of the University of Southern Maine, describes the development of a course in market opportunity analysis designed to augment the undergraduate business curriculum. It also describes the educational environment surrounding the decision to offer the course, the design criteria employed, the pedagogy for delivering the course, and the initial evaluations from both students and business participants.

Dr. Dianne H.B. Welsh of John Carroll University in conjunction with her students, Renée Goffinet, George E. Smith, and Kuan-hui Wang developed a case study entitled, *Family-owned Avantor Technology Experiences Growing Pains: Walking the Tightrope*. The case was designed to describe some of the problems that arose when a company in a rapidly growing industry failed to adapt. It emphasizes the unintended downside of promotion from within. The case focuses on the Human Resources Department and the effect a problem in this area can have, both within the department and throughout the organization. The case addresses organizational culture, issues, that occurred when a closely-held company reached a critical point in its growth. They also prepared an Instructors' Note with the case supplying possible responses to appropriate questions.

SERVICE-LEARNING AND ENTREPRENEURSHIP: STUDENTS TEACHING STUDENTS

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ABSTRACT

Entrepreneurship education lends itself to active learning. While students may be interested in becoming an entrepreneur, many don't know how to begin. This paper presents an active learning workshop where Students in Free Enterprise (SIFE) members presented a realistic and relevant way for area high school students to become entrepreneurs. The presentation covered different economic and finance concepts as the students sought a profitable solution to the energy deregulation in California. The SIFE students taught the high school students how electricity-producing windmills could increase farm and ranch income. Wind is a local and abundant commodity. A Kruskal-Wallis test is employed to compare pre and post exam results of the high school students. The results indicate a statistically significant increase in correct responses on the ex-post exam indicating that the SIFE students were able to teach challenging material.

INTRODUCTION

While many individuals might be interested in becoming entrepreneurs, they often don't know how to begin. In its simplest sense, an entrepreneur recognizes an opportunity and then produces a product or service to profit from the opportunity. Entrepreneurship can be difficult to teach, especially to younger individuals. One approach is students teaching other students. The information is conveyed in a less threatening way and both groups of students learn in the process. Students who are active learners learn and retain more. The question is how to teach students to be entrepreneurs. One way is to let them be entrepreneurs and teach other students to be the entrepreneurs. In this workshop, the college students taught high school students how to profit using the comparative advantage of the local area, wind, to meet a national need, electricity.

Students learn in a variety of ways but spend most of their time in classes that use the lecture format. Large class sizes and limited room space are not conducive to more active learning methods. However, student organizations with their smaller size and more motivated students are an ideal environment for active learning.

Active learning has been shown to increase student involvement and retention of information (Kolb, 1981). However, the active learning is usually within the classroom as case studies (Carlson and Schodt, 1995; Palmini, 1996) or team projects (Bartlett, 1996). Doing active learning in the community adds the component of service. Because of the limited background of the university

students, the service activities are usually limited to basic information (McGoldrick, Battle, and Gallagher, 2000) or volunteering for businesses (Gujarathi and McQuade, 2002).

The purpose of this paper is to outline a service-learning workshop of students teaching other students. The workshop material was intentionally rigorous but balanced by its relevance to both student groups. The local comparative advantage of wind is an underutilized resource for the local energy generation industry. The SIFE students raised funds for their organization through the workshops. A main result is that students can teach other students difficult material if they are provided the information and support.

WORKSHOP OUTLINE

The University's Students in Free Enterprise (SIFE) teamed with the West Texas Center for Economic Education in developing a program for area high school gifted and talented classes. The regional educational service center and the Texas Council on Economic Education provided funding. The SIFE students wanted to present entrepreneurship as a viable option for the high school students. The California energy crisis provided the topic. Energy is a major industry in the local area. Not only are there oil and gas reserves in the area but there is also an abundance of wind. The workshop focused on electricity generation and in particular, wind energy. While the theme of the workshop is current, more importantly the theme is relevant to both student groups.

While there are programs where college students teach high school students, the uniqueness of this workshop is the difficulty of the material and the theme of the material. It is a combination of science and economics seen through the eyes of the entrepreneuring enterprise. The deregulation of the energy market has created opportunities for entrepreneurs in energy generation. Because of the rural background of the students combined with the geographic characteristics of the area, energy generation in the form of wind energy is a realistic opportunity for both sets of students. The lesson showed the students the income potential for landowners in the area. By giving the students information on how to increase the profitability of their families' land, the SIFE students encouraged the high school students to consider entrepreneurial actions. The entrepreneurial action was linked with the declining farm income to provide a realistic and immediate opportunity for the students. A main idea of the workshop was how to begin being an entrepreneur.

The outline for the presentation was in the deductive format. The first question addressed was how electricity was made. This led to a discussion on energy and energy pricing. Then the students discussed the deregulation of electricity generation and in particular, California. The SIFE students posed the question to the high school students about how an energy company should react to the situation of decreasing sale price but rising costs. The shortage of energy in California becomes more than a news story and more than blaming the companies. The companies reacted to the demand and supply prices for their product. The students learned and applied concepts such as how supply and demand affect price structure, natural monopolies versus contestable markets, regulated markets versus free markets and a geographic understanding of U.S. power transmission grids.

The second part of the presentation was finding a profitable alternative to meet the growing U.S. energy demand. Agricultural income is always a local concern. The addition of windmills increases rural income and provides greater stability to area local economics without disrupting existing uses of the land. The students built anemometers to calculate wind speed. They then participated in a simulation to calculate revenue and costs from a windmill on local land using local figures. Concepts such as an income statement, fixed costs, and renewable versus non-renewable resources were examined.

In the final activity the students visited the Alternative Energy Institute on campus and learned how to go build a windmill and begin producing energy.

WORKSHOP RESULTS

The presentation was designed with the students working as a team. Because of the difficulty of the workshop topic, the authors wrote the basic materials for the SIFE students to use to ensure their factual correctness. We purposely did not structure the parts instead letting the students divide the presentation amongst themselves. They quickly determined the strengths and weaknesses of the other members and shifted the topics around after the first presentation to compensate for the weaknesses and promote the strengths of the presenters.

The students prepared their parts of the presentations including examples and active learning. The students are used to the lecture format present in many university courses and started with this style. They quickly learned that the high school students were easily distracted and viewed the day at the University as a free day. It was interesting to watch the college students become frustrated with the high school students because they really did want their students to learn. The students had to alter their presentation style mid-workshop to adjust to the high school students' behavior. At one point, in order to maintain order, the college students used candy prizes as a reward for thinking and developing the solutions. Once the high school students recognized that the opportunity to themselves, their interest was heightened.

While the SIFE students had only two to three economics classes as a background, the high school students had no background in either economics or entrepreneurship. For example, the high school students did not know about the demand-supply graph. Thus, the concepts of contestable markets and deregulation were completely foreign. This provided a unique learning opportunity for the SIFE students. Presentations are used to convey information. While students do presentations in classes, one style of presentation is rarely practiced. In their professional lives, students will be faced with presenting to individuals who have limited or no background on the subject. The presentation must be non-threatening but informative and able to hold the attention of the audience. In other words, teach without looking like a teacher. The SIFE students learned this useful presentation style.

After the workshops, the SIFE students were asked to analyze the experience. Most of the students were surprised at not only at how much they had learned but how much the high school students learned. They also were pleased that the high school students rose to the level of the material.

In addition, the alternative energy institute received calls for more information following the lessons. The gifted and talented teachers were all pleased with the workshop and indicated that they would sign up for the following year's program.

SURVEY FINDINGS

Pre and post exams were administered to both the high school students and the SIFE students to assess the success of the workshops. The fourteen question multiple-choice exams covered the main topics of the learning activity.

Table 1 presents the results of the analysis on the pre and post exams. Four workshops were conducted to a total of 53 gifted and talented high school students. The average pre-exam score was 29.2%. The post-exam score averaged 79.4%. The high number correct is surprising considering that the high school students weren't graded on their performance and there were no negative consequences for incorrect answers.

Table 1			
Kruskal-Wallis Test for Significant Difference in Pre-test Versus Post-test			
Column 1	Column 2	Column 3	Column 4
School Pre-test and Post-test Averages (n = sample size)	Pre-test	Post-test	Ho: m pre = mpost
Booker and Lazbuddie (n = 24)	24.7%	73.2%	m pre < mpost
Perryton and Memphis (n=15)	33.8%	74.8%	m pre < mpost
Stratford, Nazareth and Vega (n=14)	31.6%	86.6%	m pre < mpost
Composite (n=53)	29.2%	79.4%	m pre < mpost
* All post-test scores are statistically greater than the pre-test scores. Statistical significance tested at the 99% confidence level			

The statistical methodology incorporates a nonparametric approach to comparing the ex-ante and ex-post exam scores. The Kruskal-Wallis test is employed because it offers the most powerful test statistic in a completely randomized design without assuming a normal distribution. The Kruskal-Wallis test is designed to be sensitive against differences among means in the k populations and is extremely useful when the alternative hypothesis is that the k populations do not have identical means. The Kruskal-Wallis test is employed in this study to test the null hypothesis that the k pre/post-test scores come from an identical distribution function. For a complete description of the Kruskal-Wallis test see Conover (1980). The specific equations used in the calculations are as follows:

$$N = \sum_i n_i \text{ with } i = 1 \text{ to } k \quad (1)$$

$$R_i = \sum_j R(X_{ij}) \text{ with } j = 1 \text{ to } n_i \quad (2)$$

$$R_j = \sum_i O_{ij} R_i \text{ with } i = 1 \text{ to } c \quad (3)$$

$$S^2 = [1/(N-1)] [\sum_i t_i R_i^2 - N(N+1)^2/4] \text{ with } i = 1 \text{ to } c \quad (4)$$

$$T = (1/S^2) [\sum_i (R_i^2/n_i) - N(N+1)^2/4] \text{ with } i = 1 \text{ to } k \quad (5)$$

$$\text{Absolute value of } (R_i/n_i) - (R_j/n_j) > t_{1-\alpha/2} [S^2(N-1-T)/(N-k)]^{1/2} [(1/n_i) + (1/n_j)]^{1/2} \quad (6)$$

where R is defined as the variable rank and N is the total number of observations. The first three equations are used to find average ranks. Equation (4) is used to calculate the sample variance, while equation (5) represents the test statistic. If, and only if, the null hypothesis is rejected, equation (6) is employed to determine multiple comparisons of pre/post-test scores.

Each set of post-exam scores is statistically greater than the pre-exam scores at the 99% level of confidence. The results indicate that the SIFE students were able to teach the high school students challenging material. While neither group had a comprehensive background in economics, the relevance of presenting how to be a local entrepreneur spurred both groups to succeed.

Faculty members are well aware that one knows a topic better after teaching it. The student-presenters went from a 44% average to 87% average on the multiple-choice exam. The SIFE students were re-examined three months after the last presentation. The average score of 81% show that the student presenters maintained their knowledge. The sample size is too small to be statistically significant with a high level of confidence.

CONCLUSIONS AND EXTENSIONS

Effective education necessitates knowing more than the theories for the exam. It should prepare the students for their professional lives. Service-learning is applying the lecture ideas to further the students' knowledge while assisting others. Entrepreneurs are active learners and service-learning is a practical application of active learning. Instead of choosing basic material for students to present, we challenged both sets of students with demanding material. Both cohorts were surprised but recognizing the value of the information, they approached it with interest. The SIFE students each had had only two to three economic courses as a basis. The level of material forced the students to research the topic to strengthen their background.

The SIFE students were taught teamwork. They had to be prepared to think on their feet in order to answer questions and adjust the presentation to meet the needs of the audience. They quickly learned that they must present the same idea in several different ways to convey the information to the entire group. While the SIFE students became frustrated by some of the high school behavior, they learned to adapt and use the energy from the high school students to sublimate the energy for the workshop. By loosely outlining how the presentation should be run, the SIFE students used team-building skills to successfully design the workshop.

Based on the Kruskal-Wallis test, the high school post-exam scores were statistically significantly greater than the pre-exam scores. Results for the SIFE students also showed

improvement but the limited sample size does not allow for a high degree of confidence. Service-learning does not have to be limited to volunteer work or basic information. The students were able to teach other students with no background challenging material. The mixture of lecture with hands-on activities cemented the ideas for both sets of students. Both sets of students ended knowing more about being a local entrepreneur in wind energy.

An extension of this work is for further entrepreneur workshops with the focus remaining on realistic options for the students.

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E-COMMERCE CURRICULUM AND PEDAGOGY FOR ENTREPRENEURS

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ABSTRACT

This paper offers a curriculum and pedagogy for teaching e-commerce to students of entrepreneurship. After discussing the need for future entrepreneurs to learn this new model of business, the paper offers a methodology and course calendar for teaching this critical subject to entrepreneurs. Exhibits to the paper direct the reader to e-commerce textbooks, syllabi, tutorials, slides, case studies, and the major academic e-commerce centers. Throughout, emphasis is placed upon free and low-cost internet resources for entrepreneurs engaging in e-commerce. The paper is offered as a road map for academics who want to teach, "E-Commerce for Entrepreneurs."

INTRODUCTION

This paper offers a methodology for teaching e-commerce to entrepreneurs. Curriculum and pedagogy are proffered by a professor who teaches a course titled, "E-Commerce for Entrepreneurs." Specifically, this paper shows professors of entrepreneurship how they can teach their students to use the internet to create and thereafter grow an e-commerce business. The paper is organized as follows.

The next section discusses the profound effects of the internet upon entrepreneurship, and the critical need to teach this new model of commerce to future entrepreneurs. Subsequent sections suggest content and pedagogy for "E-Commerce for Entrepreneurs," and a means to stay current in teaching this ever-changing process. The final section of this paper discusses how e-commerce will most likely be practiced by entrepreneurs in future years.

THE NEW ECONOMY

The internet has been described as, potentially, the greatest disintermediation force in all of history. (Economist, May 20, 2000.) Indeed, middlemen in every functional area of business - marketing, finance, etc. - are being eliminated in record numbers and at record rates. The result is incredible opportunities for entrepreneurs.

In 1995, when the U.S. Congress authorized the use of the internet for commercial purposes, only a few thousand domain names existed. By March, 2002, over 31 million domain names existed, which number included over 22 million dot.com names. Approximately 135,000 new domain names are registered each day. Currently, six million publicly accessible web sites offer over seven billion web pages for public view.

Not surprisingly, numbers of this magnitude have profoundly changed the way that entrepreneurship is conducted. In the "Old Economy," significant pools of capital and long periods of time were required to successfully grow a business. In the "New Economy," an entrepreneur can literally create a complete e-commerce web site (with shopping cart, catalog, internal and external links, customer surveys, newsletters, payment mechanisms, traffic analyses, and much more) in less than one hour, and at zero or very low cost. (The author routinely does this in his "E-Commerce for Entrepreneurs" class, using free "template" sites, and then requires his students to do likewise.)

In simplest terms, it's a whole new ballgame. "Old Economy" requirements have been largely, or at least potentially, replaced by "New Economy" opportunities. Exhibit 1 lists some of the many differences between the "old" and "new" ways of entrepreneurship. Gillepsie (2000), McLoughlin (2000), and Zarowin (2000) discuss some of these changes in greater detail, along with policy suggestions on how to successfully incorporate such new opportunities into existing businesses. Williams (2000) examines the teaching of e-commerce, and how this new model affects business practices and global stability.

Essentially, the practice of e-commerce is light years ahead of the teaching of e-commerce, as academics everywhere scramble to incorporate these new tools into their curricula. In doing so, some of the professoriate may appreciate a proven framework for teaching this new model of business to entrepreneurs. This paper offers such a framework.

PEDAGOGICAL RESOURCES

The author's "E-Commerce for Entrepreneurs" course calendar is shown in Exhibit 2. E-commerce textbooks, including ones specifically targeted toward entrepreneurs, can be examined at the web sites listed in Exhibit 3. Dozens of e-commerce syllabi, from almost every type of college and university, can be examined via the links in Exhibit 4. For those instructors who wish to avoid using a textbook in order to stay as current as possible, scores of (excellent) e-commerce tutorials, some of which are specifically targeted toward entrepreneurs, are available via the links in Exhibit 5.

E-commerce slide shows are available in Exhibit 6, including 349 Power Point slides directly targeted toward entrepreneurs (at the "E-Commerce Center for Entrepreneurs"). These latter slides contain scores of links to hundreds of free or low-cost resources available to entrepreneurs wishing to engage in e-commerce. Such free or low-cost resources include: e-commerce-enabled web sites (e.g., BigStep.com); online record keeping (NetLedger.com); templates and advice for constructing business plans (BusinessPlans.org); reports of all types; toll-free telephone numbers; fax numbers; voice mail; forms of every type (expense, payroll, purchase orders, performance appraisals, etc.); online calendars and meeting rooms; online calculators; legal and accounting advice; and scores of other free and low-cost resources for entrepreneurs.

E-commerce case studies (including full-text Harvard cases, free to academics) are accessible via Exhibit 7.

In general, the major academic e-commerce centers listed in Exhibit 8 are excellent comprehensive sources for anyone teaching e-commerce. Virtually anything an instructor needs or wants is available at one or more of these sites.

PEDAGOGY

Course prerequisites for "E-Commerce for Entrepreneurs" include the introductory course in every discipline of business (marketing, finance, etc.) plus an introductory course in Information Technology. Hence, undergraduate students are at least juniors before taking this course, and usually seniors. Graduate students should have completed the "pre-MBA" curriculum equivalent to the undergraduate prerequisites.

An e-commerce course for entrepreneurs can begin with an overview of the subject (see, again, Exhibit 2). Such an overview includes: the basic types of e-businesses (pure play, integration, and transformation), the interaction between e-commerce sectors (primarily B2B (Business to Business) v. B2C (Business to Consumer), the advantages and disadvantages of e-commerce, some basic statistics, and the abundant availability of e-commerce data/info (see Exhibits 9 and 10).

Students are then shown the various types of e-commerce models that they can use to launch their e-businesses (advertising-supported, transaction-fee supported, etc.), and which model is best for the particular market niches that they've identified.

The overview is followed by a tutorial on how the internet works: protocols, formats, networks, packet switching, bandwidth, domain names, and so on. (This module is also necessarily a brief overview as are, in fact, all of the modules; some schools offer complete courses on each module listed in Exhibit 2.) Learning the "nuts and bolts" of the internet is essential if entrepreneurs are to successfully utilize the internet to exploit business opportunities.

After the overviews, students are taught how to create a business plan, including identifying the market niche on which the business plan is predicated. The internet has many excellent resources (e.g., www.businessplans.org and www.pwcv2r.com) with which entrepreneurs can create business plans that are highly attractive to venture capitalists.

Prior to showing entrepreneurial students how to create an e-commerce web site, a discussion of markup languages, particularly HTML (Hyper Text Markup Language), is required. HTML is easily absorbed by students, and is even easier to teach. (The HTML tutorial at webmonkey.com is excellent.)

After learning HTML, students of entrepreneurship are then shown how to use free or low-cost templates to quickly create a professional-looking e-commerce site, complete with catalog, shopping cart, customer surveys, traffic analysis, etc. Knowledge of HTML allows students to fine-tune their sites to their exact desires. The author uses bigstep.com and freemerchant.com in class to build e-commerce web sites, taking approximately one hour of class time for each, and showing students how to use the multitude of tools available at each site. Both sites are the perennial "Editor's Choice" of PC Magazine, receiving a rating of 5 out of a possible 5 every year. Students are consistently amazed that they are able to create sites that look and largely behave like amazon.com and other professional sites, in less than one hour.

After creating a web site, students are shown the various hosting options for their sites, as well as for individual and corporate/organizational sites in general. The advantages and disadvantages of self-hosting v. external hosting are discussed, as well as the requirements for each.

The above lays the groundwork for a discussion of the e-security needed by entrepreneurs as they operate on the internet: encryption, digital certificates, digital signatures, certificate authorities, private and public keys, security protocols (Secured Sockets Layer, etc.), and all the other security tools used to encrypt credit-card numbers and other proprietary information traveling over the internet. Not surprisingly, some of the encryption methods used today make rocket science look easy; consequently, instructors should be careful to use an abundance of examples and time in explaining some of these tools. (The history of cryptography, literally dating back thousands of years, is highly interesting, and would certainly embellish any e-commerce course if time permits.)

The following two sections (e-marketing and e-finance) can be presented in either order. E-marketing explains the various types of internet ads (banner ads, rotation ads, etc.) that can be utilized by entrepreneurs, the plethora of marketing terms ("click through," "reach," "page view," etc.), banner exchanges, affiliate programs, Customer Relationship Management (CRM), and online approval seals (Bizrate, etc.). All of this is presented within the context of the various types of online marketing models (sale, fee, advertising-supported, etc.) that are available to entrepreneurs. The web sites bCentral.com and BeSeen.com are particularly helpful to entrepreneurs in growing their e-commerce sites.

E-finance discusses online payment mechanisms available to entrepreneurs (credit cards, digital cash, e-checks, etc.), e-wallets, Electronic Bill Presentation and Payment (EBPP), Financial Electronic Data Interchange (FEDI), and Value Added Networks (VANs). (Interestingly, FEDI is essentially the original internet, predating even the U.S. Defense Department's ARPA network, which is generally acknowledged to be the beginning of the internet era.)

Online auctions are best discussed before Supply Chain Management, as the latter relies heavily upon the former in e-commerce. The two major types of auctions (English v. Dutch) are explained, along with reverse auctions that have so popularized both B2B e-commerce as well as C2B (the latter best exemplified by priceline.com). Some of the major multi-commodity auction sites (e.g., freemarkets.com) can be visited to demonstrate the auction processes that have so radically altered the entrepreneur's supply chain.

Teaching entrepreneurs how to grow an e-business relies heavily upon previous modules. Banner exchanges and affiliate programs are utilized from the e-marketing module; payment mechanisms are borrowed from e-finance; various software (e.g., internal search engines for the students' web sites) can be obtained by cutting and pasting HTML code; and so on.

Students of entrepreneurship find the legal, cultural, and tax issues of e-commerce to be quite interesting, which, in fact, they are. Legally, for example, if a business headquartered in Seattle, using a server in Vancouver, ships a product from Mexico to a consumer in Europe, which legal system should handle any litigation initiated by the consumer? Culturally, a white background for a web site is acceptable in America, but is offensive in some Asian countries, as are web sites divided into quadrants. Some countries (such as Denmark) do not allow children to be used in advertisements, while others (such as Germany) do not allow unconditional money-back guarantees. How are such restrictions resolved in light of the fact that every e-commerce site is, by its nature,

global, and must simultaneously adhere to all laws of every country, even though such adherence is clearly impossible.

Policy and Strategy conclude the course. Interestingly, this capstone section of an "E-Commerce Course for Entrepreneurs" relies heavily upon "bricks and mortar" philosophies and practices of established businesses: set goals and objectives before engaging in e-commerce, quantify desired outcomes, estimate revenues and expenses, incorporate same into a highly detailed business plan, evaluate ex post, and revise, revise, revise. Finally, current issues can be discussed if time permits; or, alternatively, such issues can be interwoven throughout the course.

The author teaches e-commerce to entrepreneurial students via several hundred PowerPoint slides (available free; see Exhibit 6), and by alternating from slides to web sites to demonstrate and exemplify course content. (Classrooms in the author's business school are equipped with a DS3 connection, which has a bandwidth of approximately 44mbs, equivalent to a T3 line.) Besides the pedagogical value of being able to demonstrate course content with live web sites, students generally find the web sites to be highly entertaining. Indeed, many of the cutting-edge web sites (which use DHTML, XML, and other powerful markup languages) are essentially mini-movies designed by professional marketing firms who really know how to capture a person's attention.

