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Edited by

Robin Anderson

University of Nebraska-Lincoln

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LETTER FROM THE EDITOR

Welcome to the inaugural issue of the *Journal of Entrepreneurship Education*, a journal focused on quality and excellence in entrepreneurship and free enterprise education. This journal brings together scholars and practitioners from multiple disciplines to examine the effective development of entrepreneurs and training techniques for our future business leaders. The Editorial Board is concerned with discovering how entrepreneurs learn, developing more effective methods for teaching them, challenging them to exceed their own expectations of success, and helping them to reach their true potential.

To meet this objective, the *JEE* will have three major sections. The first section will present innovative and original, theoretical and empirical research which will advance the literature of entrepreneurship education. The second section will present applied manuscripts which provide descriptive, practical methodologies for entrepreneurship practitioners and educators. These two sections will be double blind refereed and competitive. Our editorial objective is an acceptance rate of 25 to 30%. The third section will present descriptions of award winning free enterprise education applications. These applications will be selected by the Students in Free Enterprise Competition Judges and will represent the best such applications in the United States.

World-class educational programs bridge the theoretical with the applied. Therefore, our editorial board is comprised of academic scholars as well as America's leading CEOs and executives. Our editorial mission is to bring together academics and practitioners in the development of a high quality journal. This objective is a reflection of the exemplary mission of Students In Free Enterprise, Inc., the *JEE*'s major sponsor.

We encourage direct submissions of manuscripts from academics and practitioners around the world. Direct submissions should be addressed to the Editor. In addition, our Editorial Board will referee conference submissions to the Academy of Entrepreneurship, our publisher, and its affiliate, the Allied Academies, to choose high quality papers for inclusion in the *JEE*. Conference submissions should be addressed to the Allied Academies, with copies of manuscripts forwarded to the Editor for journal consideration. Each issue of *JEE* will feature an invited article. The Editor welcomes any nomination of individuals who are making significant contributions to the field of entrepreneurship education.

The SIFE Board of Directors and the *JEE* Editorial Board are committed to building *JEE* into a tier-one journal which significantly impacts entrepreneurship education. We strongly encourage your suggestions, criticism and contributions. Indeed, we need your support to achieve our editorial mission and to maintain excellence. I would like to extend my appreciation to SIFE, to the Academy of Entrepreneurship, to the University of Nebraska-Lincoln and to the Editorial Board members for their assistance in launching this journal and supporting its publication.

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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.

Antecedents of Business Conflict in Family Firms by Terrence C. Sebor, of the University of Nebraska-Lincoln, and Michael W. Wakefield, of the University of Arizona-Sierra Vista, investigates the antecedents of business conflict in a sample of 1,002 family firms. The authors provide empirical evidence that family interactions carry over into business activities. This manuscript provides insight into some of the antecedents of family business conflict and provides a framework for understanding such conflict which is valuable for entrepreneurship educators.

Entrepreneurial Orientation and the Aspiring Entrepreneur: The Individual in Entrepreneurship Education by Wayne H. Stewart, Jr., Clemson University, presents a review of elements of the entrepreneur's psychological framework and cognitive temperament, learning styles and learning objectives in entrepreneurship education. The author demonstrates how the Myers-Briggs Type Indicator can be used to identify an aspiring entrepreneur's learning needs and examines how those needs may be addressed through an individualized pedagogy.

Management and Entrepreneurship Curricula, Continuous Improvement, Practical Relevance and the Search For a Curriculum Based Answer to Them All by Michael D. Ensley, of the University of North Carolina at Charlotte, James Barr, and Douglas T. Grider, of the University of Central Arkansas, presents a study of knowledge and skills which should drive the development of new courses in colleges of business. Critical thinking/problem solving, communication, and innovation/creativity skills were deemed the most important skills by 118 executives. The paper concludes with implications of such findings and a suggestion for the development and adoption of more entrepreneurially oriented business curricula.

ANTECEDENTS OF BUSINESS CONFLICT IN FAMILY FIRMS

Terrence C. Sebor, University of Nebraska-Lincoln
Michael W. Wakefield, University of Arizona-Sierra Vista

ABSTRACT

This paper investigates the antecedents of business conflict in a sample of 1002 family firms. One half the sample is used to build a model to test the effects of ten independent variables in three blocks on a composite measure of business conflict. Six significant antecedents are found. The accuracy of this model is tested on the second half of the sample.

FAMILY BUSINESS, ENTREPRENEURSHIP, CONFLICT

Perhaps the most important organizational achievement for a business owner is the continued survival and success of her/his vision (Ward, 1987). The odds against survival can be found in an examination of family business mortality rates. Dyer (1986) noted that family businesses have relatively short life spans, about twenty-four years, which is also the average life tenure of the founder in the firm. Once the business is passed on, more than 70 percent of businesses do not survive to the third generation (Babl, 1994). Half of those remaining fail during the tenure of the third generation (Babl, 1994). Few family businesses survive beyond the third generation (Ward, 1987).

These statistics suggest that balancing family and business needs, especially the management of conflict related to the family business may become more significant to business success in generations after start-up for a variety of reasons (Goldwasser, 1986). First, there tend to be more family members who have differing interests in the business (Dyer, 1986). Second, entrepreneurs tend to be strong individuals in the business and in the family. When the business is passed along, headship of the family is symbolically passed along, creating the potential for tension in the family and the business, especially if two or more family members are vying for control of the family, the business, or both (Hershon, 1975). Third, if the business has good prospects for growth, more is at stake, raising the desirability for individuals in the family to try to gain some control to their advantage. Finally, for second generation and later family businesses, problems revolve around conflicts represented by diverse interests of family members (Dyer, 1986).

Because family members influence and control business decisions (Harris, Martinez & Ward, 1994), many authors have suggested that considering how family dynamics affect business activities is important (e.g., Bork, 1986; Dyer, 1986; Gersick, Davis Hampton & Lansberg, 1997; Tagiuri & Davis, 1992). The family dynamic can act as a double-edged sword -- a cohesive family involved in business can be a source of strength, allowing the organization to prosper from quick response to environmental changes. A family business characterized by

conflict can result in insufficient attention focused upon business needs and increase the chance of failure (Kets de Vries, 1993).

The study of conflict in family businesses is important because appropriate management of conflict may make a difference in the business' ability to survive and prosper. Management of conflict among family members, from an interpersonal perspective and from an organizational perspective, can play an important role in reducing the dysfunctional conflict that can create business problems and undermine organizational success. To date, however, there has been virtually no empirical work regarding conflict in family businesses.

THEORETICAL BACKGROUND

Hershon (1975) explores the idea that the type of family interaction and how the way the family deals with conflict could carry over into business relationships. He suggests that the interdependency between family and business resources is a source of conflict that affects both family functions and business activities. Hollander (1983) indicates that the very nature of family and business are incongruent, and relationships in each will contradict the relationships of the other. This author characterizes families as protective and emotional, and business as objective and not protective. Friedman (1991) and Kets de Vries (1993) note the tendency for family relationships to carry over into business and vice versa, leading to a tremendous source of potential conflict. Favoritism in the business can result, whereby family members are given better positions, opportunities, or compensation, to the detriment of organizational morale (Kets, de Vries, 1993). Friedman (1991) maintains that sibling rivalries left unchecked can destroy family firms. Intergenerational relationships within the family, such as paternalism between a father and daughter, can also play out in the business, making the younger family member feel undermined in ability and authority (Goldwasser, 1986). Other potential sources of conflict in family businesses have been suggested to include: (1) use of the company's assets; (2) equitable sharing of assets; (3) how decisions are made and by whom; and, (4) who should be considered "family." The latter question is most likely to arise in later generations of family business ownership where numerous extended family relationships are possible (Dyer, 1986).

Beckhard & Dyer (1983) and Harvey & Evans (1994) extend Hershon's (1975) perspective of interdependent family/business relationships by theorizing that during business transition periods, family conflicts are also likely to emerge, which in turn affect business interactions. While there is disagreement over whether or not conflict will increase or decrease as the number of generations increases, there seems little doubt that theorists believe that the nature of family inter-relationships changes with transgenerational succession. Succession issues and the succession experience in family business have received the most press of any activity facing family business. Considerable research is still required, however, to understand fully the implications of leader succession and some of the contingent factors leading to a successful succession within the family business (Wortman, 1994). Disagreement over business or family matters may occur between predecessor and successor (Hershon, 1975). A source of disagreement between the predecessor and the successor may be that the parent does not want to

relinquish control of the organization (Hershon, 1975), especially if it is apparent that the successor wants to make large scale changes in the business.

All is not negative regarding the interaction of the family and the business (Scott, 1996). Hershon (1975) and Ward (1987) describe scenarios where problem solving modes, family consensus, support and loyalty provide the business with a source of strength. Kets de Vries (1993) and Scott (1996) cite many advantages held by family firms, including long-term orientation, patient capital, less bureaucracy and greater independence of action on the part of family business owners and top management.

Generally, conflict in family business is likely to be affected by members of the family who make or affect organizational decisions, and others who can directly influence those members (Bork, 1986; Rosenblatt, de Mik, Anderson, & Johnsonet, 1985). Some of those who are involved in business decisions in family firms include: (1) family members in positions of authority; (2) family members in positions of potential authority; (3) family members not in the business but married or close to those in positions of authority or potential authority; and, (4) outside professional influences, if accepted by key family members in the organization. The study of conflict in a family business is important because how conflict is managed in a family business can make a difference in the business' ability to survive and prosper (Dyer, 1986; Goldwasser, 1986; Rosenblatt, et. al, 1985). However, there has been limited empirical work to date in family business in general (Wortman, 1994) and even less empirical work regarding conflict in family businesses in particular. The primary purpose of this study is to explore empirically, through multiple regression, the antecedents of conflict in family business.

HYPOTHESES

Family Dynamic

As important as the variable of family conflict might be in understanding family businesses, little empirical work directly addresses the role of family conflict in family business.

In his extended case studies of thirty businesses, Hershon (1975) found evidence that family conflict should be considered as an antecedent variable to conflict over business issues. Hershon (1975) argues that conflict related to the family dynamic can emanate from a number of sources and that family dynamics affect conflict over a variety of business issues. Some family-related factors related to business conflict include the number of generations the family has controlled the business, the number of family members employed by the business, the number of non-employed family members who substantially influence business decisions, and the interactions among family members interact both at work and in social settings. Each of these factors will be discussed in turn.

Duration of Control. The duration of control of a business by the family can be expected to be related to increased levels of overall conflict in the family and the business. This can be attributed to two factors: dilution and diffusion of the strategic vision held by the founder of the business. Dilution can occur as the vision is passed from one generation to the next. The overall content and meaning of elements of the purpose of the organization can become diluted,

or omitted, as the business passes transgenerationally. Conceptually, dilution can be related to business conflict because it could lead to organizational stagnation resulting from a lack of a clear organizational purpose. If one accepts Dyer's (1986) proposition that family businesses fail because of inadequate adaptation to environmental conditions, family business failure is more likely to occur because of conflict among the extended family members over successive generations. The resources spent acquiring and maintaining power within the family is likely to distract the family from the task at hand: running the family business from a more rational, as opposed to emotional, perspective.

Diffusion of strategic vision can occur transgenerationally, just as it was previously suggested that power may become diffused over generations. Diffusion can exacerbate the dilution problem as the extended family grows and the types of relationships of people who could be involved increase. The relationships in the second generation would typically be represented by siblings (children of the founder) and eventually their wives and perhaps brothers- and sisters-in-law. By the time the business reaches the third generation (grandchildren of the founder), the types of relationships become even more tenuous as the range of inclusion of family members with vested interests in the business could extend to cousins and all of their spouses. As the vision of the organization becomes diluted, competing visualizations of the business representing the various family members' interests diffuse the founders' vision of the organization. This competition over strategic vision could possibly lead to coalition building and conflict among family members.

H1: In family businesses, conflict over business issues is directly related to the number of generations the family has controlled the business.

Family Members Who Affect Business Decisions. Lee and Rogoff (1996) find that owners of businesses with family participation report greater business/family conflict than do owners of businesses without family participation. Two types of family members influence business decisions: those directly employed by the business and those whom the business does not employ but still exert control, either directly as board members, or through employed family members (Dyer, 1986; Rosenblatt, et. al 1985). As the number of employed and non-employed family members involved increase, the variety of relationships becomes more complex, and the potential for misunderstandings increases (Schell, 1994). Conflict frequently ensues from these misunderstandings. As the number of family members employed by the business increases, confusion over roles increases, leading to expected higher levels of business conflict (Freudenberger, Freedheim, & Kurtz, 1989). Non-employed family members significantly affect business decisions both directly and indirectly (Gersick, et. al, 1997). A number of scenarios have been described in family business literature where non-employed wives, husbands, brothers, and a host of extended family relationships can create pressure for one or more employed family members to engage in certain activities affecting the business, usually detrimentally (Bork, 1986, Chrisman, Chua & Sharma, 1996). Generally, there seems to be agreement that the number of family members involved in business decision making, whether

employed or not, should be positively related to the level of conflict in the business, suggesting the following hypotheses:

- H2: In family businesses, conflict over business issues is directly related to the number of family members employed by the business.*
- H3: In family businesses, conflict over business issues is directly related to the number of non-employed family members who affect business decisions.*

Interactions Among Family Members. Carry over conflict from family disputes is also of concern. While some conflict is expected and considered normal in family business (Hershon, 1975), how families communicate and resolve conflict among themselves will determine if family conflict will become an issue for the family business (Dyer, 1986; Scott, 1996). Family members who interact closely with one another at work are less likely to find that they disagree over business issues. Lundberg (1994) suggests that increased quality and quantity of communication at work will result in lower levels of overall organizational conflict over business issues and will reduce the amount of perceived role conflict and role ambiguity. This is expected because families who interact and communicate are able to express concerns and ideas. While there may be some conflict, eventually the conflict is resolved to the satisfaction of the concerned family members. It can be expected, therefore, the close family relations in the business will lead to more open communication and quicker conflict resolution.

This same closeness among family members outside the business, however, may have just the opposite effect. Carry-over relationships have been a common theoretical supposition in family business conflict literature (cf., Dyer, 1986; Hershon, 1975; Rosenblatt et al., 1985; Ward, 1987). The business and time spent in it can be seen as taking away from the "quality time" available for family interactions. Work-family conflict is pervasive and significant (Adams, King, and King, 1996). In non-family business work-family conflicts, the cause of the conflict may be seen as transferred to some anonymous "they" in the business. When the "they" is "us" in a family business, conflict may increase as close family members feel that the business is "chosen" over them. Moreover, because the business is controlled by the family, decisions could be made (and are not) to provide greater time for family relationships. Resentment may fester, leading to inter-family member conflict that spills over into the business. Closeness among family members within and outside the business setting may be important and contradictory factors related to conflict, leading to the following hypotheses:

- H4: In family businesses, conflict over business issues is inversely related to closeness among family members in the business setting.*
- H5: In family businesses, conflict over business issues is directly related to the closeness among family members in non-business settings.*

Succession Preparation

For family businesses, the head of the business, at least in the early years of the business, is likely to also be the head of the family. Passing on the business is tantamount to passing on family headship (Hershon, 1975). It is theorized that failure to provide for succession is a major contributing factor of family business failure (Danco, 1987; Hershon, 1975). Conflict may arise from comparison of the successor to the predecessor. The "Rebecca Syndrome" can undermine the family's and non-family members' confidence in the successor if they feel the successor "just doesn't measure up" to the predecessor (Dyer, 1986). The key incumbent family member, as head of the organization, sets the tone for organizational activities, interprets business issues and guides their framing for the upper echelon, affects the succession of management to the next generation, and can even serve as a baseline measure against which all successors will be compared. Age and education levels of this key family member are salient factors which could affect degree of conflict over business activities reported.

Incumbent Age. Age has been theorized to be an important aspect in conflict and smoothness of the succession experience (Davis, 1982). Harvey & Evans (1994) suggest life stage is related to quality of succession, including conflict. According to these authors, older incumbents are likely to be more nurturing towards the next generation and less competitive. Generally, when successors are older, succession will progress much more smoothly, strengthening the organization. If the successor and business survive together, a number of conflicts will have been resolved, so experience that comes with age can be an important factor in ability to deal with conflict, suggesting the following hypothesis:

H6: In family businesses, conflict over business issues is inversely related to the age of the family member with greatest control in the business.

Successor Preparation. Family businesses should be concerned about future business needs and how successors are developed to meet those needs. The development of a successor is also considered key to organizational survival. Trow (1961) and Ward (1987) advocate that the successor work outside the family business to gain experience and credibility in the eyes of members of the family business. Handler (1994) indicates that working in the business to obtain experience at all levels is important for the successor. Handler (1992) also advocates participation in business decision making to help create a smooth transition of power from one generation to the next. Demonstrated experience, planning, training, education and socialization may be instrumental in reducing conflict in the organization, as organizational members perceive that a competent individual who understands the business can take over the helm. Successor development may encompass a number of critical factors, including education (Harvey & Evans, 1994), experience within the business at an entry level and on the job at managerial levels (Handler, 1994), experience outside the organization to "prove" one's ability (Rosenblatt, et. al, 1985), decision making experience within the organization (Handler, 1992), and allowing an equity stake to be earned (Schell, 1994) or transferred (Handler, 1994) to increase the successor's vested interest in the performance of the business.