SUMMARY AND OUTLOOK

E-commerce is rapidly changing the way that entrepreneurship is conducted. With dollar volume fast approaching one trillion dollars and an annual growth rate of almost 60%, e-commerce is radically changing the world of business, including how businesses are created and grown.

Currently, business schools are scrambling to catch up with practice, as they should, given the importance of this topic. E-commerce courses are proliferating across academia and, at larger schools, specialized e-commerce courses exist in every subtopic of e-commerce (e-marketing, e-finance, supply chain management, etc.).

Eventually, business and entrepreneurship will simply absorb e-commerce, just as they have absorbed information systems, globalization, and other "hot" topics in the world of commerce. Ten years from now, the term "entrepreneurship" will automatically mean digital signatures, online supply chains, electronic payments, and all the other elements of today's "e-commerce."

Currently, e-commerce is undergoing a massive consolidation, as historically happens whenever a major innovation (steam, electricity, automobiles, etc.) is introduced. The Austrian economist Joseph Schumpeter was quite prescient when he posited his Theory of Creative Destruction. The internet innovation is, indeed, rapidly destroying old ways of creating and growing businesses, and thus rapidly sowing the seeds for a new form of entrepreneurship.

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EXHIBIT 1	
OLD ENTREPRENEURISM v. NEW ENTREPRENEURISM	
Old Entrepreneurism	New Entrepreneurism
high startup costs	very low startup costs
long startup time	short startup time
years to grow a business	weeks/days to grow a business
slow economic growth	exponential economic growth
long time to establish a brand name	short time to establish a brand name
hard to expand a business	easy to expand a business
long search time for customers	short search time for customers
high cost to find new customers	low cost to find new customers
high cost to retain new customers	low cost to retain new customers
going global is costly and slow	going global is cheap and fast
imperfect information	near-perfect information
limited # of buyers and sellers	unlimited (global) # of buyers and sellers
large inventories	little or no inventories
long product cycles	short product cycles
retail stores	virtual stores
limited store hours (e.g. 9-5)	open 24/7
monitoring competitors is hard	monitoring competitors is easy
seller centered	buyer centered
physical supply chains	online supply chains
paper bills	online bills
transactions are very time consuming	transactions are instant, and in real time
slow price setting	instant price setting
relatively low technology	relatively high technology

EXHIBIT 2
COURSE CALENDAR: E-COMMERCE FOR ENTREPRENEURS

Week 1	An Overview of E-Commerce
Week 2	How the Internet Works
Week 3	Creating a Business Plan
Week 4	Creating an E-Commerce Web Site
Week 5	Markup Languages/HTML
Week 6	Hosting an E-Commerce Web Site
Week 7	Growing an E-Commerce Web Site
Week 8	E-Security/Cryptography
Week 9	E-Marketing
Week 10	E-Finance
Week 11	Supply Chain Management
Week 12	ERP (Enterprise Resource Planning)
Week 13	Legal, Cultural & Tax Issues
Week 14	Policy and Strategy
Week 15	Current Issues

EXHIBIT 3
E-COMMERCE TEXTBOOK LISTINGS

◆	Center fo Research in Electronic Commerce http://crec.bus.utexas.edu/works/books.html
◆	IS World Net http://www.isworld.org/isworld/isworld.html (click on “Teaching” then “Electronic Commerce” then “Books”)

EXHIBIT 4
E-COMMERCE COURSE SYLLABI

◆	http://dossantos.cbpa.louisville.edu/ISNET/Ecomm
◆	http://cism.bus.utexas.edu

EXHIBIT 5
TUTORIALS: E-COMMERCE FOR ENTREPRENEURS

◆	Center for Business Planning	http://www.businessplans.org
◆	Start Up Biz	http://www.startupbiz.com
◆	Yahoo! Small Business	http://smallbusiness.yahoo.com
◆	Entrepreneur Resource Center	http://www.pwc.v2r.com
◆	Entrepreneur.com	http://www.entrepreneur.com
◆	Biz Plan It	http://bizplanit.com
◆	E-Com Resource Center	http://ecomresourcecenter.com
◆	Business Town	http://www.businesstown.com

EXHIBIT 6
E-COMMERCE SLIDE SHOWS

◆	http://cism.bus.utexas.edu
◆	http://cbpa.louisville.edu/russray/ecom.htm

EXHIBIT 7
E-COMMERCE CASE STUDIES

◆	Information Week	http://www.internetwk.com/case/study/htm
◆	Harvard University*	http://www.hbsp.harvard.edu/products/cases
◆	ZDNet	http://www.zdnet.com/ecommerce
◆	Network World Fusion	http://www.nwfusion.com/ec/casestudies.html
◆	IS World Net	http://www.magal.com/iswn/ecourse

*Full-text Harvard cases are free to academics

EXHIBIT 8
MAJOR ACADEMIC E-COMMERCE CENTERS

- ◆ Center for Research in Electronic Commerce, University of Texas, Austin, <http://crec.bus.utexas.edu>
- ◆ IS World Net, E-Commerce Consortium of Universities, <http://www.isworld.org>
- ◆ McMaster E-Commerce Research Center (MERC), McMaster University, Canada, <http://merc.mcmaster.ca>
- ◆ iXL Center for Electronic Commerce, Georgia Tech University, <http://www.dupree.gatech.edu/ebus/index.shtml>
- ◆ International Center for Electronic Commerce, Korea Advanced Institute of Science & Technology, <http://icec.net>
- ◆ Center for eBusiness, Massachusetts Institute of Technology, <http://ebusiness.mit.edu>
- ◆ Center for E-Commerce for Entrepreneurs, University of Louisville, <http://cbpa.louisville.edu/russray/ecomm.htm>

EXHIBIT 9
ONLINE E-COMMERCE/INTERNET PERIODICALS

- ◆ Business Weeks's e-biz, <http://businessweek.com/ebiz>
- ◆ Information Week, <http://www.informationweek.com>
- ◆ eCompany, <http://ecompany.com>
- ◆ Internet Week, <http://www.internetwk.com>
- ◆ Internet World, <http://www.iw.com>
- ◆ The Industry Standard, <http://www.thestandard.com>

EXHIBIT 10
E-COMMERCE RESOURCE LINKS

- ◆ IS World Net, <http://www.magal.com/iswn/ecourse>
- ◆ Center for Research in Electronic Commerce, <http://cism.bus.utexas.edu>

THE STOCK MARKET GAME IN ECONOMICS INSTRUCTION

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ABSTRACT

The Stock Market Game [SMG] is designed to help motivate students to learn about the American economic system through the stock market. In Arkansas the SMG is distributed exclusively through the Arkansas Council on Economic Education [ACEE]. The Center for Economic Education and Students in Free Enterprises [SIFE] programs at Arkansas State University [CEE-ASU] have been using this simulation to introduce regular college students enrolled in economics courses and inservice-teachers to the stock market and the enterprise economy.

The ASU SIFE team has been involved with the project in three ways. First the team has written two major publications and ten special activities' sheets distributed to students grades three through 12 participating in the program. The state had 1,200 teams in 1997-1998 alone.

*The second publication, entitled *The News Cookbook Journal*, presented the stock market in the framework of corporate activity and simulated a real company, which students could emulate in the classroom. This guide incorporates the role of the stock markets in with a simulation that can make real money for the class. This booklet was made available to teachers playing the stock market game throughout the state. The publisher of both guides is the Arkansas-Democrat Gazette. We also designed 10 special worksheets mailed to all participants of the SMG to enhance the learning portion of the exercise. SIFE wanted feedback on the effectiveness of the materials they produced.*

The SIFE team also helped conduct twenty teacher training workshops using their materials. SIFE team members served as host/hostess; conducted sessions; provided group checking stations, helped set up displays and provide some lecture for the teachers. A total of 417 teachers participated in these workshops.

Finally SIFE team members set up play stations on the Internet version for students on the ASU Campus in formal class settings and informal student conferences providing additional services to students.

The program was evaluated based on four goals: (1) increasing teacher and college student knowledge and appreciation for economics and the stock market, (2) affecting teacher attitudes toward economics, (3) increasing student knowledge and appreciation for economics and the stock market, grades 4 through 12 and (4) informing area teachers about the services available in teaching about the stock market through SIFE and the ASU Center for Economic Education.

Using raw data, Chi-square and regression analysis techniques this program has been found to be successful, providing valuable insights that could help other instructors establish their economic education program.

INTRODUCTION

The Stock Market Game [SMG] is a nationally distributed tool for teaching basic economics and finance principles through the stock market. In Arkansas the SMG is distributed exclusively through the Arkansas Council on Economic Education [ACEE]. On the ASU Campus the program is co-sponsored by the ASU Students in Free Enterprises [ASU-SIFE] and the Center for Economic Education at Arkansas State University [CEE-ASU]. They have been using this simulation to introduce students to the stock market and the enterprise economy in three different classes:

1.	Since 1992 the SMG has been used with a total of 27 classes of Economics totaling 1,793 students. These are both upper-division Economics courses (History of Economic Thought, Comparative Economic Systems, Economic Development) and introductory level courses (Economics of Social Issues). The purpose for using the game in this class is to provide information on the stock market to the students and to students to begin thinking about investing for their future.
2.	A class in Personal Finance consisting of 23 business area majors is used this program in 1997.

The ASU SIFE team has been involved with the project in three ways. First the team has written two major publications and ten special activities' sheets distributed to students grades three through 12 participating in the program. The state had 1,200 teams in 1997-1998 alone.

The First major publication was the two volume notebook *Economics in the Newspaper: Intermediate Grades* and *Economics in the Newspaper: Secondary Grades*. These curriculum guides show teachers how to use the newspaper to teach about the economy and business in the general curriculum using a multi-disciplinary approach that includes math, science, language arts, government and business. It includes a variety of games, puzzles and activities designed to use newspapers as a teaching tool.

The second publication, entitled *The News Cookbook Journal*, presented the stock market in the framework of corporate activity and simulated a real company, which students could emulate in the classroom. This guide incorporates the role of the stock markets in with a simulation that can make real money for the class. This booklet was made available to teachers playing the stock market game throughout the state. The publisher of both guides is the Arkansas-Democrat Gazette. We also designed 10 special worksheets mailed to all participants of the SMG to enhance the learning portion of the exercise. SIFE wanted feedback on the effectiveness of the materials they produced.

The SIFE team also helped conduct twenty teacher training workshops using their materials. SIFE team members served as host/hostess; conducted sessions; provided group checking stations, helped set up displays and provide some lecture for the teachers. A total of 1,117 teachers participated in these workshops.

Finally SIFE team members set up play stations on the Internet for students on the ASU Campus in formal class settings and informal student conferences providing additional services to students.

The program was evaluated based on four goals: (1) increasing teacher and college student knowledge and appreciation for economics and the stock market, (2) affecting teacher attitudes toward economics, (3) increasing student knowledge and appreciation for economics and the stock market, grades 4 through 12, and (4) informing teachers about the services and materials available in teaching about the stock market through SIFE.

These goals were assessed using raw data, Chi-square and regression analysis techniques and found successful, providing valuable insights that could help other instructors establish their economic education program.

INCREASING TEACHER AND COLLEGE STUDENTS' KNOWLEDGE ABOUT ECONOMICS AND THE STOCK MARKET

This research into the effectiveness of the SMG will focus on 22 credit courses, with 1,038 students enrolled. This group of test subjects [TS] was compared with a control group [CG] of eight classes of 291 students, who did not use the SMG approach. The control group consisted of 41 students in two classes in Personal Finance, 41 students in two classes of Macroeconomics and 209 students in Economics of Social Issues.

The first phase of this study is to learn if the SMG is successful in improving the understanding of and appreciation for basic economic concepts and the stock market. Several studies have shown the importance of teacher education in improving economic literacy among the general population (Highsmith, 1974; Baumol, 1988). The Walstad-Soper study (Walstad, 1988) concludes that each college level economics course completed by a teacher add .64 points to the predicted score of his or her students on the nationally normed *Test of Economic Literacy*. Teacher education is the most effective tool available to the economic education movement in its goal of improving the economic literacy of the general population. This paper will evaluate the effectiveness of the SMG as an instructional method using raw data, Chi-Square statistical analysis and regression analysis techniques. A general *Stock Market Test* [SMT] consisting of 25 questions about basic stock market terminology and background information was developed by the instructors. In addition the standardized *Test of Economic Literacy* (TEL.), published by the National Council on Economic Education (NCEE), was used as a pretest (form a) and a post test (form b) to every student in the study from our workshops. The test was used to monitor progress and supply data for this study.

We first looked at the impact of the SMG approach on the learning of economics among the three student treatment groups as compared with their counterparts in the control groups. An examination of the raw data, difference between the preinstruction test mean score (PETMS) and the post instruction test mean score (POTMS), clearly demonstrates that all three subject groups did learn some economics. Teachers in the test group improved their knowledge of economics and the stock market during the workshop. The difference between these mean scores ranged from a low of +2.41 in the Fall of 1995, to a high of +11.25 in a Spring of 2000 class on the TEL. The PETMS ranged from 10.95 (1995S) to a high of 30.42 (2000S) while the POTMS ranged from 18.23 (1994S) to a high of 36.56 (1999F).

A series of Chi-square tests (χ^2) of independence was used to decide if the difference between the PETMS and the POTMS, which improved every year, was significant using a critical value of χ^2 established at the .01 level of significance. Results were statistically significant, the null hypothesis was rejected, for every year except the Fall of 1993 and the Spring of 1994. Those classes still showed some improvement, but it was not statistically significant. Teachers in the group did learn economics, since the difference in scores is not random.

The control groups did not fare as well as the treatment groups. Only two of the classes and one micro class showed significant improvement in economics. A second χ^2 test of significance was run comparing the test subject groups against the control groups. Both the teacher and micro experimental groups performed significantly better, at the .01 level, in learning economics than their counterparts in the control groups. Only the personal finance groups showed no significant difference in their performance in economics between the test and control groups. Since Personal Finance does not usually emphasize economics instruction this finding is not surprising. This finding is enhanced by the fact that all groups of classes were taught by the same instructor. The only major difference in the classroom presentation was the introduction of the stock market game and materials in the TS group.

A similar procedure was followed using the stock market test with even more startling results. The teacher and micro treatment groups learned more about the stock market, with one exception, than their counterparts in the control group. Only one teacher in the CG and none of the micro CG's improved by taking the course. The personal finance CG's fared much better, but the treatment groups still did significantly better on the post test than the CG. This is not surprising since personal finance does include a section on the stock market. What is important is that these students' learning did translate into a greater retention of the material using the SMG than a standard lecture approach to the materials even in the personal finance classes.

We also pre and post tested student groups and discovered that regular college students, who were exposed to the SMG approach in their instruction performed 21% better on the post test than their counterparts from a similar course taught by the same instructor.

A regression analysis was used to learn what factors were most influential in predicting success in the economics courses. After econometric testing for possible adverse effects of multicollinearity and heteroskedasticity, a simultaneous multiple linear regression analysis was established using the following hypothesized relationships;

$DMTEI = b_0 + b_1PCE + b_2PI + b_3GPA + b_4AGE + b_5SEX + b_6PESM$
DMTEL = The difference between the pre and post test Tel Mean score.
PCE = Previous Courses taken in Economics
PI = Personal Interest in Economics
GPA = Grade Point Average
AGE = Age
SEX = Male or Female

PESM = Previous Experience with Stock Market

The results of the regression analysis indicated that the following factors were significant contributors to success in the class, at the .01 level; personal interest in economics, Grade Point Average and the experience with the SMG. This result is somewhat surprising. Previous course taken in economics was not significant. One would think the more economics a student had the better he or she would do in additional economics course. This can be explained in part because 73% of the subjects had no previous experience with economics. They still seemed to do as well as those with economics instruction. I am not surprised that interest in economics and GPA were significant. The more one likes economics, the better they should do in the course and the more intelligent the students, as reflected by GPA, the better they should do in the course. Clearly the most important finding is that students who played the Stock Market Game performed better than students in the control group. What a phenomenal motivational tool this proved to be in college instruction. Students in these classes gave a 42% higher rating to the practical value of the course, when the SMG was used as part of instruction.

INCREASING STUDENT, GRADES 4 THROUGH 12, KNOWLEDGE/APPRECIATION FOR ECONOMICS AND THE STOCK MARKET

We tested three groups of 78 students, grades five and six, who were taught by three graduates of our economics for teachers class who played the stock market game and used the instructional materials. We also found two groups of 46 students in the same schools to act as a control group. While this is a very limited sample size, we pre and post tested these students using the appropriate test of understanding, The Basic Economics Test [BET], and a modified 25 question stock market test. The experimental group outscored the control group by an average 35% on the BET and 81% on the SGT. A better understanding of both economics and the stock market was found in the treatment groups at the .01 levels, using the X^2 test of significance. Since all of the classes contained a unit on economics in their social studies curriculum it suggests that the SMG approach worked as well with students as it did with their teachers.

We also ran a regression analysis with student groups. The results of the regression analysis indicated that the following factors were significant contributors to the amount of knowledge retained by students, at the .01 level; Grade point average, other courses taken in economics, personal interest in economics and the experience with the SMG and classroom materials. This result is not surprising.

AFFECTING TEACHERS ATTITUDES TOWARD ECONOMICS IN THE CURRICULUM

Teachers who have been exposed to the SMG approach clearly have a better understanding of basic economic concepts. We also wanted to know if they appreciate economics and its importance in the overall school curriculum, particularly as it relates to that teacher's specific curriculum and lesson planning. A recent national study concludes that:

"Teachers of economics believe that all teachers, themselves included, should be required to take more courses in economics than they have taken"

(Baumol, 1988).

This interest in economic literacy is not shared by the profession as a whole since only 25% of the nations teachers have ever taken a single course in economics in either high school or college (Volker, 1988).

Earlier research conducted at West Texas State University (Dale, 1987) suggests that exposure to economics instruction techniques creates a favorable attitude toward economics in the curriculum among teachers. This favorable attitude is reflected in pre? and post?course survey responses. Such interest should result in more economics being taught. The same survey was used with teachers in the credit courses taught between 1992 through 1997. Although this is a required course, these students gave a mean rating of 4.68 on the Teacher Attitude Survey (TAS), with a maximum of 5.0. This suggests strong agreement with the idea that economics was an important part of the elementary curriculum. A slight but interesting difference came when teachers were asked if it were important that they; 1) understand basic economic principles and, 2) teach those principles in their own class setting. A majority of 61% of the elementary teachers stated that they would include some economics instruction in their curriculum because of the experience.

This attitude change came with an overwhelmingly favorable response to the course experience. On the Economic Education Course Evaluation (EECE) form 84% of the students rated the course outstanding in some or all respects. Similar ratings were noted of 96% in 1992; 97% in 1993; 98% in 1994; 87% in 1998 and 45% in 1999.

Teacher attitude toward economics is critical if teachers are to include economics in their curriculum plans. The Baumol-Highsmith study indicates that:

"Students share with their teachers many of the same goals for studying economics, but students believe that these goals are less important than teachers believe them to be"

(Baumol, 1988).

If students are to be motivated to learn economics, their teachers must first be interested in the subject matter and capable of teaching it effectively. Students enrolled in economics courses are very favorable to the subject according to the Baumol-Highsmith study with 67% of the students indicating a favorable attitude toward economics subjects and only 13% disliking the subject. Excited enthusiastic teachers will improve the level of economic literacy.

Teachers leave the college experience with a better perception of economic, believing that economics should be an important part of their curriculum. This does not mean that this new attitude will be reflected in long-term changes in classroom behavior. The Economic Education Survey (EES) was mailed to all 1,117 graduates of the 1994 through 2001 workshops to decide; 1) if they were teaching more economics or less than before the workshop and 2) what factors were influencing their behavior. Of the surveys mailed, representing 100% of the population to be surveyed, 22.5% were returned with a notice that the addressee had moved, 60.13% were returned

completed or partially completed and 16.82% have not been returned. This is a phenomenally high rate of return for a mail survey. This shows that the teachers still have strong interests in economics.

The survey asked teachers to set the amount of classroom time spent teaching economics as integrated into other subject areas. An overwhelming 83% of the intermediate teachers said that they did spend some time teaching economics with 13% suggesting that they spent 50% of their time or more teaching economics. Primary teachers spent an average of 17% of their time teaching economics. These statistics suggest that teachers, from the ASU workshops, are spending a significant amount of time with economic subjects and content materials. Most surveys show that economics has not been given a high priority in the nation's schools, certainly much less than is proved by this group of teachers (Volker, 1988). Sixty-one percent of the graduates showed that they had used the SMG in their classroom. Of those using SMG, 53% said they would use the SMG again with 26% saying they might use it again. Less than 4% said they would definitely not use the materials again. An additional 17% used the SMG materials developed by SIFE, but did not play the game. A modified form of the survey was distributed to six area principals, randomly selected, and they were each asked to give the survey to five classroom teachers on a random basis. This served as a control group. Forty-six percent of the control group surveys were returned. This group said that only 41% of the respondents included economics instruction in their classroom. On average 11% of the control group's curriculum was devoted to economics at the intermediate level and 3% at the primary level. Only 6% of the teachers had ever heard of the SMG and less than 1% used it in their classroom. A Chi square test of significance was run, at the .01 levels of significance. The null hypothesis was rejected at the .01 level indicating that workshop graduates were more likely to teach economics and use the SMG approach than the control group.

The rating was used to set up a regression analysis to learn what factors were most influential in predicting time spent on teaching economics. For this computation the information from teachers whose primary duty requires teaching economics was excluded from the test results. After econometric testing for possible adverse effects of multicollinearity and heteroskedasticity a simultaneous multiple linear regression analysis was established using the following hypothesized relationships;

$TTEI = b_0 + b_1SM + b_2PI + b_3SAE + b_4IA + b_5SMG + b_6CSM$
TTEI = Time teachers spend in economics instruction
SM = State Mandate Rating
PI = Personal Interest in Economics
SAE = School Administrators Encouragement Rating
IA = The International Paper Company Foundation Awards Program
SMG = The Experience with the Stock Market Game in College
CSM = Experience with SIFE Stock Related Materials

The results of the regression analysis indicated that the following factors were significant contributors to the amount of time teachers spend in economic instruction, at the .01 level; state mandates, personal interest in economics and the experience with the SMG and classroom materials. This result is not surprising. Workshop materials and experience are a significant predictor of time spent teaching about economics and the stock market. All respondents indicated support for economics in the curriculum.

INCREASING STUDENT KNOWLEDGE/APPRECIATION FOR ECONOMICS AND THE STOCK MARKET

We tested three groups of 78 students, grades five and six, who were taught by three graduates of our economics for teachers class who played the stock market game and used the instructional materials. We also found two groups of 46 students in the same schools to act as a control group. While this is a very limited sample size, we pre and post tested these students using the appropriate test of understanding, The Basic Economics Test [BET], and a modified 25 question stock market test. The experimental group outscored the control group by an average 35% on the BET and 81% on the SGT. A better understanding of both economics and the stock market was found in the treatment groups at the .01 levels, using the X^2 test of significance. Since all of the classes contained a unit on economics in their social studies curriculum it suggests that the SMG approach worked as well with students as it did with their teachers.

INFORMING TEACHERS ABOUT THE SERVICES AVAILABLE IN ARKANSAS AND PROVIDING QUALITY MATERIALS

The CEE-ASU uses each of our teacher contacts to advertise various materials and programs available to educators each year. Every student that graduates from the ASU course is placed on our extensive mailing list, along with workshop participants. We find that 'word of mouth' advertising is our most successful contact that has allowed us to attract 17,991 teachers to our 167 workshops held since 1992. We believe that a combination of useful free materials and successful workshops is responsible for our outreach.