While successor preparation may be informal, it appears that a formal succession preparation may be preferred. Dyer (1986) suggests that a successful succession includes a well-developed training and socialization program for the successor, including education. Trow (1961) offered evidence that lack of planning can be a contributing cause of lowered performance, even the failure of the business. Christensen (1953) was an early advocate of planning for succession. The experiences mentioned above as critical may benefit from a formal program through which they are accomplished. These issues suggest the following hypotheses:

- H7: In family businesses, conflict over business issues is inversely related to the degree of successor preparedness.*
- H8: In family businesses, conflict over business issues is inversely related to the use of a written succession plan.*

Resource Scarcity

Finally, availability of scarce resources, especially access to capital, is identified as a factor in small business failure (Dun & Bradstreet, 1981). Capital for family business operations often comes from both external and family sources. Generally, Bourgeois (1981) implicates the lack of slack resources as a factor influencing conflict in organizations, leading to political behavior in order to secure scarce resources. Sufficient resources can produce slack in businesses and Cyert & March (1963) theorize that slack reduces goal conflict by allowing organizational members to pursue non-essential projects. Slack can also provide a cushion for organizational experimentation and innovation, which will ultimately lead to greater levels of competitiveness. Conversely, it can be expected that a need for capital can lead to greater conflict. When the family itself is a major source of necessary capital, a lack of capital may increase tensions among family members in the business as money that could be used for family needs is directed to the business. The implication for family business is that poor access to capital and dependence on family funds for business operating capital could be associated with an increased level of business conflict, leading to the following hypotheses:

- H9: In family businesses, conflict over business issues is directly related to perceived importance of access to non-family capital.*
- H10: In family businesses, conflict over business issues is directly related to perceived importance of family funds for business capital.*

METHODOLOGY

Sample

A large national sample (n=1,002) was obtained through research support by a large insurance company as part of its effort to improve understanding of family businesses. Survey

design and results were prepared by Matthew Greenwald and Associates. Gallup conducted the survey. The sampling error is $\pm 3\%$. Of primary importance is defining the population (i.e., family businesses) from which an appropriate sample could be drawn. Handler (1989, p.262) defines a family firm as "an organization whose major operating decisions and plans for leadership succession are influenced by family members serving in management or on the board." This study's population adequately met Handler's criteria threshold for family business.

The businesses in this survey were drawn randomly from comprehensive lists maintained by Survey Sampling. Ownership of the family business is defined as owning more than half the business assets for private firms or owning more than ten percent (10%) of the stock for publicly held firms. Businesses were further screened to ascertain that they met the following criteria: (1) Ten or more full-time employees on the payroll; (2) Annual revenues exceeding \$2 million; and (3) The business founded ten or more years ago. By meeting the above criteria, businesses were less vulnerable to liabilities of smallness and newness (Aldrich & Auster, 1986). These researchers have demonstrated that firms with annual revenues of less than \$1 million are significantly more likely to fail, as are firms which are less than ten years old. Minimizing the liabilities of smallness and newness through this screening process provides a greater degree of control in the study and enhances confidence in the study results.

Data were collected using a structured survey conducted by telephone interview. Interviewee participants were required to hold CEO, president, or ownership positions within the family firm. Interviewers introduced themselves and described the survey to gain the trust of the interviewees to complete the 20-40 minute interview. Up to five attempts were made to contact a given business.

Measures of the Variables

The interview included questions regarding how the business began or was founded, the extent of the family's involvement, succession planning, conflict over business activities, the use of outside professionals, and certain organizational characteristics. The dependent variable of interest is conflict over business issues (CONFLICT or CO in the correlation table). This variable was a composite of four measures of conflict magnitude and one measure of conflict frequency. Subjects were asked to indicate the extent they perceived conflict over money, management roles, vision, and control to be a problem (three point scale: major, minor, not) in their firms. Subjects were also asked to indicate how often (five point scale: very frequently to almost never) they perceived business conflicts occur in their firms. The mean of the four magnitude variables (how much?) was multiplied by the frequency variable (how often?) to produce a measure of overall business conflict. The degree of conflict was hypothesized to be associated with a number of independent variables.

There are ten independent variables. Five variables are grouped into the category family dynamic. These variables are: (1) the number of generations the business has been controlled by the family (GENBACK or GE); (2) the number of family members employed by the business (FMWRKS or FW); (3) the number of family members not employed by the business who affect business decisions (FAMINFS or FI); (4) the perceived closeness of family members interactions

in conducting business activities (BUSINTER or BI); and (5) the perceived closeness of family member interaction in social settings (SOCINTER or SI).

The variable GENBACK measures the number of generations the business has been controlled by the family and is directly recorded. The number of family members working in the business, as well as the number of family members who are not employed by the business, are tallied and coded under the two separate variables FAMWRKS and FAMINFS. The variables BUSINTER and SOCINTER measure family member interactions (four point scale: very close to not close at all) in settings of the business and in social contexts, respectively.

Three variables comprise the successor preparation category. The incumbent's age (AGE or AG) in years is recorded. The use of a written succession plan is a dichotomous variable requiring a yes or no response (WRISUCC or WS). Successor preparation is measured by the number of different activities that the incumbent reports has used to prepare the next generation. The variable SUCCPREP (SP) counts and tallies each of the following activities designed to prepare the successor to take over the business: on-the-job experience, business experience outside the family business, involvement in business decision making processes, entry level experience in the family business, college education, and providing the successor with equity in the business.

Finally, the resource scarcity category uses two variables to measure the perceived scarcity of capital resources in the organization: access to external capital (CAPACC or CA) and (FAMFUND or FF). Respondents indicate the level of perceived importance of access to non-family capital and of family funds for business capital (five point scale: not important to very important).

Building and Testing the Full Model

The large sample size enabled a calibration-validation procedure to be used. Following Pedhazur (1982), the sample is divided. The odd numbered observations (termed the calibration sample) are used to test the full model and calibrate the most parsimonious model. The even numbered observations (called the validation sample) are used to confirm the explanatory effectiveness of the parsimonious model. Table 1 displays the means and standard deviations of the split sample. T-tests of the two halves indicate no significant differences among the variables. The first step in this process is to test the full model. Because of missing data, 411 of the original 502 observations in the calibration sample and 399 of the original 502 observations in the validation sample are examined.

Variable	Calibration Sample (N=411)		Validation Sample (N=399)		Test of Sample Mean Differences	
	Mean	Std. Dev.	Mean	Std. Dev.	T	P Value
GENBACK	1.62	.97	1.73	1.13	-1.27	.20
FAMWRKS	2.60	1.16	2.78	1.12	-1.18	.24

FAMINFS	.70	1.17	.63	1.12	.78	.44
BUSINTER	1.92	1.60	1.92	1.26	.11	.91
SOCINTER	1.56	.91	1.52	.86	.98	.33
AGE	49.36	12.10	50.06	12.09	-.95	.34
WRISUCC	.29	.46	.31	.46	-.08	.94
SUCCPREP	1.69	2.19	1.67	2.17	.04	.97
CAPACC	2.02	.94	1.97	.96	.69	.49
FAMFUND	2.02	.99	2.13	1.01	-1.36	.17

In building the model, the variables associated with the family dynamic (GENBACK, FAMWRKS, FAMINFS, BUSINTER, SOCINTER) are entered into the equation first to measure their impact. Entry of this block of variables into the model is significant at $F = .000$ and adjusted $R^2 = .05$. The second set of variables entered into the model is those associated with the category of incumbent characteristics and succession issues (AGE, WRISUCC, SUCCPREP). The inclusion of this block into the model results in a significant F change of 6.99, $F = .000$. When the family dynamic and succession blocks are both entered, adjusted $R^2 = .09$. Entry of the third block of variables (CAPACC, FAMFUND) into the model results in a significant F change of 3.26, $F = .000$. Adjusted R^2 for full model is .10. Table 2 presents the zero-order correlations of all of the variables in the calibration model. Table 3 presents the results of regression analyses of the blocks and the full model.

Variable	CO	GE	FW	FI	BI	SI	AG	WS	SP	CA
GENBACK(GE)	.15*									
FAMWRKS(FW)	.07	-.02								
FAMINFS(FI)	-.04	.16**	-.36**							
BUSINTER(BI)	-.04	-.03	.24**	-.16**						
SOCINTER(SI)	-.16*	.01	.06	-.04	.29**					
AGE(AG)	-.22**	-.26**	.10	-.11	-.07	-.05				
WRISUCC(WS)	.00	.08	.14**	.02	-.08	-.01	.20**			
SUCCPREP(SP)	-.13*	-.09	.15*	-.04	-.20**	-.09	.29**	.30**		
CAPACC(CA)	.12	.02	-.11	.09	.09	.11	-.06	-.07	-.06	
FAMFUND(FI)	.07	.01	-.08	.06	-.10	-.13*	.04	-.09	-.02	-.07

Bold = $p < .05$ * = $p < .01$ ** = $p < .001$

Testing The Model's Predictive Accuracy

The next step in assessing the usefulness of this model is to test its predictive power. This can quite effectively be accomplished using the full model to predict the CONFLCT scores in the calibration sample. There are six significant variables in the full model, three from Family Dynamic Block (GENBACK, FAMWRKS, SOCINTER), one from the Successor Preparation Block (AGE), and two from the Resource Block (CAPACC, FAMFUND). In a third step, the full model is reduced to a more parsimonious set of predictors. Table 4 presents

statistics regarding the power of the parsimonious model to predict CONFLICT scores in the calibration sample. A comparison of the parsimonious calibration model (see Table 4) with the full calibration model (see Table 3) indicates that R^2 for the parsimonious model in the calibration sample is .12 and adjusted R^2 is .10. R^2 for the full model in the calibration sample is .12 and adjusted R^2 is .11. Comparison of the variance accounted for by the six variables with that of all variables in the full model, therefore, indicates that these six variables best account for explained variance and that use of the parsimonious model is appropriate.

Variables	Model 1				Model 2				Model 3			
	B	SE B	T	Sig T	B	SE B	T	Sig T	B	SE B	T	Sig T
GENBACK	.39	.12	3.03	.001	.24	.12	2.00	.05	.23	.12	1.96	.000
FAMWRKS	.15	.11	1.38	.17	.18	.11	1.71	.09	.21	.11	1.98	.05
FAMINFS	-.09	.10	-864	.39	-.10	.10	-1.01	.31	-.13	.10	-1.24	.22
BUSINTER	.01	.09	.167	.87	.02	.09	.26	.80	.01	.09	.10	.92
SOCINTER	-.41	.13	-3.19	.002	-.43	.13	-3.43	.000	-.44	.13	-3.48	.000
AGE					-.04	.01	-3.86	.000	-.04	.01	-3.98	.000
WRISUCC					.24	.26	.94	.35	.32	.26	1.23	.22
SUCCPREP					-.08	.06	-1.51	.13	-.08	.06	-1.43	.15
CAPACC									.23	.12	1.92	.05
FAMFUND									.25	.11	2.19	.03
CONSTANT	1.64	.45		.000	3.82	.68		.000	5.39	.91		.000
Analyses of Variance												
	Model 1				Model 2				Model 3			
Multiple R	.24				.32				.35			
R^2	.06				.10				.12			
Adjusted R^2	.05				.09				.10			
R^2 Change	.06				.05				.02			
F Change	4.86				6.99				4.60			
Sig F Change	.000				.000				.01			
Sig F	.000				.000				.000			

Variables	Calibration Sample				Validation Sample			
	B	SE B	T	Sig T	B	SE B	T	Sig T
GENBACK	.22	.12	1.96	.06	.33	.09	3.58	.000
FAMWRKS	.26	.10	2.79	.01	.21	.09	2.20	.02
SOCINTER	-.46	.12	-3.77	.000	-.30	.12	-2.23	.01
AGE	-.04	.01	-4.56	.000	-.03	.01	-3.32	.001
CAPACC	.22	.12	2.79	.05	.33	.11	3.04	.002
FAMFUND	.24	.11	2.16	.03	.26	.10	2.49	.01
CONSTANT	2.64	.70	3.78	.000	1.77	.67	2.65	.008
Analyses of Variance								
	Calibration Model				Validation Model			

Mult R	.35	.35
R ²	.12	.12
Adj R ²	.10	.11
R ² Change	.12	.12
F Change	9.41	9.38
Sig F Change	.00	.00
Sig F	.00	.00

In the final step in the analyses, the variables in the parsimonious model are retested using the validation sample. This procedure is known as cross-validation and is consistent with the recommendations of Pedhazur (1982). Table 4 presents the results of model tests. R² for the parsimonious model in the validation sample is .12 and adjusted R² is .11. As can be noted in the table, there is no significant difference in the explanatory power of the model in the two tests. While the explained variance is small, the results indicate that these variables are reliable predictors of levels of conflict in family businesses.

RESULTS

The Family Dynamic and Business Conflict

The first hypothesis, relating the number of generations of family control to conflict, is not rejected ($p = .000$). The second hypothesis, proposing that the number of family members employed by the business would affect conflict, is not rejected ($p = .05$). The third hypothesis, addressing the theorized relationship between the number of non-employed family members who may affect business decisions and frequency of conflict, is rejected ($p = .22$). The fourth hypothesis, considering the nature of family members' interactions in a business environment as they affect frequency of business conflict is rejected ($p = .92$). The fifth hypothesis, assessing the relationship between non-business social interactions among family members and business conflict, is mixed. While the relationship between conflict and family non-business social interaction is significant ($p = .000$), it is not in the direction hypothesized. Closeness of family members outside the business is associated with lower levels of business conflict. The entry of the family dynamic block of variables into the regression model produced a significant relationship ($p < .05$). Specifically, the number of generations, the number of family members actively working in the business, and the closeness of family members outside the business context are associated with the frequency of business conflict.

Non-active family members do not influence business conflict. Perhaps, because they are not employed, they are not directly concerned with money and compensation issues, who performs in what managerial role, or who has ownership of the company. This is incongruent with the position that those who marry into the business or those who have more tenuous family relationships will want to exert their influence (Bork, 1986). Since the study is self-report of respondents' perceptions, the respondent may consider it undesirable for it to be known that the family business is influenced by family members who are not actively working in the business. Such a response would demonstrate, at least superficially, that the family members and the

respondent are in control of the business. Another explanation for this lack of association may be suggested by the significant negative relationship ($\beta = -.36$; $p < .001$) between outside family influence and the number of family members working in the business. It is possible that most family members, who care to, work in the business.

Generally speaking, family dynamics are important factors related to business conflict in family businesses. The extent to which family members "get along" outside the business is associated with lower levels of business conflict. This finding is opposite of that hypothesized. A direct relationship was expected; an inverse relationship is found. The tensions between home and work found to be a part of many families may not be as significant an issue in family run businesses. The correlations also indicate that family members who get along do so both when at work and not at work ($\beta = .29$; $p < .001$). This finding suggests that, in the perception of the heads of the family businesses in the sample, business conflict is reduced by family closeness. Regardless of how close family members are, however, too many cooks may indeed spoil the broth at work. Finally, the duration of control of a business by the family is related to increased levels of conflict in the business, reflecting an increased diffusion of the strategic vision and purpose of the business. Given the significant negative association between the age of the lead family member and the number of generations, the findings may also indicate that strategic vision is not as well established early on in each generation's leadership as it becomes later.

Succession Issues and Business Conflict

The second set of hypotheses investigates the relationship between incumbent characteristics and succession issues and the frequency of business conflict. The sixth hypothesis, focusing on the age of the key family incumbent as it may be related to business conflict, is not rejected ($p = .000$). The age of the key family incumbent is significantly and inversely related to business conflict. The seventh ($p = .15$) and eighth hypotheses ($p = .22$), suggesting inverse relationships between conflict and both general and formal successor preparation, are rejected. The block of variables entered into the full regression model to investigate incumbent and succession issues produced a significant F change (7.82, $F = .00$). In addition, zero-order correlations indicate age is significantly correlated with a number of other variables at $p < .05$ and above (see Table 1). The age of the key business family member is inversely related to the number of generations ($r = -.26$; $p < .00$) and the number of family members not employed by the business who affect business decisions ($r = -.11$; $p < .05$). It is directly related to the number of family members who work in the business ($r = .10$; $p < .05$).

These results can be explained in at least two ways. First, it may be that an older lead family member has learned how to manage the organization and others in such a way as to reduce sources of conflict. This is consistent with the theories of some who have suggested that older incumbents (and successors) will be more nurturing toward the next generation and associated with smoother transitions (Davis, 1982; Longenecker & Schoen, 1975). It is also consistent with Harvey and Evans' (1994) suggestion that life stage could be related to the amount of conflict experienced in the family and business. It may be that an older key family

member has more years experience and other family members involved in the business have greater confidence in the his/her ability to lead the organization and, therefore, are less inclined to raise opposition. Alternatively, it may be that there is response bias on the part of older incumbents who are reticent to admit that there is conflict in the organization they lead. Older managers may take great pride in running a tightly controlled organization and would consider admitting to internal conflict a sign of weakness. There appears to be multicollinearity between the age and the succession preparation variables. It should be noted that in the full model correlation table (Table 1), succession preparation is significantly related to business conflict. This association is not found in the regression analysis.

Resource Scarcity and Business Conflict

The third basic set of hypotheses investigates whether resource scarcity is related to the frequency of conflict in family businesses. The ninth hypothesis, inquiring about the relationship between the importance of perceived access to capital and business conflict, is not rejected ($p = .05$). The tenth hypothesis, examining the relationship between reliance upon family funds and conflict, is not rejected ($p = .03$). When financial resources are perceived to be needed, conflict in the business is greater. When the business relies heavily upon family generated funds for its operations, tensions in the business are higher. As comes as no surprise, money matters. In addition, family fund reliance is significantly and inversely related to the quality of interactions among family members both in ($r = -.10$; $p < .05$) and outside ($r = -.13$; $p < .01$) the business setting.

The block of variables entered into the full regression model to investigate the relationship between resource scarcity and conflict produced a significant change in F (3.26, $F = .04$). It does appear that resource scarcity is related to conflict in family business. The findings generally support the hypothesis that increased reliance on family funds will be related to conflict. These findings are congruent with Bourgeois' (1981) implication that the lack of slack resources contributes to political behavior in order to secure resources.