Other important factors have contributed to the overall success of the program. Much of the success of the model is due in large part to the long track record of the program. The business community has provided consistent support to the program, both financial and physical, that has not been equaled by many states with larger populations and more substantial financial resources.

CONCLUSIONS

The SMG approach is a successful tool in helping teacher, and student groups, understand both economics and the stock market. If included as part of an economics course it can enhance the learning of economics and help students better understand the role of the stock markets in society. Further, it is useful in motivating college students to study in order to retain more of the cognitive information presented in class.

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A DEMONSTRATION OF THE EFFECT OF SALES GROWTH ON CASH FLOW

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ABSTRACT

The goals of small businesses are survival and prosperity. These twin objectives may be accomplished through successful growth strategies, but focusing solely on revenue growth is a mistake. Students of entrepreneurship need to understand and appreciate the effect of sales growth on cash flow. This article illustrates the impact that sales growth has on the monthly and cumulative cash flow of the firm. A spreadsheet exercise is presented that allows students to observe alternative scenarios for a growing firm. By analyzing the effect of sales growth on the cash flow of the firm, students are impressed by the fact that sales growth must be financed and that exclusively focusing on revenue growth may allow the firm to literally grow itself into bankruptcy.

INTRODUCTION

Entrepreneurship students frequently believe that sales growth is a measure of success, and indeed a means of survival. At the same time, they are often puzzled and frustrated by the cash flow pressures that are caused by rapid sales growth and frequently do not understand why cash flow problems arise when the "company is doing well." The importance of cash flow is normally stressed in accounting and finance classes, starting with an overview of the statement of cash flows. Because the topic is often associated with prepared financial statements and capital budgeting forecasts associated with large corporations, entrepreneurship students may miss the importance of cash flow for small firms in early growth stages. (For a straightforward method of presenting the various cash inflows and outflows for a firm, instructors are encouraged to see "Simplifying the Presentation of Cash Flows," by N. R. VanZante, in *Great Ideas for Teaching Accounting*, copyright 1996 by South-Western College Publishing and available online at www.swcollege.com/vircomm/gita/gita_main.html.) These students need to understand, and plan for, the cash flow problems caused by sales growth. Failure to understand this cause-and-effect relationship, and to plan for the financing that is required, can create a liquidity crisis that will disrupt the sales momentum and many times lead to the demise of an otherwise successful business venture. (Two texts that provide a comprehensive overview of managing a firm's liquidity are *Liquidity Analysis and Management* by G.W. Gallinger and P.B. Basil Healy, copyright 1991 by Addison-Wesley, and *Short-Term Financial Management*, by N.C. Hill and W.L. Satoris, copyright 1995 by Prentice-Hall.)

The purpose of this article is to give the instructor and students in entrepreneurship classes a "hands on" demonstration exercise that genuinely highlights the effects of sales growth on a firm's cash flow. The theoretical base outlining the problems associated with the effect of sales growth on the firm's cash flow is outlined in financial management and bank management textbooks. (For examples, see Bank Management by T. W. Koch and S. S. McDonald, 4th edition, Dryden Press, 2000, pp. 630-635, and Intermediate Financial Management by E. F. Brigham and P. R. Daves, 7th edition, Southwestern College Publishing, 2002, pp. 700-704.) A spreadsheet template is presented whereby instructors and/or students may assume alternative assumptions for different growth scenarios. As they analyze the effects of expanding sales on the monthly and cumulative cash flows of the firm, students will be impressed with the vital need for small businesses to prepare for and finance rapid sales growth.

DEFINING CASH FLOW

A difficult aspect for students of business education is the many definitions used for certain terms. The definition of "cash flow" is no exception. Accounting and financial management texts provide different definitions of periodic cash flow, often without differentiating between cash and credit sales.

For simplicity, assume there are no depreciation or amortization expenses, and no interest expense. All sales are on credit. Then, monthly cash flow is defined by the following equation:

$$NCF_n = Sales_{n-k} - AP_n - OC_n \quad \text{Formula (1)}$$

Where:

NCF_n = net cash flow for month n.

$Sales_{n-k}$ = monthly sales for month n-k, where k is the number of months between sales and collections.

AP_n = accounts payable for month n.

OC_n = other costs, such as operating expenses and taxes, incurred in month n.

Equation 1 gives the net cash flow for any month under a given set of assumptions. Cumulative net cash flow includes the current monthly cash flow plus the aggregate cash flows previously incurred. Cumulative net cash flow is defined as:

$$CNCF_n = NCF_n + CNCF_{n-1} \quad \text{Formula (2)}$$

Where:

$CNCF_n$ = the cumulative net cash flow through month n.

It is critical for entrepreneurship students to perceive the twin concepts of periodic and cumulative net cash flow. A simple spreadsheet exercise allows students to use these equations to develop scenario analyses demonstrating the firm's cash flows over time.

For example, suppose a firm has monthly sales of \$100,000, all of which are on credit. Assume that cost of goods sold is 70 percent of sales. The terms on payables are net 30, and receivables are collected in 90 days. This leaves a cash gap of two months between payment on payables and receipt of receivables. This cash gap is the core issue contributing to the cash flow deficit. Other monthly costs such as operating expenses and taxes are assumed to be 23 percent of sales. Thus, the firm is earning $\$1 - .70 - .23 = \0.07 for each dollar of sales, or a net profit margin of 7 percent. Table 1 provides the monthly and cumulative cash flows for this firm from the beginning month of operations.

Month of Operation	Sales	AR	AP	OC	NCF	CNCF
1	100000				0	0
2	100000		-70000	-23000	-93000	-93000
3	100000		-70000	-23000	-93000	-186000
4	100000	100000	-70000	-23000	7000	-179000
5	100000	100000	-70000	-23000	7000	-172000
6	100000	100000	-70000	-23000	7000	-165000
7	100000	100000	-70000	-23000	7000	-158000
8	100000	100000	-70000	-23000	7000	-151000
9	100000	100000	-70000	-23000	7000	-144000
10	100000	100000	-70000	-23000	7000	-137000
11	100000	100000	-70000	-23000	7000	-130000
12	100000	100000	-70000	-23000	7000	-123000
13	100000	100000	-70000	-23000	7000	-116000
14	100000	100000	-70000	-23000	7000	-109000
15	100000	100000	-70000	-23000	7000	-102000
16	100000	100000	-70000	-23000	7000	-95000
17	100000	100000	-70000	-23000	7000	-88000
18	100000	100000	-70000	-23000	7000	-81000
19	100000	100000	-70000	-23000	7000	-74000
20	100000	100000	-70000	-23000	7000	-67000
21	100000	100000	-70000	-23000	7000	-60000
22	100000	100000	-70000	-23000	7000	-53000
23	100000	100000	-70000	-23000	7000	-46000

Month of Operation	Sales	AR	AP	OC	NCF	CNCF
24	100000	100000	-70000	-23000	7000	-39000
25	100000	100000	-70000	-23000	7000	-32000
26	100000	100000	-70000	-23000	7000	-25000
27	100000	100000	-70000	-23000	7000	-18000
28	100000	100000	-70000	-23000	7000	-11000
29	100000	100000	-70000	-23000	7000	-4000
30	100000	100000	-70000	-23000	7000	3000
31	100000	100000	-70000	-23000	7000	10000
32	100000	100000	-70000	-23000	7000	17000
33	100000	100000	-70000	-23000	7000	24000
34	100000	100000	-70000	-23000	7000	31000
35	100000	100000	-70000	-23000	7000	38000
36	100000	100000	-70000	-23000	7000	45000
Assumptions:	All cash flows occur at the end of the month. \$100,000 monthly sales C.G.S. = 70% of sales Payables due in 30 days Receivables collected in 90 days Other costs = 23% sales					

Under a stable sales scenario (there is no growth assumed in the above example), the firm experiences negative cumulative cash flow for the first 29 months of operations. This is due to the cash gap resulting from payables being due 60 days before collections on outstanding receivables. While monthly net cash flow turns positive in the fourth month when collections begin, it takes much longer to cover the aggregate deficit accumulated in the first months of operations. It is important for students of entrepreneurship to understand the effect on cash flow of the cash gap. However, a stable sales scenario is not realistic, when in fact the goal of the entrepreneur is to grow the business. The following extends the exercise to include both increasing sales and the costs associated with financing them.

FINANCING SALES GROWTH

The cash conversion cycle, also known as the cash gap, is the number of days needed from the time inventory is purchased for product development to the date cash is received from the sale of the finished product. Gitman (1974) defined the cash conversion cycle as the inventory conversion period plus the accounts receivable period, less the accounts payable period. As a firm increases its sales, greater inventory and accounts receivable levels are needed. These must be financed, and the increase in payables is not normally great enough to accomplish needed financing.

Boer (1999) notes that a firm's cash gap must be financed, and the financing costs reduce cash flow. Gallinger (1997, p. 25) defines the cash conversion cycle as "the number of days the firm's operating cycle requires costly financing to support it."

Now change the assumption of zero growth in sales, from the original example, to an annual rate of sales increase of 10 percent ($.10/12 = .0083$ per month). Greater sales means greater production costs; if accounts payable do not expand proportionally to cover the higher costs, the difference must be financed through external sources. Many entrepreneurs fail to recognize these costs associated with growth. External financing results in interest costs, which further drain the cash flows from operations. Assume that annual interest costs are 8 percent ($.08/12 = .0067$ per month). All other assumptions remain the same. Then, monthly net cash flow is given by

$$NCF_n = Sales_{n-k} - AP_n - IE_n - OC_n \quad \text{Formula (3)}$$

Where:

IE_n = monthly interest expense, computed as

$$IE_n = (CNCF_{n-1})(\text{monthly interest rate})(1 - t) \quad \text{Formula (4)}$$

Here, t is the firm's marginal tax rate. This adjustment reflects the tax deduction associated with interest expense by expressing the cost on an after-tax basis.

Table 2 shows how sales growth and the financing costs associated with the growth affect the firm's monthly and cumulative net cash flow. The firm must use external financing, at an 8 percent annual rate, to afford the increasing production associated with the sales growth. Students can see the effect on monthly and cumulative net cash flow that results from the costs of financing increasing sales growth.

The results in Table 2 highlight the costs of financing sales growth. The cash gap resulting from the lag between payables due and receivables collected, coupled with the additional interest costs from external financing, result in a cash drain on the firm. In this example, while sales grow and monthly cash flow turns positive after four months of increasing sales, the cumulative deficit incurred during the initial months persists for nearly three years of operations. Entrepreneurs must be aware of this issue and plan accordingly, or the firm may run out of cash in the midst of the "successful" sales expansion.

Month of Operation	Sales	AR	AP	Int Exp	OC	NCF	CNCF
1	100000					0	0
2	100833	0	-70000	0	-23000	-93000	-93000
3	101674	0	-70583	-434	-23192	-94209	-187209
4	102521	100000	-71172	-874	-23385	4570	-182639
5	103375	100833	-71765	-852	-23580	4637	-178003
6	104237	101674	-72363	-831	-23776	4704	-173299
7	105105	102521	-72966	-809	-23974	4772	-168527
8	105981	103375	-73574	-786	-24174	4841	-163686
9	106864	104237	-74187	-764	-24376	4910	-158775
10	107755	105105	-74805	-741	-24579	4981	-153795
11	108653	105981	-75428	-718	-24784	5051	-148743
12	109558	106864	-76057	-694	-24990	5123	-143620
13	110471	107755	-76691	-670	-25198	5195	-138425
14	111392	108653	-77330	-646	-25408	5269	-133156
15	112320	109558	-77974	-621	-25620	5342	-127814
16	113256	110471	-78624	-596	-25834	5417	-122397
17	114200	111392	-79279	-571	-26049	5492	-116904
18	115152	112320	-79940	-546	-26266	5569	-111336
19	116111	113256	-80606	-520	-26485	5646	-105690
20	117079	114200	-81278	-493	-26706	5723	-99967
21	118054	115152	-81955	-467	-26928	5802	-94165
22	119038	116111	-82638	-439	-27153	5881	-88284
23	120030	117079	-83327	-412	-27379	5961	-82323
24	121031	118054	-84021	-384	-27607	6042	-76280
25	122039	119038	-84721	-356	-27837	6124	-70157
26	123056	120030	-85427	-327	-28069	6206	-63950
27	124082	121031	-86139	-298	-28303	6290	-57660
28	125116	122039	-86857	-269	-28539	6374	-51286
29	126158	123056	-87581	-239	-28777	6459	-44827
30	127210	124082	-88311	-209	-29016	6545	-38281
31	128270	125116	-89047	-179	-29258	6632	-31649

Month of Operation	Sales	AR	AP	Int Exp	OC	NCF	CNCF
32	129339	126158	-89789	-148	-29502	6720	-24930
33	130416	127210	-90537	-116	-29748	6808	-18121
34	131503	128270	-91291	-85	-29996	6898	-11223
35	132599	129339	-92052	-52	-30246	6988	-4235
36	133704	130416	-92819	-20	-30498	7080	2844
Assumptions: All cash flows occur at the end of the month. \$100,000 initial monthly sales C.G.S.= 70% of Sales Payables due in 30 days Receivables collected in 90 days Other costs = 23% of Sales 10% annual sales growth 8% annual interest expense 30% annual tax rate							

Using this spreadsheet assignment, instructors may assign students exercises designed to highlight how changes in the assumptions affect the cumulative net cash flows of the firm. Changes in sales growth rate, cost of goods sold, other costs, and the cash gap will highlight the issue of entrepreneurs needing to plan for cash flow deficits during sales growth periods.

SUMMARY

The hypothesis examined in this article is that students of entrepreneurship will benefit from examining the problems associated with financing cash flow as firms experience rapid sales growth. Greater sales means that accounts receivable and inventories increase, and when accounts payable and accruals do not increase proportionately, financing pressures exist. Further, the costs associated with the additional financing make the problem even more difficult for the firm to survive.

The "proof" is revealed by the spreadsheet examples. By using these examples to perform scenario analysis for alternative sales growth assumptions, students can easily see the resultant effects on cash flow, and the financing thus required. Students should understand the difference between "costless" internal financing, from stretching accounts payable, and costly external financing that further drains the firm's net cash flows. These demonstration examples clearly highlight these issues for a young entrepreneurial firm. Students of entrepreneurship who grasp the importance of these concepts have a much higher probability of success in future business ventures.

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FINANCIAL FORECASTING FOR BUSINESS SUCCESS: AN INTERACTIVE STRATEGY FOR STUDENTS AND ENTREPRENEURS

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ABSTRACT

This paper demonstrates an interactive methodology for teaching financial statement forecasting. We use an Excel spreadsheet template with prompts to guide users through the process of forecasting using historical financial statements and a set of account assumptions. The resulting forecast is plausible and can be easily modified by changing the assumptions. We suggest that accounting and auditing relationships are often easier to grasp if a user understands how period assumptions generally affect related account balances in integrated financial statements. We have found that skillful template users can modify the suggested template to make simple forecasts of many real world businesses once the account relationships are understood.

INTRODUCTION

Forecasting is an important financial management skill for both the university student and the entrepreneur. A financial forecast is a planning tool that can enable managers to vary assumptions in order to evaluate ex ante the effect of strategic alternatives on revenue, profits, cash flow, and financial ratios. As these results affect business values, forecasts can be used to estimate business values (Hilmetz, 1999). When a strategy and its set of assumptions are ratified, a forecast can become a budget that communicates how an organization's present circumstances are associated with its future objectives, committing personnel toward coordinated action. Finally, a forecast can also be used as a control mechanism for comparing realized financial statements with the budget ex post to identify budget variances.

While firms and industries vary in the extent of application of forecasting financial information, Lam (1999) finds that companies in any industry can benefit greatly from utilizing a general forecasting model. In fact, the work of Kaplan and Ruback (1995) demonstrates the importance of empirical applications for large capitalization enterprises. Moreover, start-up and small capitalization companies certainly have an equal, if not greater, need to have routine access to financial forecasts to avoid running out of cash. Sung (1999) finds that ratios involving predicted cash flows are important to predicting bankruptcy.

We posit that though all business students and entrepreneurs may benefit from learning to develop integrated financial forecasts, few succeed when it is only taught theoretically. This is a

shame, because classroom experience suggests that this spreadsheet application is easy to teach and learn in about 3 hours when students can be coached through the process as they enter formulas on their computers.

TEACHING FORECASTING INTERACTIVELY

Penn (1999) takes a literal approach to forecasting using definitions followed by the American Institute of Certified Public Accountants (1994). That approach separates prospective financial information into two camps-forecasting and projections-the latter facilitating changing assumptions.

Woodroof (1999) and Penn (1999) illustrate applications of corporate data in spreadsheet analysis. While these papers provide excellent examples, they do not provide step-by-step procedures and hints of interest to unsophisticated users. We try to simplify the process for the basic accounting statement user with a computer and access to the simple statements in the Excel file that we describe (Excel File available from the authors).

INTRODUCING THE FORECASTING MODEL

The Excel file includes a sheet (Figure 2) that shows the completed forecast (the answer key) and a sheet (Figure 3) that shows Projected columns with hints where formulas are to be entered. We recommend teaching the forecasting process in a computer classroom equipped with a computer projector so that students can see how the instructor manipulates cell formulas in an Excel file immediately before they perform similar manipulations themselves. The "watch, hear, and do" interactive pedagogical approach makes learning easier because the student gets immediate positive reinforcement when the correct answers are obtained, and help from the instructor when incorrect answers are obtained. Hand and eye neural connections are repetitively made and little has to be remembered or understood before success is achieved, enabling learners to build confidence in their skills quickly.

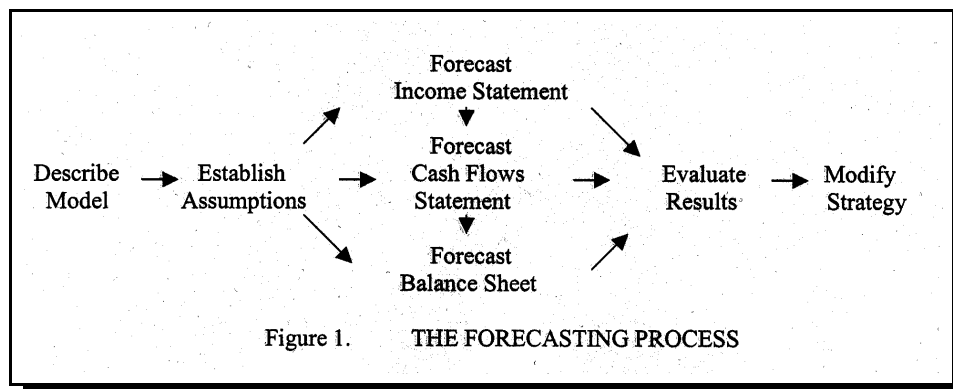


Figure 1 illustrates the flow of the forecasting process. After the completed model is introduced, we emphasize the importance of the assumptions and demonstrate how changing assumptions affect each of the forecast financial statements. Then we explain how the accounts in the Income Statement, Cash Flow Statement, and Balance Sheet are linked, usually with two accounts tied to each assumption. Then we suggest that the assumptions should reflect operating history, adjusted by proposed changes in business strategy. Finally, we encourage students to manipulate assumptions and to view the changes in the financial statements. Understanding begins when the student is able to anticipate how a change in an assumption will affect the financial statements.

Describing the Model

As we maneuver down Figure 2, some students with limited accounting understanding may become intimidated, but we encourage them by emphasizing that most junior students can learn to forecast by practicing the steps we suggest, by asking questions as they arise, and by successfully adopting the model to another set of financial statements. Students can usually check the reasonableness of their efforts because the basic accounting equation, Total Assets = Total Liabilities + Owners' Equity, rarely will be in balance in an incorrectly prepared forecast.

Figure 2 - Forecasting Business Success Model					
Sheet 1					
See Sheet 2 for projection to complete and Sheet 3 for Directions.					
When you are determining assumptions, record the amount that you want to appear on the income statement.					
		Projected Assumptions	Projected Assumptions	Projected Assumptions	Projected Assumptions
	Year >>	1999	2000	2001	2002
Period Assumptions are below right:					
Sales	Current = past period x 1 + growth rate (above multiple * prior period sales)	1.08	1.11	1.13	1.14
	(0.45)	433	481	543	619
Cost of Goods Sold	Current = sales x constant ratio (above multiple * current period sales)	(195)	(216)	(244)	(279)
	(1.05)				
Selling and Administrative Expenses	Current = past period x 1 + growth rate (above multiple * prior period S&A exp)	(79)	(83)	(87)	(91)
	(0.08)				
Depreciation Expense	Current = Deprec rate x (fixed assets) (above multiple * prior period fxd assets)	(30)	(32)	(35)	(36)
	(0.09)				
Net interest Income (expense)	Current = Interest rate x (LT debt) (above multiple * prior period LT debt)	(34)	(18)	(14)	(9)
	(0.33)				
Income tax expense	Current = Tax rate x (pretax income) (above multiple * current pretax income)	(32)	(44)	(55)	(68)
Changes in Balance Sheet Accounts					
When you are determining assumptions, record the amount that you want the balance sheet account to change.					
Change in RE from Net Income	Changes from Operations (Net Income - Net income of current period)	64	88	109	136
Changes in Receivables	Changes from Operations (Workg Cap (forecast change in acct balance)	2	3	4	4
Changes in Inventory	Changes from Operations (Workg Cap (forecast change in acct balance)	(3)	7	16	23
Changes in Accounts Payable	Changes from Operations (Workg Cap (forecast change in acct balance)	2	4	(3)	2
Changes in Short-term Debt	Changes from Operations (Workg Cap (forecast change in acct balance)	1	2	3	(2)
Changes in Equipment	Changes in Investing Actv (Fixed Assets (forecast change in acct balance)	20	30	6	3
Changes in Buildings	Changes in Investing Actv (Fixed Assets (forecast change in acct balance)	4	8	12	24
Changes in Notes Payable	Changes in Financing (Longterm Debt (forecast change in acct balance)	(5)	(5)	(5)	(10)
Changes in Bonds Payable	Changes in Financing (Longterm Debt (forecast change in acct balance)	(180)	(40)	(40)	(40)
Changes in Stock Issued	Changes in Financing (Equity Accts (forecast change in acct balance)	10	0	0	0
Changes in Paid in Capital	Changes in Financing (Equity Accts (forecast change in acct balance)	35	0	0	0
Changes in RE (dividends paid)	Changes in Financing (Equity Accts (forecast change in acct balance)	(7)	(7)	(7)	(7)

Figure 2 - Forecasting Business Success Model (continued)

Actual Actual Projected Projected Projected Projected

	Year >>	Finl Stmt 1997	Finl Stmt 1998	Finl Stmt 1999	Finl Stmt 2000	Finl Stmt 2001	Finl Stmt 2002
Income Statement							
	Row Assumptions are below:						
Revenues	Negative values in the income statement are expenses						
Sales			401	433	481	543	619
Cost of Goods Sold	(fixed % of column's sales)		(180)	(195)	(216)	(244)	(279)
Gross Profit	(subtotal addition)		221	238	264	299	341
Selling and Administrative Expenses	(expected constant rate of increase)		(75)	(79)	(83)	(87)	(91)
Depreciation Expense	(% of prior column's fixed assets)		(19)	(30)	(32)	(35)	(36)
Income from operations	(subtotal addition)		127	130	150	177	213
Other Income (Exp)							
Net interest Income (expense)	(Interest on prior column L-T Debt)		(28)	(34)	(18)	(14)	(9)
Income before tax	(subtotal addition)		99	96	133	164	204
Income tax expense	(fixed % of column's pretax income)		(33)	(32)	(44)	(55)	(68)
Net income (subtotal addition)		6 points >>	66	64	88	109	136
Cash Flow Statement (The signs of values in the CF stmt show the affects on the period's cash balance).							
From Operations							
Net income	(Copy net income from above)		66	64	88	109	136
Plus Depreciation Expense	(Depr exp is added back to net income because it doesn't use cash)		19	30	32	35	36
Plus decreases in receivables	(if assets increase, cash decreases)		(20)	(2)	(3)	(4)	(4)
Plus decreases in inventory	(if assets increase, cash decreases)		2	3	(7)	(16)	(23)
Plus increases in accounts payable	(if debts increase, cash increases)		9	2	4	(3)	2
Plus increases in short-term debt	(if debts increase, cash increases)		(4)	1	2	3	(2)
Net Cash Flow from Operations	(subtotal addition)	6 points >>	72	97	116	124	145
From Investing Activities							
Less purchase of equipment	(if assets increase, cash decreases)		(30)	(20)	(30)	(6)	(3)
Less purchase of buildings	(if assets increase, cash decreases)		(150)	(4)	(8)	(12)	(24)
Cash Flow from Investing Activities	(subtotal addition)	6 points >>	(180)	(24)	(38)	(18)	(27)
From Financing Activities							
Notes Payable issued	(if debts increase, cash increases)		40	(5)	(5)	(5)	(10)
Bonds issued	(if debts increase, cash increases)		200	(180)	(40)	(40)	(40)
Stock issued	(if stock is issued, cash increases)		45	10	0	0	0
Addl Paid in Capital > Par Value	(if stock is issued, cash increases)		0	35	0	0	0
Dividends Paid	(if divds are paid out, cash decreases)		(7)	(7)	(7)	(7)	(7)
Net Cash Flow from financing	(subtotal addition)	6 points >>	278	(147)	(52)	(52)	(57)
Net increase (decrease) in cash	(sum of 3 cash flow stmt subtotals)		170	(74)	26	54	61
Cash at the beginning of the year	(previous year's ending balance)		147	317	243	269	323
Cash at the end of the year (net change plus beginning balance)			317	243	269	323	384

Establishing the assumptions

Figure 3 provides the forecast model to be completed. At the top of the sheet in the shaded area are the Forecast Assumptions. We show examples where Income Statement assumptions are variable (e.g., cost of sales varies directly with sales), but they can also be forecasted with fixed (same value period after period) or semi-variable (partly variable and partly fixed). Darbonne (1999) argues that financial projections should go beyond historic trends to include creative future strategic alternatives. This is particularly appropriate for start-up businesses that have no history to project from. Management often needs to be able to evaluate "what if" scenarios (Myers, 2001) and to react to the environment with flexible (rolling) budgets. This part of the model provides an excellent opportunity to discuss the need to have forecast assumptions that are relevant, practical, and achievable, while taking into consideration the continuously changing business conditions facing the business in the future.