To summarize the results, family closeness outside the business seems to reduce conflict over business issues in family businesses. The number of family members working in the business and the number of generations the business has been under family control, however, are related to increased conflict. As expected, family businesses in which the need for capital and reliance on the family report more business conflict. In addition, incumbent age matters; the older the central family member in the business, less is the reported business conflict. Unfortunately for the purposes of this study, these variables, while reliable, account for only 12% of the variance in family business conflict.

IMPLICATIONS AND EXTENSIONS

Implications For Practice

There are significant implications for practitioners that evolve from this study. The first is that the nature of social interaction is an important indicator of conflict, as suggested by previous researchers (Hershon, 1975; Gersick, et. al, 1997; Kets de Vries, 1993; Ward, 1987) .

When the family is the business, conflict over the time and attention given to the business rather than the family itself can increase conflict over business issues in the business itself. The results of this study provide strong evidence of a positive carry-over effect from family relationships to the family business. Closeness among family members outside the firm does not seem to lead to the same family/work conflicts found in other work conditions. When family social interactions outside the family business are close, a decrease in business conflict can also be expected.

Again, it appears that money and its source matters to the conflict in the family business. When there is a felt need for capital and when the family is accountable for that capital, conflict is more likely to increase. Given the resource problems small businesses face, this is understandable. It is interesting that the importance of family funds is significantly and negatively associated with social interactions among family members, both in and outside the business setting. While many speculations may be made for these relationships, it appears that business conflict, family money, and family togetherness are tied together.

Practitioners and consultants must also be sensitive to the multiple objectives of different family members. The importance of incumbent's age supports this. Older incumbents are, perhaps, more interested in stability and passing on a healthy business. Interestingly, the age of the incumbent is also negatively and significantly related to family social interactions. It may be that older family businesses operators have learned that having a few family members in or associated with the business may be better than having many. To this finding should be added that these older operators appear to be first generation owners (note negative significance with GENBACK), who have prepared their firms for the future (see positive significance with WRISUCC and SUCCPREP).

Implications For Research

This study provides empirical evidence that family interactions carry over into business activities. Specifically, families that have closer social interactions and who are presumably more cohesive in their culture will carry these patterns into their business dealings with family members and ultimately experience less conflict in the work environment. What are the most effective ways to improve family social interactions? Do improved interactions necessarily lead to lower levels of conflict? Does the distribution of power within the organization (centralized versus decentralized) affect conflict? Does ethnic background affect the type or level of conflict the family business experiences? Are there industry affects associated with conflict? All of these issues require further investigation individually and multi-dimensionally to test for interaction effects.

Additionally, this study assumes that levels of conflict in family businesses matter. While not tested here, it was assumed from theoretical implications in the literature review that there is a relationship between conflict over business issues and business performance. In order to help complete the picture of the role of conflict in family organizations, conflict must be

evaluated from the consequence (performance) side of the equation. Is there an "optimal" level of conflict? Reflecting the general conclusions of conflict research, Hershon (1975), for example, suggests an inverted U relationship between conflict and business performance. Does the type of conflict matter in business performance? In this study overall conflict was examined. Conflict in businesses takes many forms. It may be that different dimensions of conflict, e.g., over vision, over products, over resource allocation, over personnel, may have different antecedents and different consequences.

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ENTREPRENEURIAL ORIENTATION AND THE ASPIRING ENTREPRENEUR: THE INDIVIDUAL IN ENTREPRENEURSHIP EDUCATION

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ABSTRACT

While entrepreneurship education programs have proliferated, instructional delivery research in entrepreneurship education has been sparse. The theme of this article is that attention to individual factors in entrepreneurship students would enhance the efficacy of instruction. The paper presents a review of selected elements of the entrepreneur's psychological framework and cognitive temperament, followed by learning objectives and styles in entrepreneurship education. Subsequently, the Myers-Briggs Type Indicator, an instrument increasingly used in management education and development programs, is used as an example of how some of the aspiring entrepreneur's learning needs may be addressed through individualized pedagogy.

INTRODUCTION

As entrepreneurship has become an increasingly popular career alternative, entrepreneurship education programs have proliferated in an attempt to equip aspiring entrepreneurs for the challenges of new venture creation and management. As a result, over 500 colleges and universities have inculcated entrepreneurship into their curricula (Solomon, 1992), and these efforts have the potential to generate positive results. A higher education level leverages the success rate of new venture creation, enhances firm performance and fosters growth (cf. Robinson and Sexton, 1994; Cooper and Gascon, 1992), contributing economic value to the local area (McMullan, Long and Graham, 1986) and beyond (Birley, 1987; Reynolds, 1987; Kirchoff and Phillips, 1991). Given these outcomes, it is important to maximize the efficacy of entrepreneurship education, thereby expanding the supply of capable entrepreneurs. Nevertheless, many questions remain about entrepreneurship education, even fundamental issues such as whether or not entrepreneurship can be taught.

Research on education issues in entrepreneurship has primarily focused on a particular course or institution's program (Block and Stumpf, 1992; Vesper, 1986), and circumscribed the requisite elements of effective course content. Unfortunately, theory-based inquiry into delivery techniques in entrepreneurship education has been limited, a condition eliciting educators to call for additional research into instructional delivery. This line of investigation should include consideration of the cognitive processes that facilitate entrepreneurs' long term knowledge bases (Young, 1997), in the context of both active learning processes and cognitive development. The

educational requirements for entrepreneurship would seem to be outside the traditional business school curriculum, which usually targets the career preparation of middle managers. Therefore, entrepreneurship programs must be designed with non-traditional processes (Plaschka and Welsch, 1990). Such would seem to be the case with instructional delivery.

Research indicates, albeit inconclusively, that entrepreneurs generally have a psychological predisposition that may influence their career choices and the subsequent performance of their ventures. The underlying psychological constructs may be at the heart of the “entrepreneur, born or made?” conundrum, and central to the concomitant question about whether entrepreneurship can actually be taught. Moreover, a psychological model that is useful for teaching entrepreneurship has not been developed (Stevenson, 1985). Although individual issues have been targeted as an important element of entrepreneurship training (e.g., Sexton and Bowman, 1984; Sexton and Upton, 1987, 1988; Ulrich and Cole, 1987), recent efforts to identify an individual entrepreneurial predilection and foster it through entrepreneurship education programs have been limited.

The purposes of this paper are threefold. The primary purpose is to identify the salient elements of a psychological and cognitive predisposition for entrepreneurship. The underlying assumption of this effort is that, by understanding the requisite attributes of successful entrepreneurs, these features may be inculcated or developed in students of entrepreneurship. Next, learning styles and conditions are addressed in order to enhance pedagogy by tailoring instructional delivery to maximize the individual learning experience. Finally, the Myers-Briggs Type Indicator (MBTI) is used as an example of how attention to individual student cognitive styles might be used to enhance the delivery of entrepreneurship instruction.

THE ENTREPRENEURIAL PSYCHE

New venture creation has been described as a complex interaction of individuals and their contexts, where the confluence of demographic, psychological, social and economic variables results in the entrepreneurial decision (Sexton and Bowman, 1985; Cunningham and Lischeron, 1991; Herron and Robinson, 1993). Through entrepreneurial vision (Greenberger and Sexton, 1988) and an ensuing act of volition (Bygrave and Hofer, 1991) or intention (Bird, 1988; Bird and Jelinek, 1988), the entrepreneur sparks the entrepreneurial process which, when successful, culminates in value creation. Fundamentally, entrepreneurship is a phenomenon of individual creation, and while contextual conditions are certainly consequential, the entrepreneur is the epicenter of the entrepreneurial process (Carland, Hoy and Carland, 1988; Herron and Robinson, 1993; Johnson, 1990; Naffziger, Hornsby and Kuratko, 1994; Shaver and Scott, 1991).

Numerous researchers have attempted to isolate and explain the psychological factors which are the potential catalysts for entrepreneurial behavior. This stream of research, a rather voluminous one for a relatively young field of inquiry, is grounded in the premise that entrepreneurs exhibit a set of distinctive personality attributes which can be identified (Cooper and Dunkelberg, 1987) and used to predict a potential for entrepreneurship (Lachman, 1980) in order to more fully understand entrepreneurial behavior. While the value of such inquiry has

been questioned (cf. Stewart, 1996), House, Shane and Herold (1996) have recently provided support for using a dispositional approach to study behavior. Therefore, although not sufficient alone, dispositional research would appear to be a necessary piece of the puzzle of entrepreneurial behavior.

Although in excess of 20 characteristics may differentiate entrepreneurs from the general population (Timmons, Smollen and Dingee, 1985), three predominant psychological constructs can be gleaned from the entrepreneurship literature (Carland, Hoy, Boulton and Carland, 1984; Long, 1983; Stewart, 1996): achievement motivation, risk taking propensity and creativity. While not always consistent, research has generally supported the inclusion of these constructs as important components of the entrepreneurial psyche (Gasse, 1982). Of these variables, achievement motivation has been the most extensively researched.

Achievement Motivation

Building on the work of Murray (1938), who identified the need for achievement as a basic need which impels behavior, McClelland (1961, 1965) entrenched achievement motivation in the lexicon of entrepreneurship. McClelland's work indicated that a high need for achievement led individuals to select "entrepreneurial" careers. Although McClelland did not actually link achievement motivation with the founding and ownership of a business, his work stimulated additional inquiry. Subsequent research suggests that entrepreneurs are more highly motivated than the general population (Hornaday and Aboud, 1971; Hornaday and Bunker, 1970; Komives, 1972) or managers (Begley and Boyd, 1987a; Carland and Carland, 1991; Lachman, 1980; Stewart, 1996). Nonetheless, these results are questioned, and a relationship between achievement motivation and entrepreneurship has not been satisfactorily demonstrated (Brockhaus and Horwitz, 1986), potentially due to the theories and methods that have been used (cf. Stewart, 1996).

Not only may entrepreneurs be highly achievement oriented, but this orientation may also influence their performance beyond new venture creation. High achievers engage in more business activities (Durand and Shea, 1974), which may partially explain why entrepreneurs with a high need for achievement produce better business performance (Morris and Fargher, 1974; Smith, Bracker and Miner, 1987; Wainer and Rubin, 1969), generating higher return on assets (Begley and Boyd, 1987b) and more rapid growth (Smith and Miner, 1984, 1985). In sum, not only may achievement motivation be associated with the selection of an entrepreneurial career, it also may have an important influence on entrepreneurial performance. Associated with this need for achievement is a predisposition toward the acceptance of moderate risk levels (Atkinson, 1957; McClelland, 1961).

Propensity for Risk Taking

Inherent in business ownership is the fact that the entrepreneur faces a more uncertain set of possibilities than do managers (Bearse, 1982), and the entrepreneur also bears the ultimate responsibility for decisions (Gasse, 1982). Thus, the entrepreneur has a greater risk exposure

than does a manager. Perhaps the inherent riskiness of venture creation explains the indications that entrepreneurs have a higher risk taking propensity than do managers (e.g., Carland, Carland, Carland and Pearce, 1995; Hull, Bosley and Udell, 1980; Stewart, 1996; Stewart, Carland and Carland, 1996). Nevertheless, this proposition has its detractors (e.g., Brockhaus, 1980; Masters and Meier, 1988; Peacock, 1986). Much as with achievement motivation, the lack of consensus may be due, in part, to methodological issues. Most of the studies which indicate no difference in the risk taking postures of entrepreneur and managers have used the Kogan-Wallach Choice Dilemmas Questionnaire, an instrument dubious for this purpose (cf. Stewart, 1996). Not only does the majority of research support a higher risk taking propensity in entrepreneurs, but also suggests that the willingness to take risks is an influential precursor to entrepreneurial creativity.

Creativity

The notion of entrepreneurial creativity emanates from Schumpeter (1934), who posited that the entrepreneurial role was synonymous with innovation, or creativity, as the entrepreneur sparks economic change through new, multifarious combinations of resources. According to Schumpeter, this innovativeness separates acts of entrepreneurship from the more common managerial activities. This conceptualization has been corroborated by research that indicates that entrepreneurs are more creative than are managers (e.g., Buttner and Gyskiewicz, 1993). Moreover, growth-oriented entrepreneurs have a greater predisposition toward creativity than do managers (Smith and Miner, 1983; Stewart, Watson, Carland and Carland, 1998) or owners with more personal goals for the business (Carland, Carland, Hoy and Boulton, 1988; Stewart, et al., 1996, 1998). Because of the link to owner goals for the firm, these results would suggest that a willingness to engage in novel behavior is not only important for new venture founding, but is also important to the subsequent performance of the venture.

Although research does link achievement motivation, risk taking and creativity to entrepreneurship, it has not outlined the temporal nature of these constructs over the entrepreneurial process. The directionality of the sequence has been questioned (e.g., Brockhaus, 1982). In other words, do individuals become entrepreneurs because of the effects of this psychological profile, or does the process of entrepreneurship foster the entrepreneurial mentality? Research does suggest that the entrepreneurial process does not enhance the magnitude of the entrepreneurial mentality. For instance, individual success may erode the need for achievement (McClelland, 1961; McClelland and Winter, 1969) and risk taking (Timmons, Smollen and Dingee, 1985). In addressing this question, it is important to consider evidence which predates the entrepreneurial decision, that from students of entrepreneurship.

Aspiring Entrepreneurs

Students, assumed to be budding (Sexton and Bowman, 1984), or aspiring, entrepreneurs, have been studied as surrogates for actual business owners. The students' choice of an entrepreneurship major represents their potential entrepreneurial intentions. Therefore, it is plausible that these students possess the same psychological characteristics as practicing

entrepreneurs (Sexton and Bowman, 1984). Generally, these studies support the findings of studies of actual entrepreneurs.

Goldsmith and Kerr (1991), using the Kirton Adaption-Innovation Scale, compared the creative styles of a group of entrepreneurship students to a group of business students who were not in the entrepreneurship program. The results indicated that the entrepreneurship students were significantly more innovative than were the business students. Likewise, in similar studies using the Jackson Personality Inventory, entrepreneurship majors had a greater preference for innovation than did business majors (Sexton and Bowman, 1984) and non-business majors (Sexton and Bowman, 1983; 1984).

Entrepreneurship majors also exhibit higher risk taking propensities than do business and non-business majors (Sexton and Bowman, 1983; 1984; 1986), irrespective of gender (Sexton and Bowman, 1986). Moreover, McClelland's (1965) longitudinal study of college students indicated that those with a high need for achievement migrated to careers of an "entrepreneurial" nature. While more longitudinal studies are necessary to definitively demonstrate the equivalence of aspiring to actual entrepreneurs, these studies suggest that the magnitude of the psychological constructs exists before venture formation. Sexton and Upton (1988) summarized their findings concerning the delimiting characteristics of aspiring entrepreneurs and their program aimed at maximizing entrepreneurial education. The authors concluded that, compared to other majors, entrepreneurship majors tend to: be more energetic, autonomous, flexible and original; possess a high degree of self-reliance and self-determination; welcome change and new experiences; and prefer impersonal relationships. The authors surmised that the entrepreneurship student can be depicted as an individual who is capable of originality, particularly under conditions of ambiguity and risk, and who dislikes restraint, restrictions and routine.

Can a Psychological Orientation Toward Entrepreneurship Be Developed?

The aforementioned psychological constructs are often assumed to be fixed at a relatively early age, implying that their magnitude is subsequently immutable. This assumption could be premature. Although relatively stable (McClelland, 1965), these constructs may not be permanent; rather, they may be subject to influence through instructional intervention. For instance, the results of a host of studies suggest that achievement motivation can be enhanced with training (Arnoff and Litwin, 1971; Jackson and Shea, 1972; Kolb, 1965; McClelland and Winter, 1969; Timmons, 1968), leading to increases in business activity (McClelland and Winter, 1969). Miron and McClelland (1979), in a review of the literature, including their own studies, suggested that achievement motivation training significantly improves small business performance when there is a supportive economic infrastructure.

Training may also influence attitudes toward risk taking and creativity. Exposing students to creative learning processes can foster divergent thinking and creativity (Torrance and Myers, 1970), particularly if problem sensitivity and the ability to tolerate ambiguity are emphasized (Carland and Carland, 1994). Colton and Udell (1976) reported that the programs at the National Science Foundation's Innovation Centers had produced higher levels of

innovation and entrepreneurship among participating students, and thereby, had truncated the period of entrepreneurship gestation. Because innovation is inherently risky (Drucker, 1985), and innovators are risk takers (Kirton, 1986), students' risk perceptions may also be influenced through education. In fact, enhancing creativity may depend on a willingness to tolerate ambiguity and cope with risk exposure in entrepreneurial problem solving. In addition to achievement, risk taking and creativity, entrepreneurial problem solving may also be a function of cognitive style.

Cognitive Style: The Myers-Briggs Type Indicator

The ability to identify and solve problems is endemic to the entrepreneurial process (Stewart, Carland and Carland, 1996). Jung (1921/1971) proposed a theory of psychological types which describes an individual's view of a problem as being a combination of the way in which one perceives the world, and how one evaluates information. In other words, people have a preferred mode of perception which defines how a situation is understood, and a preferred mode of judgment, which describes how they deal with the situation (Myers and Myers, 1980). Myers (1962) developed the Myers-Briggs Type Indicator (MBTI), which extended and operationalized the theory of psychological types.