Figure 2 - Forecasting Business Success Model (continued)

Balance Sheet	Actual		Projected		Projected		
	Finl Stmt	Finl Stmt	Finl Stmt	Finl Stmt	Finl Stmt	Finl Stmt	
Assets	Year >>	1997	1998	1999	2000	2001	2002
Current Assets							
Cash (end of period cash balance)		147	317	243	269	323	384
Accounts Receivable (assets: prior period value plus change assumption)		30	50	52	55	59	63
Inventory (assets: prior period value plus change assumption)		22	20	17	24	40	63
Total current assets (subtotal addition)		199	387	312	348	422	510
Long-term (Fixed) Assets							
Equipment (assets: prior period value plus change assumption)		97	127	147	177	183	186
Buildings (assets: prior period value plus change assumption)		93	243	247	255	267	291
Accumulated Depreciation (assets: prior period value plus change assumption)		(20)	(39)	(69)	(100)	(135)	(171)
Net Long-term Assets (subtotal addition)		170	331	325	332	315	306
Total Assets (subtotal addition)	6 points >>	369	718	638	680	737	816
Liabilities and Owner's Equity							
Current Liabilities							
Accounts payable (payables: prior period value plus change assumption)		30	39	41	45	42	44
Short-term debts payable (payables: prior period value plus change assumption)		20	16	17	19	22	20
Total Current Liabilities (subtotal addition)		50	55	58	64	64	64
Long-term Liabilities							
Notes Payable (payables: prior period value plus change assumption)		45	85	80	75	70	60
Bonds Payable (payables: prior period value plus change assumption)		95	295	115	75	35	(5)
Total Long-term Liabilities (subtotal addition)		140	380	195	150	105	55
Total Liabilities		190	435	253	214	169	119
Owner Equity							
Stock (equities: prior period value plus change assumption)		38	83	93	93	93	93
Additional paid-in capital (equities: prior period value plus change assumption)		2	2	37	37	37	37
Retained earnings (RE: prior period value plus net income and dividends)		139	198	255	336	438	567
Total Owner Equity (subtotal addition)		179	283	385	466	568	697
Total Liabilities & Owner Equity (subtotal addition)	6 points >>	369	718	638	680	737	816

Situation: As the corporate financial analyst, you are asked to evaluate whether or not your company should act to make a hostile takeover of an unrelated firm. The decision rule is, if it is likely to be profitable, then do it. Because the target is publicly traded, you can get the financial statement data for the past years. Corporate officers familiar with the industry provide you with assumptions of operations activity that they believe could be achieved in the next four years. You enter the financial statement data on this Excel spreadsheet. You also assemble the assumptions reflecting the account balance changes at the top of this spreadsheet. The test over this worksheet will be much like sheet 2 except that the data will differ and the column F values will be gone. The help phrases will be provided in column G.

- For 6 points each (36 total), complete the income statements, 3-part cash flow statements, and 2-part balance sheets for each of the next four years.
- For 4 points, determine the cumulative net present value of the projected cash flow stream if the firm paid the market price for the target corporation's outstanding stock which is presently \$600. Assume that the sale price in year four is 10 times the fourth year cash flow and the discount rate is 16%. ANS> 306
- For 5 bonus points, what is the internal rate of return on the cash flow stream (the discount rate that makes the cumulative net present value go to zero)? ANS > 30.3%
- For 5 more bonus points, assuming the original 16% discount rate, what is the highest price that the firm could pay to break even on the transaction? ANS > 906

	Average shares outstanding	38	83	93	93	93	93
Earnings per share			\$0.80	\$0.69	\$0.95	\$1.17	\$1.46
	Time interval in years >>		0	1	2	3	4
Net Cash Flow from Operations				97	116	124	145
Cash Flow from Investing Activities				(24)	(38)	(18)	(27)
Expected Sale Value (10 times fourth year cash flow)							1180
Market value of common stock with premium (cost to acquire)			(600)				
Net cash flow from purchase of investment, operations, & investing activities			(600)	73	78	106	1298
Net present value of future cash flows	Discount rate (i)	16.00%	(600)	63	58	68	717
NPV = $CF_t / (1 + i)^t$							
Cumulative Net Present Value			(600)	(537)	(479)	(411)	306

5 points Cum NPV

Farther down the page are historical financial statements from the two or three most recent periods on the left and projected columns on the right. The Income Statement appears first because Net Income is the first entry on the Cash Flow Statement. The Cash Flow statement is next because the estimated Cash balance is the first entry on the Balance Sheet. The Balance Sheet appears last and ties the three together when Total Assets = Total Liabilities + Owners' Equity. In the projected

columns to the right of the historic financial statements, formulas call in and manipulate cell values from the current period assumptions and the prior period financial statement account balances to compute the future Income Statement and Balance Sheet account balances and the account changes that are reflected on the Cash Flow Statement.

Figure 3 - Forecasting Business Success Model							
Sheet 2 (See Sheet 1 for the completed projection. See Sheet 3 for Directions and theory.)							
When you are determining assumptions, record the amount that you want to appear on the income statement.							
		Year >>		Projected Assumptions	Projected Assumptions	Projected Assumptions	Projected Assumptions
				1999	2000	2001	2002
Period Assumptions are below right:							
Sales	Current = past period x 1 + growth rate	(above multiple * prior period sales)	(0.45)	433	481	543	619
Cost of Goods Sold	Current = sales x constant ratio	(above multiple * current period sales)	(1.05)	(195)	(216)	(244)	(279)
Selling and Administrative Expenses	Current = past period x 1 + growth rate	(above multiple * prior period S&A exp)	(0.08)	(79)	(83)	(87)	(91)
Depreciation Expense	Current = Deprec rate x (fixed assets)	(above multiple * prior period fxd assets)	(0.09)	(30)	(32)	(35)	(36)
Net interest Income (expense)	Current = Int rate x (LTD)	(above multiple * PP LT debt) (= PP value + change assumption)	(0.33)	(34)	(18)	(14)	(9)
Income tax expense	Current = Tax rate x (pretax income)	(above multiple * current pretax income)		(32)	(44)	(55)	(68)
Changes in Balance Sheet Accounts							
When you are determining assumptions, record the amount that you want the balance sheet account to change.							
Change in RE from Net Income	Changes from Operations (Net Income)	Net income of current period		64	88	109	136
Changes in Receivables	Changes from Operations (Workg Cap)	(forecast change in acct balance)		2	3	4	4
Changes in Inventory	Changes from Operations (Workg Cap)	(forecast change in acct balance)		(3)	7	16	23
Changes in Accounts Payable	Changes from Operations (Workg Cap)	(forecast change in acct balance)		2	4	(3)	2
Changes in Short-term Debt	Changes from Operations (Workg Cap)	(forecast change in acct balance)		1	2	3	(2)
Changes in Equipment	Changes in Investing Actv (Fixed Assets)	(forecast change in acct balance)		20	30	6	3
Changes in Buildings	Changes in Investing Actv (Fixed Assets)	(forecast change in acct balance)		4	8	12	24
Changes in Notes Payable	Changes in Financing (Longterm Debt)	(forecast change in acct balance)		(5)	(5)	(5)	(10)
Changes in Bonds Payable	Changes in Financing (Longterm Debt)	(forecast change in acct balance)		(180)	(40)	(40)	(40)
Changes in Stock Issued	Changes in Financing (Equity Accts)	(forecast change in acct balance)		10	0	0	0
Changes in Paid in Capital	Changes in Financing (Equity Accts)	(forecast change in acct balance)		35	0	0	0
Changes in RE (dividends paid)	Changes in Financing (Equity Accts)	(forecast change in acct balance)		(7)	(7)	(7)	(7)
				Actual Finl Stmt	Actual Finl Stmt	Projected Finl Stmt	Projected Finl Stmt
				1997	1998	1999	2000
				2001	2002	2001	2002
Income Statement							
Revenues							
Negative values in the income statement are expenses							
Sales				401		(= the column revenue assumption)	
Cost of Goods Sold	(fixed % of column's sales)			(180)		(=the column expense assumption)	
Gross Profit	(subtotal addition)			221		0 (subtotal addition)	
Selling and Administrative Expenses	(expected constant rate of increase)			(75)		(=the column expense assumption)	
Depreciation Expense	(% of prior column's fixed assets)			(19)		(=the column expense assumption)	
Income from operations	(subtotal addition)			127		0 (subtotal addition)	
Other Income (Exp)							
Net interest Income (expense)	(Interest on prior column L-T Debt)			(28)		(= the column revenue (expense) assumption)	
Income before tax	(subtotal addition)			99		0 (subtotal addition)	
Income tax expense	(fixed % of column's pretax income)			(33)		(= the column revenue (expense) assumption)	
Net income	(subtotal addition)			66		0 (subtotal addition)	
				6 points >>		66	0 (subtotal addition)

At this point, before dealing with the account balance formulas, we encourage students to copy all 18 of the financial statement subtotals (Column E values in bold type) to the right one

column (Column F values). We usually recommend highlighting the cell to be copied, placing the cursor on the black square at the lower right corner of the highlighted cell, and clicking and dragging the cell contents one cell to the right. If any rows are added to the model to reflect additional accounts, care should be exercised to insure that the copied subtotals correctly include the added row cells and that the Balance Sheet is in balance.

Figure 3 - Forecasting Business Success Model (continued)						
Cash Flow Statement <i>(The signs of values in the CF stmt show the affects on the period's cash balance).</i>						
From Operations						
Net income	<i>(Copy net income from above)</i>		66			<i>(= net income from income statement)</i>
Plus Depreciation Expense	<i>(Depr exp is added to net income because it didn't use cash)</i>		19			<i>(= - depreciation expense assumption)</i>
Plus decreases in receivables	<i>(if assets increase, cash decreases)</i>		(20)			<i>(= - change assumption)</i>
Plus decreases in inventory	<i>(if assets increase, cash decreases)</i>		2			<i>(= - change assumption)</i>
Plus increases in accounts payable	<i>(if debts increase, cash increases)</i>		9			<i>(= change assumption)</i>
Plus increases in short-term debt	<i>(if debts increase, cash increases)</i>		(4)			<i>(= change assumption)</i>
Cash Flow from Operations	<i>(subtotal addition)</i>	6 points >>	<u>72</u>			0 (subtotal addition)
From Investing Activities						
Less purchase of equipment	<i>(if assets increase, cash decreases)</i>		(30)			<i>(= - change assumption)</i>
Less purchase of buildings	<i>(if assets increase, cash decreases)</i>		(150)			<i>(= - change assumption)</i>
Cash Flow from Investing Activities	<i>(subtotal addition)</i>	6 points >>	<u>(180)</u>			0 (subtotal addition)
From Financing Activities						
Notes Payable issued	<i>(if debts increase, cash increases)</i>		40			<i>(= change assumption)</i>
Bonds issued	<i>(if debts increase, cash increases)</i>		200			<i>(= change assumption)</i>
Stock issued	<i>(if stock is issued, cash increases)</i>		45			<i>(= change assumption)</i>
Addl Paid in Capital > Par Value	<i>(if stock is issued, cash increases)</i>		0			<i>(= change assumption)</i>
Dividends Paid	<i>(if divids are paid out, cash decreases)</i>		(7)			<i>(= change assumption)</i>
Net Cash Flow from financing	<i>(subtotal addition)</i>	6 points >>	<u>278</u>			0 (subtotal addition)
Net increase (decrease) in cash	<i>(sum of 3 cash flow stmt subtotals)</i>		170			0 (sum of 3 cash flow stmt subtotals)
Cash at the beginning of the year	<i>(previous year's ending balance)</i>		<u>147</u>			<u>317 (previous year's ending balance)</u>
Cash at the end of the year	<i>(net change plus beginning balance)</i>		317			317 (change plus beginning balance)
Balance Sheet						
Assets		Actual	Actual	Projected	Projected	Projected
		Finl Stmts	Finl Stmts	Finl Stmts	Finl Stmts	Finl Stmts
	Year >>	1997	1998	1999	2000	2001
				2001		2002
Current Assets						
Cash	<i>(end of period cash balance)</i>		147	317		<i>(= cash at the end of the year)</i>
Accounts Receivable	<i>(assets: prior period value plus change assumption)</i>		30	50		<i>(= prior period value + change assumption)</i>
Inventory	<i>(assets: prior period value plus change assumption)</i>		<u>22</u>	<u>20</u>		<i>(= prior period value + change assumption)</i>
Total current assets	<i>(subtotal addition)</i>		<u>199</u>	<u>387</u>		0 (subtotal addition)
Long-term (Fixed) Assets						
Equipment	<i>(assets: prior period value plus change assumption)</i>		97	127		<i>(= prior period value + change assumption)</i>
Buildings	<i>(assets: prior period value plus change assumption)</i>		93	243		<i>(= prior period value + change assumption)</i>
Accumulated Depreciation	<i>(assets: prior period value plus change assumption)</i>		(20)	(39)		<i>(= prior period value + depreciation exp assumption)</i>
Net Long-term Assets	<i>(subtotal addition)</i>		<u>170</u>	<u>331</u>		0 (subtotal addition)
Total Assets	<i>(subtotal addition)</i>	6 points >>	369	718		0 (subtotal addition)
Liabilities and Owner's Equity						
Current Liabilities						
Accounts payable	<i>(payables: prior period value plus change assumption)</i>		30	39		<i>(= prior period value + change assumption)</i>
Short-term debts payable	<i>(payables: prior period value plus change assumption)</i>		<u>20</u>	<u>16</u>		<i>(= prior period value + change assumption)</i>
Total Current Liabilities	<i>(subtotal addition)</i>		<u>50</u>	<u>55</u>		0 (subtotal addition)
Long-term Liabilities						
Notes Payable	<i>(payables: prior period value plus change assumption)</i>		45	85		<i>(= prior period value + change assumption)</i>
Bonds Payable	<i>(payables: prior period value plus change assumption)</i>		<u>95</u>	<u>295</u>		<i>(= prior period value + change assumption)</i>
Total Long-term Liabilities	<i>(subtotal addition)</i>		<u>140</u>	<u>380</u>		0 (subtotal addition)

Total Liabilities		190	435	0 (subtotal addition)
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Figure 3 - Forecasting Business Success Model (continued)

Owner Equity				
Stock	<i>(equities: prior period value plus change assumption)</i>	38	83	<i>(= prior period value + change assumption)</i>
Additional paid-in capital	<i>(equities: prior period value plus change assumption)</i>	2	2	<i>(= prior period value + change assumption)</i>
Retained earnings	<i>(RE: prior period value plus net income and dividends)</i>	139	198	<i>(= prior period value + net income + dividends assumption)</i>
Total Owner Equity	<i>(subtotal addition)</i>	179	283	0 (subtotal addition)
Total Liabilities & Owner Equity	<i>(subtotal addition)</i>	6 points >>	369	718

Situation: As the corporate financial analyst, you are asked to evaluate whether or not your company should act to make a hostile takeover of an unrelated firm. The decision rule is, if it is likely to be profitable, then do it. Because the target is publicly traded, you can get the financial statement data for the past years. Corporate officers familiar with the industry provide you with assumptions of operations activity that they believe could be achieved in the next four years. You enter the financial statement data on this Excel spreadsheet. You also assemble the assumptions reflecting the account balance changes at the top of this spreadsheet.

The test over this worksheet will be much like sheet 2 except that the data will differ and the column F values will be gone. The help phrases will be provided in column G.

- For 6 points each (36 total), complete the income statements, 3-part cash flow statements, and 2-part balance sheets for each of the next four years.
- For 4 points, determine the cumulative net present value of the projected cash flow stream if the firm paid the market price for the target corporation's outstanding stock which is presently \$600. Assume that the sale price in year four is 10 times the fourth year cash flow and the discount rate is 16%. ANS >
- For 5 bonus points, what is the internal rate of return on the cash flow stream (the discount rate that makes the cumulative net present value go to zero)? ANS >
- For 5 more bonus points, assuming the original 16 % discount rate, what is the highest price that the firm could pay to break even on the transaction? ANS >

Average shares outstanding		38	83	0	0	0	Record here
Earnings per share			\$0.80	ERR	ERR	ERR	ERR
	Time interval in years >>		0	1	2	3	4
Cash Flow from Operations				0			
Cash Flow from Investing Activities				0			
Expected Sale Value (10 times fourth year cash flow)							0
Market value of common stock with premium (cost to acquire)		(600)		0			
Net cash flow from purchase of investment, operations, & investing activities		(600)		0	0	0	0
Net present value of future cash flows	Discount rate (i)	16%	(600)	0	0	0	0
NPV = (CF t / (1 + i) ^ t	IRR	^5 points^	(600)	(600)	(600)	(600)	(600)
Cumulative Net Present Value				(600)	(600)	(600)	(600)

5 points Cum NPV
 ^^ (complete column F and copy right to year 4) ^^

Forecasting the Income Statement

Next, for each income statement account, we show the students how to enter formulas to reflect the income statement assumption for the first project year by acting on the italicized hints in parentheses at the right of the page. For example, on the sales row, the hint is: (= the column revenue assumption). We highlight Cell F41 containing the Projected Sales amount, enter the equal sign, move the cursor using the arrow to the sales assumption value in the same column (F9), and then press <enter>. Other Income Statement forecast values are entered in a similar fashion (essentially reflecting the values in the assumptions).

Forecasting Cash Flows

Although the Financial Accounting Standards Board (FASB #95, 1988) and others (Miller & Bahnson, 2002; Krishnan, 2000) have stated a preference for the direct method of cash flow

reporting (FASB #95, 1988), we use the indirect method to project cash flow because of its simplicity. The three sections of the indirect presentation of the cash flow statement are Cash Flow From Operations, Cash Flow From Investing Activities, and Cash Flow From Financing Activities. Cash Flow From Operations computes cash flows from ordinary business activities. It should generally reflect a positive subtotal if the firm is to survive.

In the Cash Flow From Operations section, Net Income, the first item on the Cash Flow Statement, may be obtained by referencing the Net Income value computed in the projected Income Statement above. Simply, highlight the Net Income Cell F57, enter the equal sign, move the cursor using the arrow key to the Net Income row (Cell F53) above on the forecasted Income Statement, and then press <enter>. Other accounts in Cash Flows From Operations include changes in working capital accounts (Current Assets that usually convert to cash within one year, and Current Liabilities that are usually repaid within one year) and non-cash outlay expenses such as Depreciation. The changes in Current Assets (Receivables and Inventory) row formulas include minus signs because acquiring assets ultimately requires the promise to pay cash (although Current Assets may be temporarily financed by increasing a Current Liability such as Accounts Payable or Notes Payable). Because Depreciation is an expense that does not use cash (instead, cash is used when depreciable "Fixed" assets are purchased), Depreciation Expense is added back to Net Income. To project Depreciation Expense, enter the equal sign, enter the minus sign, move the cursor using the arrow key to the depreciation expense assumption, and press <enter>.

Cash Flow From Investing Activities rows usually relates to changes in Fixed Assets (assets with a useful life of more than one year) such as equipment and buildings. As with Current Assets, when these accounts increase, cash generally decreases so the changes in Fixed Asset formulas include a minus sign. In growing companies that accumulate capacity, the subtotal for Investing Activities is usually a minus value.

Cash Flow From Financing Activities involve accounts that reflect long-term creditor and stockholder obligations. The issue of obligations such as Common Stock, Notes, or Bonds provides cash. The repurchase of the corporation's stock, the payment of cash dividends, and the retirement of notes and bonds payable use cash. As the assumptions show changes in these accounts that provide cash (inflows) as positive values and changes in these accounts that use cash (outflows) as negative inflows, the assumption values are merely called into the row formulas.

Forecasting the Balance Sheet

The Balance Sheet forecast values reflect the prior period values adjusted by the changes described on the Cash Flow Statement. Accordingly, to forecast the Balance Sheet Cash value in Cell F86, enter the equal sign, move the cursor to the Cash at the End of the Year value above (F80), and then press <enter>. For Accounts Receivable, enter the equal sign, move the cursor to the cell to the left (E87), Shift_+ (press and hold down a shift key and then press the + key), move the cursor to the Accounts Receivable assumption row, and press <enter>. Except for Retained Earnings, other Balance Sheet values are similarly projected. Retained Earnings differs because we must change the prior period balance by the forecasted Net Income and any forecasted Dividends

to be paid during the forecast period, in calculating the final Retained Earnings projection amount.

When the first forecast column (Column F) is completed, the Total Assets balance should equal the Total Liabilities and Owners' Equity balance. If the values are not in balance, the logic of each of the formulas in the Column F forecasted financial statements should be reviewed until any errors are identified and corrected. If only one error has been made such as a missing minus sign, the error is often half the amount that separates Total Assets from equaling Total Liabilities plus Owners' Equity. If a student continues to experience difficulty while balancing the accounting equation relationships on the forecasted Balance Sheet, the student can refer to the corresponding cells on Sheet One, the completed forecast example, to discover where their error occurred.