The preferred modes of perception are sensing (S) or intuition (N). "Sensing" types, as the label implies, stress their senses in gathering information. Alternatively, "intuition" types are intuitive and perceive problems holistically. Judgement, which Jung implied was the approach for dealing with problems and making decisions, is dichotomized into thinking (T) or feeling (F). Those who are "thinking" types are logical, methodical and pragmatic, and emphasize the ends over the means. Conversely, those of a "feeling" type tend to stress value systems, and be more impulsive and more oriented toward people. People have attitudes reflective of their orientation of energy, which is either extroversion (E) or introversion (I). Introverts are internally oriented, whereas extraverts are externally oriented. Judging (J) or perceiving (P) describes an individual's attitude toward the external world and decision making. "Judging" people are methodical and sequential through some outlined procedure in making their decisions. Alternatively, people characterized as "perceiving" are focused on information gathering, and are more spontaneous and impulsive in their decision making style. Adapted from Barr and Barr (1989) and Myers and Myers (1980), Table 1 provides a description of each of the alternative types, as well as each type's potential strengths and weaknesses.

The combinations of these four basic dimensions result in 16 distinct typologies described by the preferences on each of the eight scales. Subsequently, Keirsey and Bates (1984) modified the basic theory by postulating that an individual has a particular temperament rather than a combination of attitudes, preferences, types or functions. Operating on the assumption that the different types of cognition could be parsimoniously captured by temperament, rather than through the integration of Jung's attitudes, Keirsey and Bates collapsed the 16 types into four major cognitive temperaments which represent the major cognitive distinctions among people: intuitive-feeling (NF); intuitive-thinking (NT); sensation-judging

(SJ); and sensation-perceptive (SP). These four primary temperaments are summarized in Table 2.

Table 1: Description, Strengths and Weaknesses of the Elements of Psychological Types

Elements	Description	Potential Strengths	Potential Weaknesses
Extroversion	Outward focused; world of people and things; active; outgoing; sociable; gregarious; breadth of interests	Confident and enthusiastic; open and straightforward; communication and ideas; initiates action; excels at social interaction	Easily distracted; lacks privacy; intellectual
Introversion	Inward focused, world of thoughts and concepts; pensive; concentration; reflective; depth of interests	Calm and focused; discrete; can concentrate intensely and develop ideas; good at personal interaction	Easily preoccupied; needs quiet environment; bottlenecks; poor people at a distance; needs feedback
Sensing	Oriented to the present; practical; realistic; concrete; data; details; specific; sequential	Stable; pragmatic; results-oriented; bases opinions on observations	Lacks long term perspective; may overlook implications; may be too literal
Intuition	Oriented to the future; possibilities; speculation; conceptual; theoretical; abstractions; novelty; ingenuity	Imaginative and creative; excels at conceptualization; intellectually tenacious; holistic perspective	Overcomplicates; lacks routine; may overthink; unrealistic
Feeling	Sympathetic; empathetic; appreciative; trusting; compassionate; harmony; personable; cooperative; considerate	Committed to values; demonstrative and expressive; persuasive; sensitive to others; loyal; expressive	Overly sensitive; easily hurt; critical feedback; may be overburdened and overwhelmed
Thinking	Analytic; objective; logical; inquiring; criteria; justice; assertive; principles	Committed to logic; carefully assesses alternatives; rational; firm but fair; explains thoroughly	Disregards own and others' feelings; analytical; critical; formal
Judging	Planned; organized; control; routine; schedule; prefer structure and closure	Excel at planning, organizing and controlling; decisive; reliable	Close-minded; may react prematurely; react judgmental
Perceiving	Spontaneous; flexible; adaptable; openness; curious; prefer dynamic situations	Open-minded; tolerant; inquisitive; open to change	Delays decision making; unfocused and disorganized

Table 2: The Four Primary Temperaments

<p><i>NF</i></p> <p>Idealistic; sees possibilities; draws out peoples' best; emphasis on harmony; democratic and participative; appreciative; charismatic; has quest for identity; takes criticism personally; works well with people; tends to have laissez faire management styles; makes decisions based on personal likes and dislikes and feels responsible for the failure of others; learns best by reading books and writing, working in small groups and sharing information; learn best with individualized instruction</p>	<p><i>NT</i></p> <p>Inventive; visionary; architect of change; sees short term and long term implications; nonconformist; hungers for competency and mastery; technologically ingenious; abstractions are filtered through objective decision making processes; intellectualize; challenge authority; pursue excellence; strategic planners and researchers who can overlook details; likes to make decisions but may not verbalize them; may be insensitive to others; learn best by problem solving</p>
<p><i>SJ</i></p> <p>Traditionalist or stabilizer; likes to create policies, rules, procedures, schedules and standards; organized; excels in administrative positions requiring precision and organization; has a need to serve, to be needed and to do one's duty; is hard and steady worker; is thorough and loyal; has a strong sense of social responsibility; Resistant to change; pessimistic; may preserve useless rules; can be critical of others; learn best in a traditional classroom manner, but require structure</p>	<p><i>SP</i></p> <p>Practical; focus on action; flexible and spontaneous; focus on the present; resourceful; good at negotiating and troubleshooting; has a knack for opportunity and feels that everything is negotiable; is a risk taker; is practical; has acute powers of observation; is a peacemaker; is flexible; is a good decision maker; is a catalyst for activity with an economy of motion; does not like theory or routine; lives for the moment; learn best through action with immediate relevance</p>
<p>Source: Adapted from Keirse and Bates (1984) and Golay (1982)</p>	

The MBTI in Research

While the psychometric properties of the MBTI, particularly validity issues (cf. Gardner and Martinko, 1996), have been questioned, the instrument has generally been favorably rated (Keyser and Sweetland, 1984). As a result, the MBTI is becoming ubiquitous in corporate training, and is being used in an increasing number of examinations of managerial behavior. While a complete review of the literature using the MBTI is beyond the scope of the paper (see Gardner and Martinko (1996) for a thorough review), there are some studies in the management literature that may provide insight into the cognitive features of the entrepreneur.

TJs, described as 'logical decision makers' by Myers and McCaulley (1985), are overrepresented in samples of managers as compared to the general population (Gardner and Martinko, 1990), as type theory would predict. Results also indicate that Ts tend to be assertive in coping with conflict, whereas Fs tend to be cooperative (Tucker, 1991; Williams and Bicknell-Behr, 1992). Es are also more assertive (Kilmann and Thomas, 1975) and collaborative, but avoid conflict and accommodate less than Is (Mills, Robey and Smith, 1985; Percival, Smitheram and Kelly, 1992).

In studies of decision making, SF managers perceive less risk and are less risk averse than other styles, and NFs, NTs and SFs tend to perceive more risk and be more risk averse (Nutt, 1986, 1990). NTs take the least, and STs the most, amount of time to decide on a course of action (Davis & Elnicki, 1984; Campbell & Kain, 1990). The JP scale is positively correlated with creativity measures (Carey, Fleming & Roberts, 1989; Carne & Kirton, 1982; Thorne & Gough, 1991). These results suggest that a combination of an N's conceptual abilities and a P's openness and flexibility enhances creativity (Gardner & Martinko, 1996). Also, Ns appear to be particularly proficient at strategic planning (Hurst, Rush & White, 1989), potentially due to a holistic way of thinking.

Type Theory in Entrepreneurship

These studies would suggest that, due to the nature of entrepreneurship, the SFs, because of their risk attitudes, and NPs, because of their creativity, would be predominant among entrepreneurs. Unfortunately, research using the MBTI is sparse in the field of entrepreneurship. Nonetheless, some research indicates that entrepreneurs have a distinctive cognitive typology.

Using the theoretical definitions of Carland, Hoy, Bolton and Carland (1984), Carland and Carland (1992) found differences in the cognitive orientations of entrepreneurs, small business owners and managers. Entrepreneurs, who are innovative owner-managers who focus on profit and growth, and use strategic planning practices, tended to display the ENTJ composite typology. Small business owners, who focus on producing family income and operate the business as an extension of their personalities, and managers both tended to be ESTJs. Additionally, the small business owners differed from entrepreneurs with regard to the relative strength of preference on all of the scales except for the SN scale. In a subsequent study, Stewart, Carland and Carland (1996) examined the cognitive typologies of entrepreneurs and small business owners, using the same definitions of each. Both tended to be extraverted, but the entrepreneurs were more so. Also, entrepreneurs were oriented more toward "thinking" rather than "feeling." The results also suggested relationships between the EI and TF scales and risk taking and achievement motivation. The authors concluded that entrepreneurs are more pragmatic and emphasize outcomes over processes. Conversely, small business owners emphasize values and tend to be more people and process oriented in their cognitive style.

Conclusions About Entrepreneurial Orientation

Overall, this stream of research underscores the importance of the individual entrepreneur in the creation of value. The literature portrays the entrepreneur as an achieving, creative risk taker who mutates the economic characteristics of markets by reconfiguring resource sets. Potentially, the confluence of these characteristics represents a constellation that manifests a proclivity for entrepreneurship (Stewart, Watson, Carland and Carland, 1998). In terms of temperament, owners who are growth oriented tend to be extraverted, intuitive and thinking in their cognitive styles. This predisposition, possibly composed of additional elements, may be

associated with the entrepreneur's decision making heuristics (cf. Busenitz and Barney, 1997), cognitive processes (cf. Gatewood, Shaver and Gartner, 1995) and other behaviors which bear on venture formation and subsequent performance.