If the Balance Sheet does balance, the student can highlight and then copy the entire range of cells between F41 and F115 to the right for all forecast years in one operation. With practice, in 30 minutes the learning model can be completed. Moreover, once the model is completed, the assumption values can be varied to observe the sensitivity of the assumptions given various business scenarios.

Evaluating the Results

Once students have properly prepared the forecast, we explain more fully the purposes of the financial statements. For example, the Income Statement reflects the ability of a business to earn a profit during a time frame. The Income Statement is based on accrual accounting, which includes both cash and credit sales, as well as expenses that have been incurred but not paid. The cash flow statement predicts future cash balances and reflects changes in other balance sheet accounts. The Cash Flow Statement adjusts the period's beginning cash balance by the net of the changes to cash during the period, to compute the ending cash balance. The Balance Sheet reflects the financial condition of the business as of a specific date. The effects of transactions that have occurred during the period on asset and ownership rights are reflected on the Balance Sheet.

Adopting the model to another business

The template can be adapted to another firm by simply using the other firm's set of historical financial statement values (available, for example, through the Multex Investor website <http://yahoo.marketguide.com/mgi/home.asp?nss=yahoo>, FreeEdgar <http://www.freeedgar.com/>, Yahoo Finance <http://biz.yahoo.com/research/indgrp/>) in place of the template financial statement values. For different Income Statement accounts, rows will have to be added to both the assumptions and income statement. For different balance sheet accounts, rows will have to be added to the assumptions, Cash Flow Statement, and Balance Sheet. For all new accounts, the historical and projected subtotals will have to be modified to include the new rows.

The forecast assumptions will need to be modified to reflect the firm's future business strategy. We suggest that the managers charged with implementing the firm's strategy and attaining objectives be afforded input into the development of the forecast assumptions to increase their

understanding of account relationships and their commitment to the forecasted financial results (which, if ratified, may become the corporate budget).

Other Model Applications

A forecast can also be used to compute a wide range of financial ratios for historic and projected time intervals. Once ratio formulas that read in financial statement values are in place, the values they show will automatically adjust for any changes in the assumptions. For examples (Current Ratio, Quick Ratio, Debt to Equity Ratio, and Return on Stockholder Equity Ratio) are shown below the financial statements on the model.

The model can also be used to estimate a firm's intrinsic value using discounted cash flow theory (Rappaport, 1986). As shown on Figure 2, the sum of the subtotals of the projected future cash flows including an estimate of the value of cash flows of years beyond the projected years can be discounted to obtain a cumulative net present value that represents the intrinsic value of the firm. The intrinsic value is what the discounted cash flow method suggests that the market capitalization (stock price x shares outstanding) of the firm should be. The methodology can be adapted to value the return to a bidding firm of a takeover bid.

In the example, the Cash Flow from Operations and Investing Activities subtotals are copied to the cash flow table below the Balance Sheet (= subtotal of Cash Flow from Operations + subtotal of Investing Activities). Cline (2000) suggests that relatively short periods are better in terms of forecasting relevance and usability, and that anything over ten future periods is beyond management's control. Next, a value representing cash flows for periods following the projection is added to the final column to be projected. (We used 10 times the last year's sum of the subtotal of Cash Flow from Operations + subtotal of Investing Activities in our example as an estimate). If a buyout is being proposed, the offering price for all of the target's stock (a negative value) is introduced in the Time 0 column. Next, the period cash flows are summed, the sums are discounted by a rate approximately equal to the average cost of capital for the bidding firm, and the discounted cash flows are accumulated to obtain the cumulative net present value of the takeover offer to the bidding firm. This represents the present value of the wealth that should be realized if all assumptions are correct and the cash flows materialize. If the cumulative net present value is a positive value, the bidder's market capitalization is expected to increase by the computed amount. If the cumulative net present value is zero or a negative value, the bidder has no financial incentive to complete the transaction. (We assume any synergies from combining the operations of two firms are already in the assumptions). Alternately, if no bid is being considered, there is no negative value in time 0 of the cash flow table and the cumulative discounted cash flow sum is interpreted to be the intrinsic value of the target firm.

CONCLUSION

We have found that financial forecasting can be taught and learned quickly using a computer spreadsheet program, a spreadsheet template with prompts, and an interactive, experiential approach. We suggest that forecasting theory is often easier to grasp once a student or entrepreneur knows how

to obtain and evaluate account balances. We recognize that experience is also essential for making plausible strategies based on realistic assumptions, but we hope that greater understanding of financial forecasting will help users to gain the experience necessary to become more successful managers.

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DEVELOPMENT OF A COURSE IN MARKET OPPORTUNITY ANALYSIS: A MARKET-ORIENTATION TO BUSINESS EDUCATION

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ABSTRACT

Given the ever-changing business environment, long-term organizational viability is tied to the successful pursuit of new market opportunities. For business education to be relevant, schools must be market-oriented to educate students to operate in a dynamic economy. This paper describes the development of a course in market opportunity analysis designed to augment the undergraduate business curriculum. The paper describes the educational environment surrounding the decision to offer the course, the design criteria employed, the pedagogy for delivering the course, and the initial evaluations from both students and business participants.

INTRODUCTION

"It seems like only yesterday that we were wondering if there was such a thing as a new economy. Now we wonder what remains of the old one."

Michael Warshaw, Senior Editor at *Inc. Magazine*

To contend that the business environment is in a state of flux would be an understatement. We are witnessing a confluence of major environmental factors influencing business. Notable are the increasing pace of change, globalization of market opportunities and resulting competition, and rapid technological advances. These factors provide both a greater need for and availability of real-time information for decision making. Furthermore, the quality movement of the 1990s has driven home the need for organizations to be market-oriented and managed as integrated systems. A dynamic market makes pursuit of new market opportunities an organizational imperative. It also limits the effectiveness of traditional planning approaches that require substantial lead times and significant budgetary support. Marketing scholars like Dickson (1997) recognize that an organization's very survival depends on its ability to learn and adapt quickly, and that plans often

must be altered at the very time they are being implemented. This has resulted in a pronounced shift from relying solely on traditional marketing planning activities to developing methods of opportunity assessment in times of dynamic change with brief windows of opportunity. It is our contention that long-standing criticism of the relevance of business education is partially due to the limited extent to which curricula focus on entrepreneurial approaches to marketing planning in dynamic markets.

CHANGES IN BUSINESS EDUCATION

Criticism of business education has pressured business schools to design curricula responsive to the realities of business in the new millennium. Lamont and Friedman (1997) articulate this need succinctly:

"In changing times, marketing educators must innovate to offer an education that will provide students with the knowledge and skills for a complex world. To meet the challenge, faculty will need to shape imaginative marketing curricula and use teaching methods that respond to the needs of students, employers, and their academic institutions." (p. 39)

Bailey and Dangerfield (2000) further contend that strategic curriculum changes are influenced by a variety of entities - business advisory boards, accreditation associations, and others have joined faculty members and administrators in setting the direction of business schools. This broadened constituency fosters a market-orientation in curriculum revision. Slater and Narver (1998) articulate a market-orientation as one that anticipates customers' current and future, expressed and latent needs. Market-oriented organizations "scan the market more broadly, have a longer-term focus, and are... more likely to be innovative" (Slater & Narver, 1998, 1003). Such an orientation requires responsiveness within the academic community to the realities of the market. Using this type of market-oriented perspective to reengineer business curricula avoids the problems associated with a narrow, customer-led perspective where students are viewed as the primary "customer." Bailey and Dangerfield (2000) indicate that a commitment to a market orientation is more likely to create long-term, superior customer value than the customer-led philosophy. Likewise, in response to criticism of business education, AACSB, the International Association for Management Education, adopted mission-linked accreditation standards in April 1991 that have stimulated much interest, discussion, and research (Yunker, 1998). Taken together, these factors are generating major changes in business education intended to enhance relevancy. Table 1 presents alternative approaches to business education resulting from a more market-oriented perspective. The challenge for academia is to provide students with knowledge-management skills and the ability to operate as flexible team members in cross-functional environments.

TABLE 1: ALTERNATIVE APPROACHES IN BUSINESS EDUCATION

Traditional Approach	Market-Oriented Approach
Classroom learning that often assumes a controlled set of market conditions	Field-based learning that recognizes complexity and interactions in the market
Information/knowledge accumulation	Information/knowledge application
Focus on simplified solutions (bias toward the latest fads within disciplines)	Development of critical reasoning skills for adapting to change with novel solutions
Use of traditional pedagogy (linear thinking)	Experimentation with new educational approaches (entrepreneurial thinking)
Business disciplines viewed with silo mentality	Cross-functional perspective toward disciplines
Orientation toward slow, methodical responses	Need for fast, decisive responses
Peripheral involvement of practitioners in business education	Active involvement of practitioners in business education

One of the central goals of business education in this emerging economy is to develop the ability of students to solve business problems. According to Jerry Wind (c.f. Jensen, 1996):

"Business people need to analyze a problem, provide a diagnosis, come up with creative solutions, evaluate them, and implement them. Without the skills to do this, I don't see how anyone can really, operate successfully for a long period of time in the business world." (p. S-12)

The development of critical reasoning skills is critical to this goal. Critical thinking skills are important for job performance and career mobility (McEwen, 1994) and are behaviors that are rewarded in the best companies (Peak, 1997). Fundamentally, the unique contribution of the marketing discipline to the business curriculum is conveying the importance of identifying a customer need and developing a product offering that creates greater value for the consumer than competitive offerings at a profit by satisfying the needs of the consumer in the long-term. By their nature, marketing courses are ideal for developing students' critical reasoning skills.

A COURSE IN MARKET OPPORTUNITY ANALYSIS

In light of the emerging shift in business education resulting from the changing business environment, we developed a course titled Market Opportunity Analysis (MOA). Timmons (1999), in his book *New Venture Creation Entrepreneurship for the 21st Century*, describes opportunity analysis as an endeavor that creates, shapes, recognizes and sizes opportunities. He highlighted the elusive nature of opportunities by quoting Mark Twain who said "I was seldom able to see an opportunity, until it ceased to be one." Assessment of business opportunities is a marketing-based

activity in that there is consideration of potential market demand, market structure and size, margin analysis involving segmentation, targeting and positioning issues, competitive analysis and financial analysis.

Market opportunity analysis can also be viewed as a subset of traditional market research. In other words, the process of evaluating a marketing opportunity involves the gathering of primary and secondary data and the use of traditional research methodologies. The goal is to generate information that can be used to "separate ideas from opportunities." Despite the similarities between market research and market opportunity analysis, significant differences exist. Market research courses tend to take the strategic business direction of the firm as a given, and focus on tactical marketing issues and development of specific skills relating to sample size determination, statistical testing, and quantitative forms of data analysis. This approach is relevant for the marketing research function within a firm, especially for large corporations with significant research budgets. A market opportunity analysis course, on the other hand, would embody a broader strategic orientation focusing on managerial decisions relating to identifying market opportunities, conducting demand analysis, and using the resulting information as a basis for forecasting sales and return on investment. As such, it would have greater relevance to a wide range of companies, from small businesses and entrepreneurial ventures to large multi-nationals.

A stand-alone marketing course dealing with opportunity analysis as distinct from market research was thought to be an attractive, innovative addition to our curriculum. It complemented the traditional marketing research course that focused on research methodologies by focusing on the use of information in complex environments and the development of entrepreneurial thinking. Likewise, an MOA course builds on planning concepts such as the SWOT analysis that students were exposed to in other upper-level courses.

DESIGN CRITERIA FOR COURSE

We obviously wanted students in the course to acquire knowledge and skills relating to market opportunity analysis. The new MOA course needed to fit into the curriculum vis-à-vis our standard marketing research course. Our research course had a history of low enrollments and a reputation as a difficult elective. This was attributable to the research course's emphasis on quantitative analysis and the often several-year gap between when students enrolled in a statistics class and when they enrolled in the research course. Therefore, the MOA class was designed to include significant coverage of fundamental qualitative research methodologies, sampling alternatives, and basic data analysis techniques so that it would complement our research course and also provide students who did not take the research course with basic knowledge of research principles.

The course was designed to achieve broader curricular goals as well. We wanted students to experience business decision-making that was information-driven in a cross-functional, dynamic environment. This was a direct response to the forces described at the beginning of this paper and our desire to respond to market needs.

We wanted the course to contribute to the development of students' critical reasoning skills and ability to solve business problems. Bloom's taxonomy (1956) is often used to frame discussions

about critical thinking. In Bloom's taxonomy, cognitive learning is demonstrated by knowledge recall and intellectual skills: comprehending information, organizing ideas, analyzing and synthesizing data, applying knowledge, choosing among alternatives in problem-solving, and evaluating ideas or actions. Higher-order thinking skills - analysis, synthesis, and evaluation - are essential for business school graduates. But, graduates must go beyond information acquisition to a consideration of what information means, how it can be applied, and the consequences of application in order to be prepared to succeed in business. They must be well informed to arrive at decisions about what to do rather than simply collecting and analyzing data. Our intent was to design the MOA course to develop these higher-level thinking skills of students.

Active learning pedagogies, including interactive instructional technology, were incorporated into the course to facilitate higher-level thinking and motivate student interest in the course. Bonwell and Eison (1991) find that strategies promoting active learning are superior to lectures in promoting the development of students' skills in thinking and writing. Boulton and Garth (1983) indicate that active learning in groups increases students' comprehension of and ability to use underlying concepts in decision making, leadership, and mutual assistance.

Finally, we wanted to connect students and the institution with the business community. Our objective was to enrich the educational experience for students, broaden the horizons of faculty members, and build relations with the community. One method of accomplishing this was through the Price-Babson Fellowship Program. This program matches an entrepreneur with a business professor to foster an applied business perspective in the classroom. Each entrepreneur-professor team is required to develop and offer a course at their home institution. One of the authors of this paper was granted the fellowship, and he and his "entrepreneur partner" developed and co-taught the MOA course.

INITIAL COURSE OFFERING

The MOA course was launched during the spring semester of 2000. Thirty students were enrolled in the course, which met once a week in a 2-hour format. The course consisted of in-class instruction and discussion led by the two co-instructors, presentations by guest lecturers, active use of case studies, and field consulting projects. (A syllabus is contained in Appendix A.)

The course design and pedagogy reflect the marketing-oriented approaches in business education identified in Table 1. The following sections highlight the specific course features corresponding to each of the market-oriented approaches to business education.

Field-Based Learning

The cornerstone of the class was a field-based, group consulting project. This aspect of the course was extremely important from the point of view of captivating student interest and making the course as practical as possible (i.e. significant hands-on experience with a business issue actually being faced by a practitioner). At the beginning of the semester, students were grouped into teams. Each team was to conduct a market opportunity analysis for a product or service that a particular company was contemplating. These projects ranged from a start-up company investigating the

billboard industry to another in the pharmaceutical diagnostics industry looking at developing a commercial test kit for bacteria found in water cooling units. Each student team was assigned to a faculty member for consultation and for monitoring team progress. At the end of the semester, each team gave a formal presentation to the class and representatives of the client firms. (See Appendix B for information about the client firms and specific projects.)

Application of Business Information/Knowledge

Through the combination of readings, in-class presentations, case preparation, exercises, and discussions, students developed skills and acquired knowledge that they could apply directly to the situations faced by their client firms. This ability to observe, learn and apply within a fairly short period of time allowed students, many for the first time, to see the connection between the information in a course and how it is applied to a real-time situation.

Development of Critical Reasoning Skills in Students

Critical reasoning and creative thinking skills were promoted in multiple ways. Three major case studies were used to reinforce course content, and promote student interaction and discussion using critical reasoning skills. Students often took on roles of individuals in the case studies while the rest of the class asked questions. During one class session, half of the class was divided into competing teams to see which could build the highest tower out of thin spaghetti (uncooked!) and marshmallows while the other half of the class observed. Once the towers were built, we engaged in a discussion using Isaksen and Treffinger's (1985) Creative Problem Solving (CPS) process as a framework. Students found the relationship between the tower height and CPS quite remarkable.

Experimentation with Alternative Pedagogy and Entrepreneurial Thinking

We covered many topics and used several teaching techniques and formats, including case studies, experiments, guest lectures, classroom technology for live Internet searches and data acquisition, field-based consulting work, and student-led discussions. Although none of these techniques is unique, the combination created a creative and dynamic learning environment. The integration of technology *per se* played a significant role in our course delivery, so the course was offered in an advanced technology classroom. The Internet was used regularly to access data and information during lecture and discussion sessions. The course was also on the *CourseInfo* system, which allowed for completely integrated electronic communication between students, instructors and clients. For example, each case team had its own chat room where meetings could be scheduled, discussions could be held, and information could be posted.

Students, throughout the course, were encouraged to view in-class case study assignments and their client MOA projects with an entrepreneurial mindset. The course emphasized that "MOA is not linear." This aspect of the class was one of the hardest for students to grasp. Students were forced to "parallel process" information and to cope with the fact that it isn't usually a straight path from a problem/opportunity to a solution. Students eventually realized that the "correct" answer or

"right way" to do something could not be found by looking in the textbook for the solution section or by imploring the professors for "the" answer.

Cross-Functional Perspective

Students were exposed to multiple disciplines and points of view. In addition to the two lead faculty members who came from significantly different professional backgrounds and areas of expertise, over one half of the classes involved a guest lecturer who would give a highly focused presentation followed by an interactive question and answer session. The speakers had a wide range of backgrounds, from business owners and venture capitalists to faculty members and research librarians. (Appendix C contains a schedule listing guest speakers.)

The combination of case analysis and the comprehensive MOA client studies afforded students the opportunity to see the fundamental interrelationships between strategy, marketing, and financial analysis. This was accomplished during case analysis sessions. More important, the understanding of these relationships was critical in order to evaluate a market opportunity successfully for their clients.

Fast, Decisive Approach to Decisions

Because student teams were involved in field case work with client firms from the beginning of the course, there was a keen understanding that their work must result in decisions and recommendations that would have a real impact. In fact, they came to recognize that multiple decisions had to be made throughout the course, and that mistakes or misjudgments could be costly. For example, one team did not use a broad enough range of substitute products in its competitive analysis, which required them to reassess the competitive environment and make significant changes to virtually every aspect of their analysis late in the process. Students knew that our expectations were high and that passively sliding through the class was not an option.

Active Involvement of Practitioners in Business Education

In addition to participating in the MOA projects, each of the six client firms agreed to deliver a one-hour presentation to the class that coincided with the topic being covered in class. (The schedule for these is contained in the Appendix C.) For example, the President of Fresh Samantha, the leading East Coast producer of premium fruit drinks at the time, discussed practical issues relating to market research in determining the introduction process for new flavors and the difficulty they had in determining when flavors should be retired from the product line. In addition to speakers from our client firms, two additional businesspeople made presentations. One was a former president of Sabre Yachts (a premier luxury yacht and powerboat builder) who described in detail the process by which his company determined that there was a need for the new class of sailing yacht that he had experimented with. Another was a Boston-based private fund manager who invested in under-valued/under-managed manufacturing firms. To focus our guest presenters, and

thus avoid a series of war stories, we familiarized them with the goals of the class and the specific learning objectives for their presentation.

Summary

The design and organization of the class was built around four major outcomes. First, we wanted to expose students to the techniques of market opportunity analysis. Second, we wanted to involve students in real-time real-life business situations where they could apply what they were learning. Third, students would be involved in an intense semester-long group activity. Finally the class would be organized and delivered in a way (i.e. Socratic teaching method) in which the students would have greater responsibility for learning per se and the faculty would act more as facilitators in the process.

RETROSPECTIVE EVALUATION

Overall, the experience was highly positive for all parties involved. Student feedback was gathered using three methods. These included a mid-term open-ended questionnaire, a standardized end-of-semester course evaluation form, and an additional questionnaire administered via e-mail after the course was completed. Instructors did not receive results until after grades were submitted. In general, the feedback from all measurements was positive and constructive. In the case of the standardized university evaluation, virtually all of the ratings on key questions (i.e. overall ratings of the instructors, development of significant skills, overall rating of the course) were substantially higher than aggregated business school results, which were already positive.

Business client feedback was gathered by asking four questions in a phone interview:

◆	<i>Was the experience beneficial from their perspective?</i>
◆	<i>Did they use the information and/or recommendations the student teams made/gathered?</i>
◆	<i>Did they feel that this type of an experience on a student's resume would make him or her more employable?</i>
◆	<i>What did they feel could be done to improve the program?</i>

All of the clients interviewed responded very positively to the first three questions. In terms of improvement, two clients mentioned the desire for better coordination and more frequent contact with student teams. Three clients noted that a more formal debriefing at the end of the semester would have been helpful to their companies and would have brought more closure from the perspective of the student teams

In addition to the formal company feedback, several other outcomes are noteworthy. One firm hired a member of its student team as a full-time employee. One of the two pre-venture businesses has raised initial seed capital, relocated out-of-state (where the target market is

concentrated), and is pursuing the business on a full-time basis. Another has requested the assistance of a student team when the course was offered next.

Anticipated Course Changes

A number of tactical changes were planned for the second offering of the course. These included:

<i>Greater Coverage of Secondary Data Acquisition</i>
The business reference librarian will spend more time at the beginning of the semester presenting advanced search techniques tailored to the specific data information needs of the student consulting projects.
<i>Closer Coordination of Material from Readings</i>
More class time will be devoted to connecting theories presented in assigned readings to their application in conducting opportunity analyses.
<i>More Interactions with Project Teams</i>
Future offerings of the course will involve greater levels of interaction between the faculty and students. It was clear that more TLC needed to be given to project teams. Faculty advisors met with students an average of three times during the semester. Next time we will offer biweekly consultations and also use some class-time for this purpose. We will monitor progress by introducing a biweekly written progress report form that all teams must prepare.
<i>More Client Contacts and Debriefing</i>
In the future, we will provide greater oversight of student-client contacts. Teams will be set up with clients as early as possible and, where appropriate, regularly scheduled meetings will be encouraged throughout the semester. We will stress the importance of some level of student representation at all meetings (not every team member must be present at all meeting as logistical problems arise). In addition to inviting clients to the student teams' final presentations, we will ensure that firms receive a formal debriefing and are given the final version of their market opportunity analysis report.

CONCLUSIONS

A stand-alone marketing course dealing specifically with opportunity analysis was thought to be an attractive, innovative alternative for a number of reasons. It complemented the traditional marketing research course which covered specific research methodologies by focusing on the use of information in complex environments and the development of entrepreneurial thinking. Likewise,

an MOA course built on exposure to the SWOT analysis framework used in other upper-level courses. In this manner, higher-order critical reasoning skills were developed by having students analyze information to make decisions and recommendations. Furthermore, MOA required the development of cross-functional decision-making skills. Finally, as a field-based experience it fostered fast, decisive responses commonly sought in business school graduates.

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APPENDIX A: MARKETING OPPORTUNITY ANALYSIS SYLLABUS	
Prerequisites: BUS 360 Instructors: Office: Phone: e-mail:	Office Hours: Mon. 11:15-12:45 2:30- 3:30 Wed. 11:15-12:45 or by appointment
NOTE: Virtually all written communication in this course (i.e. syllabi, handouts, assignments, etc.) will be done via the University's CourseInfo System. You will also be required to use the Internet, on a regular basis, outside of class. You will need an e-mail account. If you don't already have one, they can be issued at any of the computer labs.	
Course Materials: Required: Case studies and journal articles (available at the bookstore) Optional: <i>The Wall Street Journal</i>	
Course Overview: In today's rapidly changing business environment, the ability of organizations to identify and exploit potential markets is critical for long-term success. This course is designed to help develop skills that will enable you to conduct a formal market opportunity analysis. This analysis involves target market identification; industry trends; demand analysis; capacity and fit issues; competitive analysis; and forecasting. During the course, student teams will evaluate case studies and work with a local business to conduct a comprehensive analysis for a potential business opportunity.	
Objectives: This is an upper level course designed to equip you with concepts and analytical techniques required to evaluate potential market opportunities.	
<ul style="list-style-type: none"> • To become familiar with the application of MOA concepts using contemporary written cases and presentations from members of the business community. • To insure that this course conforms to the School of Business Mission Statement and the standards established by the American Assembly of Collegiate Schools of Business (AACSB) the following topics/skill areas are specifically covered/accomplished: <ul style="list-style-type: none"> • <i>Written and Oral Communications Skills</i>: Promoted via class discussions; written case(s); group assignments; consulting project; group presentation; examinations. • <i>Analytical and Critical Thinking Skills</i>: Promoted via classroom discussion; written case and group assignments; lectures; group consulting project; presentations from members of the business community. • <i>Business Ethics</i>: Ethical issues are introduced and discussed in the area of competitive analysis. • <i>Information Acquisition</i>: Students are required to do extensive data/information acquisition over the Internet in virtually all topical areas in the course. • <i>Global</i>: Global issues will be introduced in the context of international market opportunities. • <i>Legal and Regulatory</i>: The impact of legal and regulatory issues is discussed in the context of case study and project analysis. • <i>Social and Political</i>: The relationship of the social, political, and cultural environments are discussed and evaluated in the context of the cases and projects. 	

Grades:

- 20% Written Case Analysis
- 30% Class Participation
- 30% Field Project and Presentation*
- 10% Final Examination
- 10% Peer Evaluation

Assignments:

Reading assignments and case incident presentations per attached schedule. (N.B. from time to time, there may be changes in schedule; you should note these on your syllabus, you will be given at least one week advance notice of any change in case schedule.)

Attendance, Incompletes, and Late Assignments:

- Students are expected to attend all class sessions. A significant amount of your grade is determined by your participation in class. If you must miss a class, please advise ahead of time.
- Incompletes and late assignments will be allowed only under extraordinary circumstances.
- Students with any type of disability which he/she feels might effect their performance should see the instructor at the beginning of the semester.
- At any point in the semester, if you encounter difficulty with the course or feel you could be performing at a higher level, consult with me. Students experience difficulty in courses for a variety of reasons. For problems with writing skill or time management, make an appointment to see a student tutor at The Learning Center, 253 Luther Bonney (780-4228). Help is also available through the Counseling Center, 106 Payson Smith (780-4050) and the Office of Academic Support for Students with Disabilities, 237 Luther Bonney (780-4706).

- A passing grade must be received on the field project in order to complete the course.

APPENDIX B: SPRING 2000 CLIENT PROJECTS		
Client Firm	Type of Business	Nature of Project
32 North	Leading manufacturer of Stabilicers™ a device that attaches to the bottom of a boot or shoe to provide stability and traction.	Looking for opportunity to extend a reengineered product into the industrial marketplace
Target Golf	Brand new company with a patented interactive golf simulator to be used at driving ranges and golf courses.	Testing the validity/opportunity in the national marketplace.
Truck Billboards	A start-up company trying to capitalize on the vast empty spaces along the sides of 18-wheelers.	An overall analysis of the opportunity and risks associated with this new medium.
Fresh Samantha	A young, dynamic company that makes the "purest and funnest" juice around. During the course the company was sold to Odwalla Juice company for \$27 million.	Evaluation of opportunities presented by more juice products vs. smaller line of staple offerings.
IDEXX Laboratories	A world leader in providing diagnostic, detection, and information products to the animal health industry as well as quality assurance products and services to the dairy and water industries	Determining the opportunity for microbiological test kits for examining water quality.
Wright Express	A company that revolutionized the fleet industry (both trucks and cars) by introducing information management tools based on a charge card program specially designed for businesses with company vehicles.	An evaluation of a new value added customer product/service.

APPENDIX C: MARKET OPPORTUNITY ANALYSIS SCHEDULE AND TOPICS				
Date	Topic	Assignment	ClassDiscussion\Activity	Guest
Jan 24th	Introduction-Teams	1) Case: "Cybersmith" 2) "Marketing Myopia" 3) "Creating New Market Space"	1) Course Overview 2) Team Assignments 3) Case Introductions/ Project Overviews	
Jan 31st	Identifying Market Opportunities	1) "How Entrepreneurs Craft Strategies That Work" 2) "Why Do Good Managers Choose Poor Strategies?"	1) "'Marketing Myopia' and Creating New Market Space" 2) Project Assignments	Roger Husson "The Sabre Yacht Story"
Feb 7th	Strategy, Planning and Fit	1) "Creative Problem Solving"	"Cybersmith"	David Shaw, President Idexx (Client Firm)
Feb 14th	Creative Thinking	1) Case: Zenith:HDTV 2) "Concept Testing"	1) "Creative Problem Solving" 2) Progress Reports	Doug Levin Fresh Samantha (Client Firm) Rick Grover "Creativity"
Feb 28th	Demand Analysis/ Data Acquisition	"Marketing Research 1"	1) "Concept Testing" 2) Group Meetings	Dave Washburn 32 North (Client)
Mar 6th	Demand Analysis/ Data Acquisition	"Research Methods in Marketing: Survey Research"	Zenith: HDTV	Zip Kellogg, USM Library/ Internet
Mar 13th	Demand Analysis/ Data Acquisition	"Ethical Dimensions of Competitive Analysis"	1) "Marketing Research 1" 2) "Research Methods in Marketing: Survey Research"	
Mar 20th	Competitive Analysis	Case: Genesis Machine Tool Co.	"Ethical Dimensions of Competitive Analysis"	Wright Express (Client)TBA
Apr 3rd	Competitive Analysis	Entrepreneurial Finance Article-TBA	Progress Report	
Apr 10th	Financial Analysis	1) "Managers Guide to Forecasting" 2) "Four Steps to Forecast Total Market Demand"	Case: Genesis Machine Tool Co Entrepreneurial Finance Article-TBA	Keith Shaughnessy Private Fund Manager
Apr 17th	Forecasting	1) "Managers Guide to Forecasting" 2) "Four Steps to Forecast Total Market Demand"		
May 1st	Presentations			
May 8th	EXAMS			

FAMILY-OWNED AVANTOR TECHNOLOGY EXPERIENCES GROWING PAINS: WALKING THE TIGHTROPE

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ABSTRACT

This case describes some of the problems that arose when a company in a rapidly growing industry failed to adapt. It emphasizes the unintended downside of promotion from within. The case focuses on the Human Resources Department and the effect a problem in this area can have, both within the department and throughout the organization. The case addresses organizational culture, issues, that occurred when a closely-held company reached a critical point in its growth.

INTRODUCTION

Thor Johnson awoke with a start. He'd had that dream again. The dreams started about a year ago. In the first one, Thor was an army officer leading his troops into battle during World War II. Thor attributed the dream to excitement about expanding his company into Eastern Europe and watching too many documentaries on the History Channel. Thor had anticipated that some problems could surface while taking his highly successful technology company, Avantor, into the international arena. All in all, it had gone about the way he had expected. Yet, the dreams continued. For the last few months the dream had always been the same. Thor, still an army officer, was in what seemed to be an unending battle. His supply lines had been stretched beyond their capacity, and as he watched, his troops were massacred. He was helpless to do anything about it. He began to wonder if the dream had a deeper meaning.

Wendy Taylor was excited about her new position in the Human Resources Department at Avantor Technology. One of her duties was to conduct exit interviews. Wendy's boss, Mary Boggs, the Director of Human Resources, found conducting the exit interviews to be burdensome and she was happy to relinquish this task to Wendy. Wendy felt that the questionnaire Mary had developed for the exit interviews was too restrictive. She decided that the yes/no format did not help her determine why employees were leaving. Wendy knew that technology companies tended to have rather high turnover rates. Despite this fact, a proportionately higher rate of qualified employees were leaving after just a short time. Avantor's compensation package was competitive. She believed that the family-friendly reputation at Avantor should attract and maintain the best employees.

Wendy expressed her concerns to Mary. However, she was disappointed by Mary's dismissive reaction.

Mary Boggs was barely out of high school when Janet Johnson hired her to work at the newly formed company. Janet and her husband, Gunthar, had founded Avantor, a keyboard manufacturer, the year before. At that point, Avantor had nearly 50 employees. Mary was a hard worker, and quickly advanced from assembler to lead assembler, then to crew chief. Mary had a knack for getting people to work harder, faster, and more effectively. Janet began to have Mary interview prospective assemblers. Mary had a gift for finding people who would make good assembly line workers. As time went by, Janet and Gunthar decided to develop a more formal structure, and promoted Mary to the newly created position of Human Resources Director. They also promoted their best salesperson to Director of Marketing about the same time. Janet and Gunthar were extremely proud of their company and its employees. All of the heads of departments had started out as assemblers. The Johnsons knew their company would succeed with their program of rewarding hard work and loyalty by promotion from within. Avantor's strong market position confirmed Janet and Gunthar's belief in their promotion policies.

Upon completion of a bachelor's degree in electrical engineering from a local state university, Janet and Gunthar's son, Thor, came back to work for the company. Thor was a thoughtful and gifted engineer, and his parents expected him to soon be ready to take his father's place as President. A year passed, and Thor was named President. That same year, Thor developed a new process and product that put Avantor at the cutting edge of technology. Simply put, the hardware product was a storage library and retrieval system that enabled the reuse of software in the engineering field. Within three more years the number of employees grew from two hundred to over five hundred. It was a time of great excitement at Avantor Technology!

INDUSTRY BACKGROUND

Founded 16 years ago by Gunthar and Janet Johnson, Avantor Technology is a closely held corporation. The stock ownership is as follows:

Gunthar Johnson	age 68	35%
Janet Johnson	age 67	35%
Thor Johnson	age 37	30%

The company is headquartered in Bowling Green, Illinois, a city with a population (MSA) of 400,000, located in the Midwest United States. The company owns a manufacturing facility in Korea. Avantor's sales force covers the United States, Canada, Mexico, and much of Central and Eastern Europe.

The Johnson family, especially founders Janet and Gunthar, attributed much of their success to their family-friendly attitude toward their employees. Many employees have at least one other

family member employed by Avantor. Employing entire families, like the Johnsons themselves, is a common practice.

International Considerations

Avantor was rather unusual for a company of its size. Typically, a company of the size and scope of Avantor would have gone public and have taken on a more traditional corporate culture. In the United States, giving preferential treatment in hiring family members in firms with nearly one thousand employees is highly unusual. Nepotism is generally viewed negatively.

However, outside the United States, the family unit is the bedrock of business. This is especially true in Asia. However, with the trend toward globalization and increased development of free market systems, competition is fierce. There is immense pressure to change. Founders of Asian businesses are beginning to seek professional, often Western, educated managers to fill leadership positions. Families will send their children to Western countries, primarily to the United States, for education. If this is not an option, professional management is accepted from outside the family.

There are cultural considerations, as well as societal mores, which differ between countries. For example, in Taiwan the family that controls Formosa Plastics prohibited their eldest son from taking over the business because of an extramarital affair (Arnoff, 1993). This decision stemmed from the belief that a person who is unable to manage his personal life will be unable to manage the business successfully.

In Italy, there has been a tendency for sons and daughters to inherit their father's share of the family business. This type of inheritance can be troublesome for Italian businesses when the son or daughter is unwilling, not interested, or incapable of managing a business. Like what is occurring in the United States, Italians are facing the reality that a firm's viability may have to take precedence over family ties (O'Connor, 1992).

THE PROBLEM

As Seen by Thor Johnson

Thor had felt that for some time his company was experiencing growing pains. He often spoke with his "network of non-competing competitors" (as he called them), which was composed of peers from five other companies around the country who were engaged in technology or technology-related businesses that were not competing with Avantor. Of the companies in his network, three were closely-held companies, one has been publicly traded for many years, and one had just completed a initial public offering (IPO). Thor developed this network to brainstorm marketing ideas and to explore how he would retain control if he decided to take the business public. Thor recognized that going public could cause him to lose control of the company. At the same time, it might assist him to finally gain control from his parents, who just couldn't seem to let go of the business. Thor knew that his parents were opposed to taking the business public. His father worked for a large company for many years before striking off on his own to start Avantor. Both

of his parents were concerned that taking the business public would result in a loss of the family-friendly culture. While this culture was extremely important to the elder Johnsons, it became a frustration to the younger Johnson. Not only was it holding him back from taking advantage of a stock market that adored high tech IPOs, but it made strategic changes very complicated to implement. For example, taking disciplinary action against an employee who had several family members scattered throughout the organization could be more trouble than it is worth. Too often problems got worked around rather than solved.

Thor wondered why his company's turnover rate was so much higher than all but one of the companies in his network. However, he trusted Mary Boggs' judgment. After all, his parents promoted her. It was at his insistence that Mary began to conduct exit interviews. The only conclusion Mary had determined from the interviews was that the employees who left had bad attitudes. According to Mary, "nobody has the work ethic we had when the company started; people will go up the street for a nickel more per hour." In his gut, Thor believed that there was more to it than just that, but what? Thor had no background on the human side of management. His major in college was engineering. The feedback from his advisory group told him that the heart of his problems was in the human resources department.

As Seen by Wendy Taylor

Wendy quickly learned that the family-friendly culture of Avantor had positive and negative attributes. The head of purchasing, Keith Crandall, had complained to her about a long-time employee named Noreen, who worked in his department. Noreen was constantly absent. The company had a written absentee policy, but it was enforced only sporadically within the Bowling Green headquarters. Noreen was skillful at working the system, but had gotten sloppy lately and had commented to a number of co-workers that she hated Avantor and would take every opportunity to get back at them by using all the outs in the system. Her absences were not that unwelcome, according to Keith, because "she doesn't really contribute all that much when she is here except to complain." His real concern was that Noreen's absences were causing the rest of the employees in the department to copy Noreen's absentee behavior. The problem was escalating. He wanted Wendy to "do something about it."

After reviewing the absences in the purchasing department and the policy concerning absenteeism, Wendy went back to Keith and explained the process that he would need to follow with Noreen. Both agreed they would be able to terminate Noreen if she had two more absences within the next three months. This decision was reached after reviewing all the human resource policies. The second absence happened within three weeks. At that point, Keith didn't want to fire Noreen. When Wendy explained to him that they had to fire her, or the absentee policy would be unenforceable, he told her she would have to do it. Keith told Wendy that he wanted to speak to Janet Johnson first. If he didn't inform Janet, Keith predicted that Noreen would go running to her and Janet would insist on giving Noreen another chance.

According to Keith, long time employees of Avantor, such as Noreen, knew that all they had to do was go crying to Janet to rescue them. Despite human resource policies to the contrary, long-time employees were untouchable. "It's a shame," said Keith as he left to talk with Janet; "most

of the long- time employees were good workers when they were on the assembly line. They were in the right place at the right time, but were promoted into jobs that were beyond their skills and abilities."

Wendy changed from yes/no to open-ended questions during the exit interview. She was increasingly disturbed by the answers she heard. She really wanted to discuss the situation with her boss, but every time she tried, she felt like she was "talking to the wall".

As Seen by Mary Boggs

Mary had never felt as connected to anything as she did to Avantor Technology. She had been a less than stellar student at Bowling Green High School. She couldn't recall why she applied for an assembler position at Avantor, except that she had always enjoyed crafts. Assembly work was a lot like completing crafts. She did not know how many of the little silver things were supposed to be stuck in the white plastic things, so she made a game out of it. The lady who hired her, Janet, seemed quite pleased with her work. Before she knew it, Janet was giving her more responsibility. She really liked the way it made her feel.

Mary had always kept to herself when she was in school. Now, she was showing other people, many of them older than she, how to put things together. Soon she learned how to predict in the first few minutes of working with someone if he or she was going to be able to grasp how the process worked. Janet noticed this too, so she began to have Mary interview prospective assembly employees.

The company grew very rapidly. Because Mary had been so skilled at selecting assemblers, it only made sense to put Mary in charge of human resources. Mary knew this was outside her comfort zone, but wanting to excel, she decided to accept the position. Mary struggled initially. It was easy for her to spot good assembly line workers, but she found it much more difficult to select employees for other departments. She had some hiring successes as well as some failures, but most people whom she needed to hire in the early days were assemblers, so it worked out overall. Mary avoided dealing with problems. She attended a few seminars and tried to learn about interpersonal communication. However, she really never felt comfortable with most of her peers. She observed that they were all older than she was, college graduates, and "stuck up."

Over the years, Mary learned to hire people with skills she didn't have. She thought it was ironic that most of the people who worked for her were college educated with Human Resource degrees. She knew that she had to be very careful not to let others find out about her lack of education. As far as she was concerned, she knew everything that she needed to know, and competently managed the human resources department. She keenly kept departmental functions separate so that no one employee could attempt to steal her job.

According to Mary, of all the dumb ideas Thor had ever come up with, his idea to have her do exit interviews was the dumbest. Mary knew she was great at hiring people. "The unemployment rate is at its lowest level in decades, but college-boy Thor can't understand why our employee turnover is high," Mary complained to her sister. "I am not going to spend my time listening to any more whining by a bunch of quitters. I think Thor is trying to blame me. Well, that

is not going to happen. I still know how to hire people. I'll let my new college-educated assistant handle it. She is so gung-ho; the exit interviews will give her a little taste of reality," she exclaimed.

QUESTIONS

1. What issues will need to be addressed to enable Avantor to become a successful enterprise as it is presently structured?
2. Should Avantor change its family friendly culture?
3. Are the employee relation problems, illustrated in the case, the responsibility of management, or the employee of Human Resources Department?
4. How can the company reconcile the need to hire the most qualified person for every job with its family-friendly culture?
5. How might management better assess the most appropriate match of employee skills and positions available?
6. How can the exit interview questionnaire be revised to provide better feedback?
7. How might Wendy attempt to "manage" her boss and achieve her objectives without arousing Mary's insecurities?
8. What structural and human resource policy changes might improve the effectiveness of the organization?
9. What roles could Thor play in Avantor's future?

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TEACHING GUIDE & NOTES

Case Overview

This case requires students to consider the special cultural considerations present in family-owned and managed businesses. It brings together the issues associated with technology businesses where products, competitors, and strategies change rapidly. It also deals with the unintended downside of promotion from within. The company's organizational structure and human resource policies resulted in solely promoting from within. This resulted in employees occupying positions that were beyond their abilities.

Relevant Courses

An appropriate audience for this case would be students enrolled in undergraduate classes for business, communications, organizational behavior, entrepreneurship, and family business. The relevant topics include management strategies, organizational behavior, family-owned business issues, development of core competency models, management of rapidly growing entrepreneurial firms, and human resources. Exhibit One gives an example of how the oral presentation examining this case could be completed by students role playing as consultants to Avantor.

Data Source

The case focused on the Human Resources Department at Avantor Technology, a fictional company based in the Midwest United States.

Analysis

This case describes a rapidly growing family-owned technology company. The company has a long-standing policy of starting all new employees as assembly line workers and promotion only from within. Now, every key manager used to be on the assembly line. Like a gazelle, the

company is expanding quicker than it can react. Nearly every key manager has been promoted from within. Though the key managers are very loyal to the company, they lack the educational depth and breadth of experience to continue to make the company flourish. Issues to consider for this case include:

1. How family-owned businesses differ in culture;
2. How to implement organizational change in a family-owned business;
3. How to modify the human resource policies and procedures so that employees are not promoted into positions that do not match their education, abilities and skills;
4. How to reconcile the need to select the most competent people but retain precious organizational values; and
5. How to best manage growth in an entrepreneurial technology company.

The objectives of this case are as follows:

1. To describe the difference in perceptions held by various stakeholders;
2. To explore how promoting people beyond their abilities can handicap an organization;
3. To consider alternative methods to resolve the situation;
4. To introduce the use of core competency models to help an organization resolve the unintended downside of promotion only from within; and
5. To consider the best methods of growth management in an entrepreneurial technology company.

Answers to Questions

- 1. What issues will need to be addressed to enable Avantor to become a successful enterprise as it is presently structured?**

In order for Avantor to grow and remain successful, it will need to identify and address the issues of business planning, management of rapid growth, succession planning, human resources, and communications. The company has grown so rapidly that management has had to be reactive rather than pro-active. The family-friendly program of promoting only from within has been carried too far. This has led to most managers being promoted beyond their abilities. This is affecting organizational efficiency and effectiveness. It is most critical in the Human Resources Department. Although it is having

a widespread effect throughout the organization, it is at the critical stage in the Human Resource Department. New Human Resource policies must be implemented immediately that identify the core competencies, experience, and education for each job position at each level of the organization.

2. Should Avantor eliminate its current culture and adopt a more traditional corporate culture of a company its size?

Avantor should not necessarily change its family-friendly culture, but its promotion policies. The concept of a family-friendly culture in and of itself is not necessarily a weakness. However, the lack of consistent vision between the president of the company and the founders will continue to cause problems in strategic and tactical planning, and more obviously in implementation. Many large corporations are attempting to bring a more personal touch to their culture by creating the very environment that the founders of Avantor idealize (Branch, 1999). The problem is in the level of dysfunction present at Avantor. If expanding the company is desired, then the principle players need to re-evaluate the mission, goals, objectives, and requirements of each upper-management position. Objectives that are determined to be critical will probably need to be developed by a team of professional experts. Implementation plans will be required. This would have to be completed by an outside human resource consulting firm. Accurate job descriptions and specifications must be done for each position that would contain this information. Standards of conduct need to be established and acted upon. This is especially evident in the management of human resources. Employees should expect realistic consequences for failing to adhere to the policies and standards established for absenteeism; for example, family members must respect boundaries that need to be established for the greater good (Goffee, 1998). It must be communicated from the top that the new policies and procedures will be adhered to and followed without exception.

3. Who is responsible for the employee relations problems illustrated in the case, the line managers or the Human Resource Manager?

The problematic employee morale, attitudes, and behaviors are largely due to key management figures and the objectives of the company. Enforcement must come from the top down in any organization to be accepted and followed by the employees. Mary's competency problems are symptomatic of a much broader problem. Noreen's poor attitude and work habits stem from learning the system and using it for her personal advantage. As a result of poor supervisory management, Mary's skill level did not match the knowledge, skills, and abilities (KSAs) required of her current position. The founders had not addressed the importance of knowledge, skills, and abilities (KSA's) training and experience of the employees. The owners, managers, and current head of the Human Resource Management Department are all at fault for the morale problem. Poor communication by managers and a lack of consistency for enforcing policies and procedures only served to reinforce the

negative work habits and employee behaviors. A total evaluation of the positions within the company and the competencies needed for each position must be made by a team of outside experts or at the very least, overseen by human resource experts. Then, the recommendations should be evaluated and implemented at all levels

4. How can the company reconcile the need to hire the most qualified persons for every job with its family-friendly culture?

More formal development of job descriptions and specifications as well as employment policies and procedures would provide the company with the information needed to match the person with the position based on KSAs. Avantor needs to develop a core competency model for each position, and it needs to assess the core competencies for each employee. Not only would this ensure effective job and skill matches, it would identify employees with especially strong skills, as well as those employees with problem areas. It would be essential to use this as a diagnostic tool to determine which competencies need to be further developed. It should not be used to target people to be fired. However, certain key positions may need to place others in them. Training would be a great advantage for this company. Horizontal employee movement may have to take place. Moving an employee from their current position to another position that is more suitable with their KSAs should be utilized only if further training and development, focusing on areas where improvement is needed, failed to affect change within the individual employee's job performance. It is possible to preserve the family-friendly structure Janet and Gunthar initiated without compromising proper employee policies and procedures. Internal job posting should proceed external recruitment. Both methods need to be implemented. Then, the most qualified candidate is chosen from the pool.

5. How might management better assess the most appropriate match of employee skills and job need?

The adoption of core competencies will help Avantor Technology better assess the skills of employees. A core competency model for a technology company might include competencies in versatility, communication, teamwork, initiative, work quality and quantity. Managers and supervisors might include leadership, subordinate development and vision (McAfee, 1999). Employees with one or two deficiencies might need additional training and development. An employee lacking vision, communication skills and leadership might be more appropriately placed in a non-managerial position. In addition to this, management may implement 360-degree assessments or employee surveys (Schoonover, 1999).

6. How can the exit interview be developed to provide better feedback?

An exiting employee may feel intimidated by the interview concept, process, or interviewer. Leaving a company because of dissatisfaction can be stressful. They are more likely to give polite comments just to hurry and finish this process. Although an accurate assessment tool might be created, the low validity of the exit interview is well established in the literature. However, the information could be valuable when considered with other employee satisfaction measures gathered by the human resource department. It is suggested that the exit interview questionnaire include open-ended questions, possibly allowing the exiting employee privacy while completing the questionnaire. It would be helpful to include questions that would inspire the interviewee to consider what he or she would do to improve the company. If it is necessary to assign an interviewer, select someone who is autonomous and non-threatening.

7. How might Wendy attempt to "manage" her boss and achieve her objectives without arousing Mary's insecurities?

First, Wendy must gain the support of Thor. The President and top management must support any major changes in the corporation before they are accepted and implemented by the employees. A consultant with expertise in human resource issues, and preferably with experience in the technology industry, could conduct an overall appraisal of the department and develop a plan that can be implemented. This would include the development of forms and materials. However, it is negligible this would happen with Mary's insecurities. Another solution might include allowing employees in the human resource department with the SKAs to complete a human resource audit to do so for every department in the firm and then streamline human resource procedures that meet standards for compliance. Mary and Wendy should be included in this process and consulted in their company expertise and to avoid as much as possible, personal security issues.

8. What structural changes might improve the effectiveness of the organization?

Working with an organizational consultant may provide some specific suggestions about the structure based upon other technology companies of similar size and focus. The adoption of core competencies would then help determine who should be placed in the positions (McAfee, 1999). In any event, if new people are brought in to replace current managers, the incumbent should not be placed in a position where they report to their replacement (Mills, 1999).

9. What roles could Thor play in Avantor's future?

Thor could take a leadership role as President by initiating an overall strategic plan for organizational change. A part of their major plan would include a thorough human resources audit of all levels and positions based on KSAs throughout this company. Based on these findings, restructuring would take place. Thor needs to begin by forming an external board to assist him in the decision-making. These boards are often recommended for family-owned businesses that are closely held.

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EXHIBIT ONE	
SUCCESS MANAGEMENT CONSULTING AGENCY Indianapolis, Indiana	
SPEAKER:	JANE DOE - PARTNER
CLIENT:	AVANTOR TECHNOLOGY (MANUFACTURING)
YOUR ROLE:	MGMT CONSULTANT COLLEAGUES/NEW ASSOCIATES
GUESTS:	AVANTOR REPRESENTATIVES
THOR	- CEO/PRESIDENT
MARY	- HUMAN RESOURCES MANAGER
WENDY	- HUMAN RESOURCES ASSISTANT
AGENDA	
1.	HISTORY OF AVANTOR & INDUSTRY BACKGROUND (10 MINUTES)
2.	INTRODUCE AVANTOR REPRESENTATIVES & INTERVIEWS (35 MINUTES)
3.	BRAINSTORMING SESSION AND Q&A (15 MINUTES)
POINTS TO PONDER DURING PRESENTATION	
§	WHAT IS THE PROBLEM AND/OR WHAT IS HAPPENING?
	What are the advantages and disadvantages of promoting only from within?
	What issues arise when a closely held company is at the critical point in its growth stage?
	Is the organization strong enough to grow internationally?
§	WHOSE PROBLEM IS IT?
	Does the problem stem from the human resources department and/or other departments in the organization?
	Which executives are responsible?
	Is the morale problem due to the human resource manager or line managers at Avantor Technology?
§	HOW SHOULD IT BE ADDRESSED?
	A thorough discussion of human resource planning is in order. The discussion should include leadership training, demotions, changes in assignments, surveys, core competencies, 360-degree assessments, organizational structure, job description and specifications, as well as knowledge, skills, and abilities (KSAs) for each position at each level of the organization..

FREE ENTERPRISE EDUCATION PROJECTS

This section of the *Journal of Entrepreneurship Education* features descriptions of the award winning, free enterprise education projects from the *2002 SIFE USA National Exposition*. These educational projects are blind reviewed by editorial board members with only the top programs in each category selected for publication, with an acceptance rate of less than 5%.

AT&T Best Use of the Internet: Kindergarten Through High School

This competition, sponsored by AT&T, recognizes a project for use of the Internet in providing free enterprise education to kindergarten through high school students. This year's winning SIFE team was University of Arizona, Tucson, Arizona.

AT&T Best Use of the Internet: Aspiring Entrepreneurs and Small Businesses

This competition, sponsored by AT&T, recognizes a project for use of the Internet in providing free enterprise education to aspiring entrepreneurs and small businesses. This year's winning SIFE team was Ferrum College, Ferrum, Virginia.

SIFE Best In-Depth Education

This competition, sponsored by *SIFE*, recognizes a project for free enterprise education. This year's winning SIFE team was La Sierra University, Riverside, California.

SIFE Best Use of Mass Media

This competition, sponsored by *SIFE*, recognizes a project for the use of mass media in free enterprise education. This year's winning SIFE team was California State University-Chico, Chico, California.

Polsky Personal Investing to Achieve Financial Independence

This was a special competition project to encourage SIFE teams to develop a program to teach fellow collegians the importance of saving and investing and how to achieve financial independence. This year's winning SIFE team was Louisiana State University at Eunice, Eunice, Louisiana.

SIFE Responsible Use of Credit

This competition, sponsored by SIFE, recognizes a project for free enterprise education concerning the responsible use of credit. This year's winning SIFE team was Quincy University, Quincy, Illinois.

SIFE Make a Difference Week

This competition, sponsored by SIFE, recognizes a team for making a difference in the lives of Americans. This year's winning SIFE team was University of the Ozarks, Clarksville, Arkansas.

SIFE Teach a Child about Business Week Sponsored by Discover Financial Services, Inc.

This competition, sponsored by SIFE, recognizes a team for teaching children about business and free enterprise. This year's winning SIFE team was Gainesville College, Gainesville, Georgia.

Kauffman Center for Entrepreneurial Leadership Entrepreneurship Assistance

This competition, sponsored by the Kauffman Center for Entrepreneurial Leadership recognizes a team for entrepreneurial assistance. This year's winning SIFE team was California State University-Chico, Chico, California.

**SPECIAL COMPETITION AWARD
AT&T BEST USE OF THE INTERNET:
KINDERGARTEN THROUGH HIGH SCHOOL**

The University of Arizona, Tucson, Arizona

International Marketplace

VISION STATEMENT:

To develop a creative and innovative project that uses the Internet as a tool to teach seventh graders about the growing importance of the Global Economy and help them develop the technological and communication tools needed to successfully compete.

MISSION STATEMENT:

To create a nine week simulation project for 50 seventh graders at Alice Vail Middle School utilizing a web page, online discussion and Internet research on international business, for the purpose of expanding knowledge of the Internet, online research tools and the international marketplace. Students will use the Internet to research assigned countries and create on-line power point presentations, on-line discussions to conduct trade negotiations and on-line quizzes to assess results.

OBJECTIVE:

For the fourth consecutive year, two seventh grade classrooms Alice Vail Middle School participated in the "International Marketplace". Five SIFE students devoted, 427 hours to designing the project, working in the classroom and monitoring the communication via the website. The project involved the following activities:

For the first two weeks of the project, SIFE students volunteered in the classroom twice a week and taught the students about the global economy. After administering a pretest on international trade, the seventh graders were assigned to teams and each team was assigned a different country. The countries studied were:

Australia	Brazil	China	Germany	Iraq
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Japan	Russia	Saudi Arabia	South Africa	USA
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The 7th grade students had two weeks to research their country, using the resources provided on the web page created for the simulation. The webpage provided the students with links to the SIFE students, links to numerous websites providing information on their assigned countries and information on imports, exports, currency, political climate, and other issues involving international trade. SIFE students presented a presentation on international trade and vocabulary.

During the next two weeks the student presented their research to the class. Using their power point skills the teams created web presentations and shared with the class. The on-line discussion feature on the webpage was used to encourage discussion between countries and to begin to establish formal trade agreements between countries. The students organized information on all countries in their diplomatic portfolios (each participant was required to keep significant information in a folder - they were to also create a name tag for display during the actual trade simulation with a flag, map and name.)

For the next five weeks the students were communicating via on-line and in class discussion groups about the status of their country. The student proceeded to take on the roles of leaders of their countries with the mission of improving the conditions in their country through trade. Actual commodities, units of measurement, currency conversions and trade contracts were used in the negotiations. Students used real greetings and the cultural traditions of their countries. They were to reflect current events that shape international events and the business ethics of their country.

At the end of this time period, 14 international students from the University of Arizona visited the classroom to discuss the actual conditions in their countries and serve as a resource for the students. Discussion groups on-line were utilized to develop the interview questions for the visiting dignitaries.

The Cultural Bazaar was the culminating activity for the simulation. Students created booths displaying various artifacts, fact sheets, pictures, and objects related to the country they had been studying. This year we had students make baklava, sushi, fried rice, and other dishes themselves. We invited other classes from the school to visit the exhibits and share the information and food. Visitors and participants alike found this to be fun and informative.

RESULTS:

Judging Criteria #1

Throughout the project, students used computer technologies to do their work and to communicate their results. Research, use of the POLIS site (monitored by the SIFE students), locating resources, answering discussion questions online, communicating with teammates, presenting information, burning CDs, using PowerPoint and creating displays were some of the ways we used technology. The SIFE students did so in a seamless, user-friendly manner that made it easier for the Vail students to accomplish their goals. This project met the technology requirements as stated by Tucson Unified School District for middle school. The technology was integrated into the overall project; it was not the only focus of the project. The International Market Place Simulation not only meets state and district educational standards but also enriches the lives of the students at Vail and the University.

Judging Criteria #2

The educational content covered in this project include the following topics: political structure, demographics, geographic features, culture, currency, trading partners, balance of trade, currency, IMF policies and imports and exports. The Internet was used extensively to research the questions posed by the assignment.

Judging Criteria #3

There were a number of means used for documenting the effectiveness of this project. Pre and post testing was used to measure the effectiveness of the teaching. The pre-test average score was 60%, post-test results were 90%, a 30% improvement! The classroom teacher also wrote a letter detailing his observations and reactions to the program.

Totally there were five SIFE students that devoted 427 hours to the project. To date, 240 students have participated in this project and over 1250 hours have been dedicated to Alice Vail Middle School by the school by SIFE students.

Judging Criteria #4

Overall judging criteria 1 - 4 were incorporated into all aspects of the "International Marketplace".

The simulation focused on how the global economy operates and encouraged the students to be entrepreneurial in the way they went about determining their imports and exports.

The emphasis on technology, the Internet, international monetary policy and balance of trade encouraged the development of the technology and financial management skills needed to successfully compete.

The student teams also had to communicate with different countries to negotiate trade agreements and then share their international experience in a cultural bazaar for the entire school. Through this experience the students developed the communication skills needed to successfully compete.

Throughout the entire simulation the students were challenged to act in an ethical manner. They knew that the decisions they made had to be in the best interest of both countries. They were learning to practice business in an ethical and socially responsible manner.

**SPECIAL COMPETITION AWARD
AT&T BEST USE OF THE INTERNET:
ASPIRING ENTREPRENEURS AND SMALL BUSINESSES**

Ferrum College, Ferrum, Virginia

Executive Summary

Project Goal

The goal of this project was to teach a member of our own SIFE family the value and the inner workings of a Web based corporation operating in a rural community.

The SIFE Team of Ferrum College has implemented a variety of Internet projects to assist local entrepreneurs including: Internet yellow pages, bidding on the Web, two web-sites for local nonprofit organizations and one e-store. Although these have been successful we believe the project we are submitting is worthy of your for consideration for three reasons: (a) It has enabled a local rural business to be successful, (b) it has provided employment for five citizens and (c) it has enhanced the E-commerce knowledge and practical experience of our team.

Absolute Insurance Solutions, (ALS) is a startup that was initially slated to be another insurance company in the already crowded insurance business. When the CEO, Suzzone R. Plaisance, President of our 2001 SIFE team sought our support and our advice we quickly pointed out to her that she would have a difficult time competing with other well established insurance companies unless she and her partner were able to overcome the rural location and the local competition. Our suggestion was to build AIS as an Internet based insurance company that generates insurance requests and leads from all 50 States of the Union and sells either insurance policies and/or insurance leads to customers in all states. The plan called for a top notch Web-site listing the various insurance products, multiple links with informative and timely text, a carefully select list of key words that will lead prospective insurance buyers to the site when the searched the Internet and a well prepared form requesting insurance quotes. The owners would have multiple insurance companies bid for the business thus generating the lowest possible quotes for the customers. Given the fact that more leads were expected than they could handle, the excess leads would either be retailed to other licensed insurance agents or they would be sold wholesale to the highest bidder. A data bank would separate these leads by area code and payments from the agents would go directly into the AIS bank account. The plan went into effect and the company www.aisquotes.com became a reality in February of 2002.

Results

Absolute Insurance Solutions informs us that as of April 15, 2002 they have exceeded the projected number of insurance leads by 25%, the number of policies sold by 34, and the income generated by 15%. In addition the company has started repaying the business loan and has hired two additional sales agents~

What did the students learn

The following students have been involved in this project: Mark Armentrout, Nick Elliott, Melinda Reamy, Kim Gordon and Jason Priest. In the process of teaching e-commerce concepts and applications to the two owners they have expanded their own knowledge and learned some valuable real life lessons.

- ◆ Negotiating with Website hosts and Internet search engine firms is a difficult and time consuming task.
- ◆ Web-site visits can be measured with counters, server log files and traffic analysis
- ◆ Excellent communications and presentation skills are necessary when you seek to secure a loan
- ◆ Developing a business plan is a time consuming activity that requires excellent writing skills, computer and budgeting skills and data management experience
- ◆ The Internet is a powerful weapon in seeking to expand your market size limitations.
- ◆ Success in e-commerce depends on an excellent Web site that is easy to read, easy to navigate and offer valuable information to the consumer
- ◆ Internet search engines work on a competitive basis; the more money you bid on key words the more hits you will receive on your Web site
- ◆ If you are among the three highest bidders on key words certain search engines will showcase your web-site in multiple search engines, thus generating more visits
- ◆ Information has economic value and it could be auctioned off to the highest bidder
- ◆ The Internet has presented Rural America with a new tool in business formation
- ◆ There is lots of operating risk from hackers and competitors who seek to bring down your site.

We have gained valuable experience and new knowledge which we are currently in the process of synthesizing into a practical users guide. The guide will consist of a glossary of a specific terms, useful web sites and other valuable e-commerce tips that could be utilized by other startup Internet based companies as they seek to expand their markets by capitalizing on the newest tool.

SPECIAL COMPETITION AWARD SIFE BEST IN-DEPTH EDUCATION

La Sierra University, Riverside, California

Welfare-to-Work Childcare Capacity-Building Business Course

Project Objective and Brief Description:

In this project we partnered with Family Services of Western Riverside County to educate welfare-dependent individuals and others in a 12-class course on starting a childcare small business right out of their homes. The course is broken up into 6 classes of child development, and 6 classes of business fundamentals as well as contacts for a successful business, including the Small Business Development Center of the Inland Empire Economic Partnership.

Event Locations:

Fall Modules:	Mead Valley Community Center Riverside Community Center
Winter Modules:	La Sierra University Mead Valley Community Center
Spring Modules:	Rubidoux Child Development Center, Mead Valley Community Center

Impacted Audience:

104 welfare dependent individuals and others

Participants:

La Sierra University SIFE team members, with the help of 2 LSU SIFE BAB members

Partners:

Family Services of Western Riverside County and Small Business Development Center of the Inland Empire Economic Partnership

Description of Event:

This year's Welfare-to-Work Childcare Capacity-Building Business Course not only introduced the fundamental basics of business, but it also took these individuals to the next step of becoming financially self-sufficient. To do this we created and implemented five curricula, including: Interpersonal Communication, Starting Your Own Business, Record Keeping, Taxes and Accounting, and Marketing and Advertising. All of these classes were taught in modules of three-hour sessions held once a week, finishing up the last week with a presentation of the things they learned.

In our Interpersonal Communication curriculum, we began the six class course of building a small business by giving participants a global perspective on business. We then brought it down to the local environment and starting-their business, educating them how to deal with their customers and other people they will come in contact with. This education dealt with using the "I" form of talking. We also dealt with the ethical responsibility on how to deal with customers.

Next, we used our Starting Your Own Business curriculum to teach them the basic information of business development. While taking them step-by-step through the business plan, they developed their own business plan for their home childcare business. For three of the modules, we were able to take participants to a computer lab to teach them basic computer skills, which they immediately put to use in developing a presentable plan.

For the Record Keeping curriculum, we brought in a certified CPA to show them that keeping records of everything in your business is important. Making detailed records of where money comes in and goes out is crucial to a business. They learned different ways to categorize their financial transactions so that when they go shopping they can break down a receipt accurately onto the appropriate financial log sheets.

In our Taxes and Accounting class, we brought the CPA back to educate the Individuals about what things are or are not tax-deductible, and what is a shared expense. They learned that saving their receipts and keeping proper records can be very helpful in this area as well. This also provided them with a major contact for someone who will help them with their taxes when it comes time to do them.

The Marketing and Advertising was taught by our BAB member and is a contact with the Small Business Development Center. The students learned the 4 P's of marketing: Product, Price, Place and Promotion, or in Spanish it is the 3 P's and the L; Producto, Precio, Lugar, Promocion. They learned different ways to advertise about their business, including 'word of mouth' and ads in the paper in order to create their own ad to advertise their own childcare business.

The presentation served as the class finale where they presented information that they had learned over the course of the module. Presenting things like their business daily schedule,

business plan, log sheets, record sheets and plans for the future. During this class we also administered our comprehensive post-test, which covered all of our topics.

How Welfare-to-Work Childcare Capacity-Building Business Course Met SIFE's Criteria

Criterion 1

To meet criterion one, La Sierra SIFE members created curricula to teach how business works in a Global Economy before we brought the idea of business down to their small business in their local communities.

Criterion 2

We met Criterion Two by identifying how being a Childcare Business Owner is needed in the local area (there are currently 11,000 children on waiting lists for home daycare in Riverside County). Family Services has discovered a need for reliable childcare givers in the Inland Empire and posed the idea to us 5 years ago; in turn we have taught how participants' decision to meet the need is an important one.

Criterion 3

Criterion Three was met by educating participants on the proper communication skills with customers, basic computer skills in teaching them to type their business plan, and the financial management skills in record keeping and taxes and accounting.

Criterion 4

The project met Criterion Four by teaching how to deal ethically with their customers. They also learned how to be socially responsible (and protect themselves legally) by checking out the child for any child abuse problems.

Results:

Pre/Post-test scores showed a 55% increase in knowledge. This Project has been tested for two years, in our third year we have sat down with Family Services of Western Riverside to review the curriculum and finalize what is the most effective curriculum and are in the process of compiling and printing our curriculum content into a single syllabus format to use as a Family Services national model.

SPECIAL COMPETITION AWARD SIFE BEST USE OF MASS MEDIA

California State University-Chico, Chico, California

Starting a Fire for Entrepreneurship Education on a Local, State, and International Scale

The CSU, Chico SIFE team used all available resources to obtain local, regional, national and even international recognition for our educational programs. A realistic estimate of gross impressions shows that we made over 30.6 million contacts. Our coverage included local television, San Francisco Bay Area television and newspapers, local newspapers, one national magazine, San Francisco Bay newspapers, local radio, national radio, four prominent local billboards, and on-campus publications. Please see the next page for a detailed list of media, including reach, frequency, and gross impressions. A brief summary of the four projects that garnered the lions' share of media attention is provided below.

Main Project	Businesses Started/Managed
Wise Kid, Wealthy Kid (Youth Entrepreneurship Camp)	30 new businesses; 7 existing businesses started from last year's camp
Synopsis	
Beginning February 16, 2002 our SIFE team began teaching 60 children between the ages of 10-13 on our campus. A total of 28 of these students come from Latino or Hmong ethnic backgrounds. Forty of the children are from Title I schools (e.g., economically disadvantaged). On four consecutive Saturdays, these students learned how to start, finance, operate and market their own business. On March 16, the "Wise Kids" sold their goods and services at the SIFE International Trade Fair. Extensive radio and newspaper coverage was obtained. Also, we were notified by the Jay Lane Show that two or three of our kids may be featured on his show in May	
Cal-High SIFE	6 businesses; each was entered into our "Best Entrepreneurship Project" competition
Synopsis	
We spread the fire to over 400 California high school students who came to our campus to participate in the Cal-High SIFE international Exposition on March 15-16. This exposition is modeled after the college SIFE program, and funding was made possible through a generous grant of \$22,500 from Silicon Valley technology company, Applied Materials, Inc. With this project we are "vertically integrating" the SIFE concept into the high school. This year, 23 high schools made multi media presentations to an audience of 82 judges who were recruited from the business, civic and academic communities. National attention has been focused on this project through Entrepreneur magazine and national radio.	

Project Africa	20 women from Botswana were assisted in managing or starting their businesses
Synopsis	
This year we have worked closely with SIFE teams in Botswana and South Africa. In January, three of our Chico State SIFE students (Allison Steltzner, Jill Zinke and Siobhan Brennan) traveled to South Africa and Botswana and taught the concepts of free enterprise and entrepreneurship to women and children. The most substantive project involved our team teaching 20 Botswana women about how to either start a business or how to manage one they already have operating. National TV and newspaper coverage was received in Botswana.	
International Trade Fair	80 businesses (30 run by kids aged 10-13; 30 run by high schools from across California; 20 staffed by Chico State Students representing products from Guadalajara, Mexico)
Synopsis	
This project was created with one purpose in mind: to integrate all of our other projects into one major event. And was major! On hand were children, high school students and global entrepreneurs. Shoppers included judges from the Cal-High SIFE Exposition, along with hundreds of members of the general public. "Virtual Streets" were named after famous entrepreneurs: Sam Walton Way, Oprah Winfrey Boulevard, Mrs. Fields Cookie Circle, Bill Gates Avenue, and Fiorina Freeway. We received extensive radio, TV and newspaper coverage from around the state. The gym was literally packed with people, and the color, energy and enthusiasm of all participants was contagious. Tremendous local TV, radio and newspaper coverage was obtained.	

Mass Media/Public Relations Outlet			
Local Television	Reach	FREQ	Gross Impressions
KRCR- Channel 7 (ASC) 30-Sec PSA	100,000 Households	5x daily lot 12 days	6,000,000
KRCR- Channel 7 (ABC) Trade Fair Broadcast	100,000 Households	I	100,000
KCVU- Channel 30 (FOX) 30-Sec PSA	250,000 Households	5x daily for 12 days	15,000,000
KNVN- Channel 24 (NBC) 30-Sec PSA	90,000 Households	5x daily for 12 days	5,400,000
KNVN- Channel 24 (NBC) Pre-Trade Fair Broadcast	90,000 Households	I	90,000
KNVN-Channel 24 (NBC) Trade Fair Broadcast	90,000 Households	I	90,000
Bay Area Television			
KRON- Channel 4 (NBC) Fremont Broadcast	200,000 Households	I	200,000
Botswana National Television (Only station serving Botswana) BNT. Women in Free Enterprise Broadcast	500,000 Households	I	500,000

Local Newspaper			
Enterprise Record- International Trade Fair Guide	Circulation 2,000	1	2,000
Enterprise Record- Trade Fair has a flair for free enterprise	Circulation: 40,079	1	40,079
Enterprise Record- Biz Bits: introducing Kids to Business 101	Circulation: 40,079	1	40,079
Enterprise Record- Biz Bits	Circulation: 40,079	1	40,079
Enterprise Record- From Ideas to Cash Story	Circulation: 40,079	1	40,079
Mercury-Register- Challenge Charter Attends Trade	Circulation: 7,000	1	7,000
Fair Paradise Post- Camps teach free enterprise	Circulation: 8,500	1	8,500
Paradise Post- Students Practice Free Enterprise	Circulation: 8,500	1	8,500
Story Chico News & Review-The Difference Story	Circulation: 40,000	1	40,000
Chico News & Review- Junior Alex P. Keaton Story	Circulation 40,000	1	40,000
National Magazine			
Entrepreneur Magazine- Fall in Love	Circulation: 536,431	1	536,431
Bay Area Newspapers			
Oakland Tribune- Student Entrepreneurs vie for \$4000	Circulation: 236,058	1	236,058
Oakland Tribune- School's barbeque stand best in state	Circulation: 236,058	1	236,058
Alameda Times-Star- School's barbeque stand best in state	Circulation: 7,300	1	7,300
Alameda Times-Star- Student Entrepreneurs vie for \$4000	Circulation: 7,300	1	7,300
Local Radio			
KQPT Radio (107.5 FM) 1 min. paid advertisement	27,500 Households	6x daily for 6 days	990,000
KQPT Radio (107.5 FM) On-Air trade fair mentions	27,500 Households	5x daily for 6 days	825,000
KQPT Radio (107.5 FM) Live broadcast from trade fair	27,500 Households	1	27,500
National Radio			
"For the Record"- Syndicated radio program on 32 stations	128,000 Households	1	128,000
Billboards			
(4) Billboards posted 1 month near business traffic arteries	90,000 pop.	1/4x90,000	22,500
College of Business Magazine (LINK)			
Operation Nicaragua, SIFE Students Teach in Central America	2,000	1	2000
Total Gross Impressions			30,664,463

In closing, judges are encouraged to look at our supporting documentation that outlines how well we've enhanced the visibility of SIFE locally and beyond. We have truly started a fire in California based on entrepreneurship education. A two-page executive summary isn't enough for us to convey how excited we are about how we've utilized all media resources available in our communities to advance our educational programs and to enhance SIFE's visibility.

SPECIAL COMPETITION AWARD POLSKY PERSONAL INVESTING TO ACHIEVE FINANCIAL INDEPENDENCE

Louisiana State University at Eunice, Eunice, Louisiana

The LSU-E SIFE Polsky members created a mutual fund portfolio for a hypothetical individual (Tim Hill), age 24, who would retire at age 59. SIFE students constructed simulated spreadsheets using Microsoft Excel formulas for Tim Hill's 401(k), Roth IRA, and a Taxable investment (disk enclosed). We used the 401(k) and Roth IRA investment vehicles for Mr. Hill's retirement portfolio that grew to \$38,525,311 over a 35-year accumulation period, and has an annual retirement payout of \$3,540,604 from age 59 through age 104. After evaluating risk and rate of return, team members researched and selected mutual funds that invest in stocks that have beaten the S&P 500 Index with a 10-year annualized return of at least 20%. Using the Roth IRA as an investment vehicle, we chose Invesco Financial Services as our mutual fund, which is managed by Jeff Morris. The fund invests in large-cap growth stocks in the financial sector and has a 10-year annualized return of 17.1% [24.7% before the market downturn] (beta .83). For our 401(k), we chose the Invesco Dynamics fund, which is managed by Tim Miller.

This fund invests in mid-cap growth stocks, and has a 10-year annualized return of 13.1% [24.1% before the market downturn] (beta 1.68). For our taxable investment, we chose Weitz Partners Value mutual fund, which is managed by Wallace Weitz. This fund invests in mid-cap value equities and has a 10-year annualized return of 18.9% (beta 0.52). Tim Hill will use the taxable investment as an emergency fund, and if not used, it will be donated to charity. Tim will donate time and money to non-profit organizations: SIFE, ASAE, and other local charities.

Students developed a PowerPoint presentation (CD enclosed), which included thirty-three slides, and three charts. The project members presented five PowerPoint seminars attended by 341 students. Pre and post-test scores indicated an Increased understanding of mutual funds by 37% and retirement by 61%. SIFE students handed out 300 articles titled "Smart Ways To Save" and "Mutual Fund ABCs" to students. Over 175 students were given compounding interest calculators and Roth IRA brochures supplied by TIAA-CREF

SIFE members held a Roth IRA drive in the month of October. Students manned a table in the student union handing out booklets on investing and Roth IRAs. Seven students and faculty opened up a Roth IRA with TIAA-CREF or TD Waterhouse.

On October 31, SIFE students participated in Grand Coushatta Casino's retirement and benefit day, passing out over 100 of our investing books and demonstrating to employees how to use our 401(k) calculator, created by SIFE students for the Casino.

On November 26, our SIFE team held a contest playing Mutual Fund Mania in the student union. Five students who were finalists won \$150 in prize money.

In the month of December, our team customized a 401(k) calculator for Tanner Construction Company of Eunice, Louisiana, who placed the calculator on their Intranet so all 900 of their employees may use the calculator.

Students created a Web site on investing "<http://www.sifeinvesting.com>". The Web page contains articles about the advantages of investing with mutual funds, evaluating your mutual funds, types of funds, and finding top performing funds. Other topics on the web site include the 401 (k) and the Roth IRA. To date we have had over 200 visitors to our website.

SIFE members edited our book on investing to reflect the tax law changes passed during the summer of 2001 and distributed it to over 400 students (14% of the student population). The book, *Investing to Achieve Financial Independence*, includes the following subjects: Tax Relief Bill of 2001, Mutual Funds, Dollar-Cost Averaging, Compounding Interest, Roth IRA's, 401(k)'s and a Mutual Fund Glossary. The book and PowerPoint presentation are placed on the LSU-E's web site: www.lsue.edu making it available to all 2800 students. Team members spent 365 hours on this project, teaching fellow collegians and others about retirement planning and investing for their financial independence. We feel that we have made a difference, both on our campus and in our business community, teaching investment principles.

SPECIAL COMPETITION AWARD SIFE RESPONSIBLE USE OF CREDIT WEEK

Quincy University, Quincy, Illinois

Executive Summary

Recognizing that college students are often at risk for developing poor credit habits as well as getting easily into debt, the Quincy University SIFE team organized a series of educational and social events November 11-17. Gaining the support of the entire campus community was crucial, the QU SIFE team requested that the Rev. Dr. Eugene Cole, OFM Conv., the university president, proclaim this period as VISA's 'Responsible Use of Credit Week.' In doing so, QU president, explained, "'Responsible Use of Credit Week' is one way to encourage our students to use, and not abuse, the privilege of using credit cards. It is a way to help them better understand the responsibility that goes along with holding credit cards." The events planned throughout the week included:

Daily Email Campaign:

SIFE team members e-mailed daily credit tips to the university community. One e-mail included signs to recognize if one is headed for serious credit trouble, another listed tips to establish a good credit history, and a third one cited steps to take if one has fallen into debt. This email campaign reached approximately 1,200 students and 125 faculty members.

Credit Awareness Seminar: An advisory board member from Mercantile Trust and Savings Bank was the featured speaker at SIFE's credit awareness seminar. He was assisted by other employees from the bank, and together they offered personalized advice regarding credit education to the entire campus community.

Credit Trivia Game:

A university member hosted SIFE's credit trivia game in which teams of students competed for various donated prizes. Twenty teams of three students answered a dozen questions in each of the four rounds, covering consumer loans, housing and auto decisions, and credit card. The teams answered multiple choice, fill in the blank, and problem solving questions.

Credit Survivor Game:

SIFE also hosted the credit survivor game throughout the week. Twenty teams of three each competed in the game. The teams were given a scenario in which they ran into financial trouble and then had to decide which steps to take to get their finances in order. To get the proper advice they were directed to various financial agencies to discuss topics such as bankruptcy, student loan terms

end deferment, car loans, and home mortgages. They had to submit their choices on what actions they had decided to take and then teams were awarded or deducted points based on how sound their decisions were. The teams met with SIFE members in order to discuss what may have been better options. The team that made it through the week's activity with the best financial decision won the game.

Illinois State Comptroller:

Daniel W. Hynes visited our campus to discuss various credit issues. He explained the legal implications of accruing credit card debt. He asked about individual credit situations and suggested ways to improve their credit standing. He also distributed a survey requesting information on credit card history. He was available during dining hours for a question and answer session. Two local television stations attended these visits. Due to the great participation with the QU campus and SIFE's involvement, Daniel W. Hynes is now serving on our advisory board. His future plans with QU SIFE is to involve our team in the legislation process of credit card regulation in Illinois.

Credit Card Bandit:

QU SIFE members role-played as credit cards, jailbirds, and lawyers during dining hours to distribute surveys that Comptroller Daniel Hynes provided for us. We also handed out approximately 300 credit tips attached to paper money. This allowed us to reach the students that were not able to attend the comptroller's presentation. Due to the positive feedback from students during dining hours, we were determined to extend our efforts into the classrooms by handing out more tips.

SIFE Credit Week Scenario:

SIFE created a scenario to distribute to classrooms. The scenario included what an average salary would be upon graduation. After deducting the expenses of both rent and car payments, the remaining revenue was to be placed to their preference in various expense categories. We then computed their answers and returned to the classrooms the following week to inform them on how sound their decisions were. We reached 21 classrooms.

Conclusion:

This week was a complete success for our SIFE team. The entire university community was reached through this credit awareness campaign by the various activities hosted by our team. Even the local surrounding community became involved in promoting credit awareness. Due to the television publicity and our SIFE teams legwork, we reached over 20,000 people during 'Responsible Use of Credit Week.'

SPECIAL COMPETITION AWARD

SIFE MAKE A DIFFERENCE WEEK

University of the Ozarks, Clarksville, Arkansas

INTRODUCTION

The University of the Ozarks' Students In Free Enterprise (U of O SIFE) challenged itself to target and fulfill a necessity in the community of Clarksville, Arkansas, to its fullest extent. After consultation with the Executive Director of the Johnson County Chamber of Commerce, Mrs. Vicki Lyons, U of O SIFE decided to target the main need in the community: to help Hispanic residents, which represents a fifteen percent of the total population in Johnson County. This group of people receives almost no help from governmental and private institutions for its professional improvement. For this reason, U of O SIFE decided to approach Make A Difference Week with two different goals for the Hispanic community: 1) to increase the work force in Clarksville, and 2) to provide information/training on how to invest in, start, and market a business in Clarksville. After the main need was established, U of O SIFE acted upon fulfilling it.

IMPLEMENTATION

In order to fulfill this need, U of O SIFE members were divided into different committees that focused specifically on the implementation of the project. It was decided to conduct one seminar per day, with topics requested by the Hispanic community. Posters were placed in restaurants, laundries, and grocery stores that are mostly visited by Hispanic residents. Also, the SIFE seminars were announced in two different church services, and fliers were given out to the attendees. The first two days were dedicated to achieving SIFE's first goal: to increase the work force in Clarksville. On the first day of Make A Difference Week, U of O SIFE experienced a great turnout. The legal aspects of how to obtain work permits for jobs in Clarksville were discussed. In addition, the legal aspects of how to start a business were discussed; including the different permits necessary to implement a business. Dr. Rickey Casey, International Studies Director at U of O, conducted the seminar on a question and answer basis aided by a translator. All the different legal forms were provided to the attendees, who were helped by SIFE members in filling out the forms. During the second day, Ms. Kimberly Spicer, Career Placement Coordinator at U of O, helped the Hispanic group correctly fill out job application forms, and described the proper documentation needed when applying for a job. The attendees filled out applications provided by three of the most Hispanic-recruiting businesses in Clarksville: Wal-Mart Stores, Tyson Foods Inc., and University of the Ozark. A copy of a professional resume was handed to the attendees as a guide for them to use when applying for a job that requires a resume.

The next two days were dedicated to the achievement of U of O SIFE's second goal throughout the week: to provide information and sources of how to invest in, start, and market a

business in Clarksville. During the third day of the seminar, Mr. Denton Tumbleson, Vice President of Simmons First Bank in Clarksville, discussed how people can obtain loans when interested in starting a business. He also discussed the importance of how to find a proper business location and how to finance it. Mr. Tumbleson also addressed the advantages and disadvantages of credit cards, savings accounts, and checking accounts for personal use. The discussions were interactive and the attendees showed a high interest in the subject. On the final day of the seminars, Mrs. Vicki Lyons, Executive Director of the Johnson County Chamber of Commerce, carried out an excellent seminar on the markets that the attendees could target when opening a business in Clarksville. Aside from the general interest of the audience in starting a business in Clarksville, there were two people who already had concrete ideas of specific businesses they wanted to start in Clarksville because they had seen a market need for their future businesses. These businesses were a bakery and a recreational center. SIFE members discussed the importance of organizing a business plan particularly for these two business markets. Mrs. Lyons also offered her full support on helping these Hispanic residents in starting their new businesses in Clarksville. She provided them with a useful Internet site that could help them in searching for jobs within Johnson County www.clarksvillechamber.com. As a conclusion to this week, SIFE offered a participation-recognition ceremony where the SIFE members and the Hispanic community could exchange opinions about the seminars throughout the week. Food was provided and plans were made to follow up on the Make a Difference Week with future events.

RESULTS

Throughout Make A Difference Week, U of O SIFE team made an impact on the community of Johnson and Pope Counties. During Make A Difference Week, twenty-seven Hispanic people participated in the SIFE seminars. As a result of the impact these seminars had on the attendees, U of O SIFE was requested to broadcast the seminars through a local radio station and television channel. These broadcasts covered the two counties with an estimated number of 73,700 TV viewers and radio listeners were reached through this seminar. The U of O SIFE has MADE A DIFFERENCE in the communities of Johnson and Pope Counties by helping out the Hispanic community in fulfilling its personal and professional needs to a maximum level. SIFE members have made a lasting difference in the community by making a commitment to the Hispanic community by offering weekly English classes. This will prepare them for a better living and understanding of the culture not only in Clarksville, but also in the United States.

SPECIAL COMPETITION AWARD
SIFE TEACH A CHILD ABOUT BUSINESS WEEK
Sponsored by Discover Financial Services, Inc.

Gainesville College, Gainesville, Georgia

EXECUTIVE SUMMARY

The Gainesville College Students In Free Enterprise Team developed and implemented effective and creative projects to teach children about the free enterprise system by increasing their awareness and understanding of how a business operates, responsible consumerism, professional opportunities, and how businesses impact our daily lives. The goal of our projects was to reach a diverse cross-section of students in our community in grades K-8 using age appropriate teaching techniques to increase their understanding of how business works including its effects on our community.

PROGRAM SUMMARIES

American Business Merit Badge As a kick-off to Teach a Child About Business Week, the GC SIFE team hosted 150 Chattahoochee District Boy Scouts of America at the Winter Advance-O-Rama on Saturday, Feb. 16, 2002. The GC SIFE Team served as Merit Badge Counselors for eleven scouts, ages 11-15, enrolled in the American Business Merit Badge. This program was a six-hour, intensive introduction to the free enterprise system. Topics covered included:

A History of American Business and the Role of the American Entrepreneur.

SIFE team members reviewed the business cycle, the circular flow of the economy, and highlighted individuals and ideas which contributed to the development of the American economy.

How the Money and Banking system works including the credit system.

The SIFE team taught the scouts important lessons about the banking and credit system, and then took them on a tour of a local bank where they were able to see the system in action.

An Introduction to the Stock Market.

Scouts learned how to find and analyze investment information. They visited several websites and were able to "purchase" stocks and track their investments using leading financial management websites.

Running a small business enterprise.

The Scouts and SIFE team members set-up the Snack Shack as a small business enterprise. They scouts selected the inventory, calculated average cost, priced the items for sale, operated the snack shack, and divided up the profits. Each scout earned a \$2.25 profit after their costs were subtracted. To complete the merit badge, the scouts must run their own small business for 90 days.

MIDDLE SCHOOL SEMINARS

GC SIFE team member conducted two after-school seminars for 45 middle school students at the Boys and Girls Club of Hall County. These students are from economically disadvantaged families with 100% being African-American or Hispanic.

Seminar One: covered the importance of stock, what stocks are, how to acquire them, the difference between saving and investing, and the important role stocks play in the economy. Each of the 23 students had the opportunity to "buy" stock in either Coca Cola or Pepsi and were given a "stock certificate" for their choice. The SIFE team members then showed them how to calculate their financial return showed them comparison of the two stocks, and compared their investments to what they could have earned in the stock market vs. their savings accounts.

Seminar Two: taught 25 students important lessons about consumer credit. It covered how to acquire credit cards, why they are important to business and the economy, the advantages and disadvantages of having one, the problems of too much consumer debt, how to keep their credit ratings good, and how to avoid identity theft SIFE created mock Discover Cards listing the advantages and disadvantages of using consumer credit on the back.

ELEMENTARY SCHOOL PROGRAMS

GC SIFE conducted two elementary school out reach programs during Teach A Child About Business Week. Both projects target Oakwood Elementary School, our Partner-In-Education school. Oakwood has an ethnically diverse student body with 45% of the students receiving free lunches. GC SIFE team members were at Oakwood Monday-Friday of Teach a Child About Business Week.

Project One:

A GC SIFE team member teaching the fourth grade Junior Achievement unit to 20 students at Oakwood Elementary School. This unit teaches students five different one hour lessons teaching the role of business in the community. Students learn about how business work through role-playing exercises where they "operate" their own businesses including selecting inventory, creating advertising, and developing zoning plans and evaluating their results.

Project Two:

showing the GC SIFE team's original film, *The Story of Ginger and Pickles*, to all of the students enrolled in the After-School program. Fifty Five students watched the short film which uses puppets to teach about how businesses and the community are affected when consumers run up store credit, and then don't pay their bills. GC SIFE Team members worked with the fourth and fifth grade students on a study sheet after they saw the film while other SIFE members read the younger students the *Ginger and Pickles* story.

QUANTITATIVE ANALYSIS

All projects completed during Teach A Child About Business Week were evaluated by using pre/post test comparisons. Each test consisted of 10 questions and used a multiple choice format for ease of scoring and comparison. In addition, open-ended questions regarding the value of the program were used to gather additional survey data. The anecdotal evidence will be used to refine and enhance future projects.

Each of the programs taught during Teach a Child About Business Week had a minimum of 80% increase in knowledge. The boys/girls club programs had the highest improvement scores with an improvement rating of 93%. The Boy Scouts had the lowest with an 80% improvement which was probably due to the higher level of pre-test knowledge of the participants. Overall, the Gainesville College Teach a Child About Business Week programs reached 270 children in grades K-8 from a diverse cross-section of our community effectively teaching them about how businesses operate, how business impacts their daily life, and how to be responsible consumers.

**SPECIAL COMPETITION AWARD
KAUFFMAN CENTER FOR ENTREPRENEURIAL
LEADERSHIP
ENTREPRENEURSHIP ASSISTANCE**

California State University-Chico, Chico, California

**Starting a Fire for Entrepreneurship Education on a Local,
State and International Scale**

The SIFE Team at CSU, Chico SIFE completed four major projects that specifically addressed the purpose of this special competition: to educate entrepreneurs on how to manage and develop their businesses more successfully. These projects are:

Scope	Main Project	Date	Businesses Started/Managed
1. Local	Youth E-Camp	February and March, 2002	30 new businesses; 7 existing businesses started from last year's camp
2. State	Cal-High SIFE	All year	6 businesses; each was entered into our "Best Entrepreneurship Project" competition
3. International	Project Africa	Three weeks in January, 2002	20 women from Botswana were assisted in managing or starting their businesses
4. Local, State, and International (i.e., Trade Fair Integrated)	International	March 16, 2002	80 businesses (30 run by kids age 10-13; 30 run by high schools from across California; 20 staffed by Chico State students representing products from Guadalajara, Mexico)

1. Youth Entrepreneurship Camp (Local} Beginning February 16, 2002 our SIFE team began teaching 60 children between the ages of 10-13 on our campus. A total of 28 of these students come from Latino or other ethnic backgrounds. Forty of the children are from Title I schools (e.g., economically-disadvantaged). On four consecutive Saturdays, these students learned how to start, finance, operate and market their own business. On March 16, the "Youth E-Campers" sold their goods and services at the SIFE International Trade Fair, held in conjunction with the Cal-High SIFE Exposition. An additional seven graduates from last year's camp also sold their goods and services. One of them--Nicole has made over \$700 in profit, selling transparent soap with a toy

inside. Her slogan: "If getting dirty was fun, getting clean just got farmer!" Based on a pre- and post-test of basic entrepreneurship and business knowledge, the average rate of improvement was 52%. (See Tab 1 for details)

2. Cal-High SIFE (State) - We spread the fire to over 400 California high school students who came to our campus to participate in the Cal-High SIFE International Exposition on March 15-16. This exposition is modeled after the college SIFE program, and funding was made possible through a generous grant of \$22,500 from Silicon Valley technology company, Applied Materials, Inc. With this project we are "vertically integrating" the SIFE concept into the high schools. SIFE National Board Member Ms. Rieva Lesonsky, Editorial Director of Entrepreneur magazine, commented: "[Cal-High SIFE] teaches SIFE principles to high school students from across the state. Chico hosted a high school SIFE competition this spring where I was moved to tears as the teens explained how Cal-High SIFE has changed their perspectives, their goals and their lives." This year, 23 high schools made multimedia presentations to an audience of over 80 judges who were recruited from the business, civic and academic communities. Note that one of the special competitions sponsored by SIFE was the "Best Entrepreneurship Project." Six high schools entered this competition. (See Tab 2 for details)

Project Africa (International) - This year we have worked closely work with \$11aE teams in Botswana and South Africa. In January, three of our Chico State SIFE students (Allison Steltzner, Jill Zinke and Siobhan Brennan) traveled to South Africa and Botswana and taught the concepts of free enterprise and entrepreneurship to woman and children. The most substantive project involved our team teaching 20 Botswana women about how to either start a business, or how to manage one they already have operating. The project consisted of an intense weeklong series of workshops that we created based on the concepts contained in the best-selling book, Rich Dad, Poor Dad. Our students returned with example Products front Africa, and we displayed these products, along with those of several Mexican entrepreneurs, the youth campers and the high school students, at rite first SIFE International Trade Fair on March 16, 2002 (See Tab 3 for details).

International Trade Fair (Integrated) - This project was created with one purpose in mind: to integrate all of our other projects into one major event. And was it major! On hand were children, high school students, and global entrepreneurs. Shoppers included judges from the Cal-High SIFE Exposition, along with hundreds of members of the general public. "Virtual Streets" were named after famous entrepreneurs: Sam Walton Way, Oprah Winfrey Boulevard, Mrs. Fields Cookie Circle, Bill Gates Avenue, and Fiorina Freeway. We received extensive radio, TV, and newspaper coverage from around the state. The gym was literally packed with people, and the color, energy and enthusiast: of all participants was contagious.

In closing, we have truly stated a fire in California based on entrepreneurship education. A two-page executive summary isn't enough for us to convey how excited we are about this program. We invite you to review the enclosed materials so you can see how effective we have been in educating current and prospective business owners how to improve their businesses.

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