Research also suggests that it is possible to leverage an individual's proclivity for entrepreneurship through education. Indicators of entrepreneurial potential could signal opportunities for educational intervention which fosters entrepreneurship (Stewart, 1996). Therefore, including explicit attention to the individual in entrepreneurship seems to be an approach that holds promise for the enhancement of instructional delivery in entrepreneurship education.

THE INDIVIDUAL IN ENTREPRENEURSHIP EDUCATION

There is evidence that education changes an individual's attitudes, values and goals (Pascarelli and Terenzini, 1991), suggesting that an instructional program could enhance an individual's entrepreneurial orientation. This entrepreneurial orientation would include an array of elements such as self-motivation (Hood and Young, 1993), values and attitudes that enable risk taking (Rice, 1985), creativity (McMullan and Long, 1987; Ronstadt, 1985; Vesper and McMullan, 1988), opportunistic thinking and vision (Hood and Young, 1993). Perhaps foremost of these elements is the recognition of an entrepreneurial opportunity (Stevenson and Jarillo, 1990), which has been identified as the core of entrepreneurship (Timmons, Muzyka, Stevenson and Bygrave, 1987). All of these elements of education echo the psychological mindset of entrepreneurs.

Several researchers have outlined the necessary elements of entrepreneurship education. Block and Stumpf (1992) emphasized the identification and stimulation of entrepreneurial drive, talent and skill, the undoing of the risk-averse bias of many analytical techniques, and the revision of attitudes toward change. Rice (1985) stressed that students should be provided with the psychological framework, values and attitudes that enable them to assume the challenges of entrepreneurship. Ronstadt (1985) proffered numerous objectives, including skills associated with creativity, opportunity identification, tolerance of ambiguity, venture evaluation, startup and strategy. These objectives should be geared toward the development of creative thinking (Lipper, 1987) in utilizing opportunistic thinking to create and develop an entrepreneurial vision (Bird and Jelinek, 1988).

Overall, research suggests that educational programs might be used to enhance an individual's predisposition toward entrepreneurship by increasing student alertness to entrepreneurial opportunity (Kirzner, 1973), and by promoting the requisite attitudes toward entrepreneurship. In other words, when combined with meaningful course content, instructional delivery strategies can be utilized to enhance entrepreneurial orientation and confidence through learning processes that enhance students' 'absorptive capacity' (Cohen and Levinthal, 1990) and inculcate entrepreneurial modes of thinking. What learning conditions are most appropriate to achieve these objectives?

Entrepreneurial Learning Conditions

Learning conditions should mimic entrepreneurial activities and experiences (Hood and Young, 1994; Gartner and Vesper, 1994), thereby contributing to the development of a student's entrepreneurial orientation. Experiential learning (Haines, 1988; Harwitz, 1977; Hills, 1988; Kourilsky, 1977), with a focus on decision-making skills (Whyte and Braun, 1966) in a process oriented framework (Plaschka and Welsch, 1990), has been suggested as a means of enhancing effective entrepreneurial behavior in students. Hood and Young (1994) proffered several teaching methodologies that are capable of using problem-based formats for true learning in both classroom and field settings. Classroom methodologies included case studies, discussion groups, experiential exercises, role play, self-study and simulation. Field setting methodologies included apprenticeships, internships, field interviews, field projects and cases, and observation.

A common issue in these instructional techniques is their potential for explicit attention to the individual needs of students. The aforementioned learning conditions might be combined with the application of knowledge about the entrepreneur into a program which models and refines entrepreneurial mindsets, as well as skillsets. According to Sexton and Bowman (1984), to improve the effectiveness of entrepreneurship education, the unique characteristics of "budding entrepreneurs" must be identified and incorporated into educational processes. An important part of this learning process is learning style.

Learning Styles of Entrepreneurs

If entrepreneurs exhibit particular clusters of psychological features, it is possible that they might also have different learning styles (Block and Stumpf, 1992; Ulrich and Cole, 1987). Kolb (1984) posited a typology of learning styles based on four central modes of learning ordered around a combination of either active experimentation or reflective observation, and either concrete experience or abstract conceptualization. When these learning styles fit well with the learner's chosen discipline, there is a greater level of academic success (Kolb, 1981). Table 3 presents the dominant learning styles, preferences and strengths of Kolb's (1984) learning styles. These styles, in many ways, are synonymous with those of Golay (1982).

Golay (1982) developed a theory of learning style based on the four temperaments of Keirsey and Bates (1984). According to Golay, each of the four styles captures the learning preferences of one of the primary temperaments. The learning styles are centered around conceptual and actual preferences, where conceptual may be global or specific, and actual may be spontaneous or routine. Golay's actual-specific learner, associated with the SP temperament, is similar to Kolb's accommodative learning style. Likewise, Golay's conceptual-global learner, corresponding to the NF temperament, echoes Kolb's divergent learning style. Golay's actual-routine and conceptual-specific learners, corresponding to the SJ and NT temperaments, respectively, share commonalities with Kolb's convergent and assimilation learning styles.

Conventional wisdom predicts that entrepreneurs are most likely to be experimentation and concrete experience oriented, rather than reflective observation or abstract conceptualization oriented; however, there is support for successful entrepreneurs having an abstract conceptualization preference in learning style (Bailey, 1986). In addition to learning style, two

additional features characterize the learning mode of successful entrepreneurs. Successful entrepreneurs tend to be opportunistic in their questioning style (always seeking new opportunities in situations), rather than

Table 3: Kolb's (1984) Learning Style Typology

Learning Styles	Dominant Characteristics	Preferences	S
Convergent	Abstract conceptualization and active experimentation; controlled expression of emotion	Technical problems and tasks rather than social and interpersonal issues	Problem solving the practical appl knowledge set does best in sc solution
Divergent	Concrete experience and reflective observation; adaption by observation rather than action	People- and feeling-oriented	Imaginative abil meaning and val situations entailir ideas and implica
Assimilation	Abstract conceptualization and reflective observation	Ideas and abstract concepts in logically precise and sound theory	Inductive reason creating theoretic
Accommodative	Concrete experience and active experimentation; emphasis on opportunity seeking, risk taking and action	Trial-by-error problem solving; Rely more on others for information than on their own analytical skills	Doing things, car involvement in suited to situatio to changing imme

social (concerned with social aspects of the situation), and they tend to use personal contacts and intuitive approaches as the major foundations of their problem solving style (Bailey, 1986).

Recognizing that students will have an array of learning styles, a diversity of pedagogical techniques aimed at different learning styles would appear to be an efficacious approach to teaching entrepreneurship. This does not always necessitate that educators adapt their pedagogies to student learning styles. Instead, it may be important to challenge students to broaden their modes of learning somewhat in order to achieve the requisite learning in an entrepreneurship course. In general, however, entrepreneurship courses should be relatively unstructured, and should present scenarios that require novel solutions under conditions of ambiguity and risk (Sexton and Bowman, 1984), in the context of a holistic, multidisciplinary perspective (Plaschka and Welsch, 1990).

Many entrepreneurs need to develop better communication skills, and to become more cognizant of how their behavior is perceived by others (Sexton and Upton, 1987). Compared to managers, entrepreneurs also tend to be overconfident and to generalize from relatively limited knowledge (Busenitz and Barney, 1997). Given the similarities of aspiring entrepreneurs and actual entrepreneurs, it is conceivable that students of entrepreneurship have the same tendencies. Therefore, interpersonal skills, due to the significance of networks in the entrepreneurial process (see Ramachandran and Ramnarayan, 1993 for an overview), and decision making skills should be emphasized in an entrepreneurship class.

In summary, the elements of an entrepreneurial orientation, achievement motivation, risk taking and creativity, are important considerations in teaching an entrepreneurship class. With this in mind, instructors should consider learning activities which best mimic the context of

entrepreneurship, and be mindful of learning styles. Research indicates that entrepreneurs tend to have a temperament defined by extroversion, intuition and thinking, and these elements correspond with an assimilationist learning style, with a focus on problem solving. Awareness of these issues may provide an opportunity to enhance entrepreneurship education. Nonetheless, an instructor is likely to have students with an array of psychological predispositions, cognitive styles and preferred learning styles. Given these conditions, how can an instructor maximize learning for all of the students in a classroom situation?

The methodologies for tailoring content delivery to emphasize entrepreneurial orientation and capitalize on learning styles are restricted only by the imagination of the instructor. However, any technique entails an assessment of the students. While there are numerous instruments which might signal a potential for entrepreneurship, the MBTI is relatively comprehensive in including attention to several psychological factors which are inherent in cognitive dimensions of entrepreneurial thinking. For this reason, the MBTI could be useful as a vehicle for individualized instruction in a basic entrepreneurship course.

Example of an Instructional Strategy with the MBTI

Depending on factors such as class size and specific content, there are numerous ways in which the MBTI might be used in instructional delivery. Carland, Carland, Ensley and Stewart (1994) provided an innovative, useful discussion of the use of the MBTI in business classes. Based upon their suggestions and the requirements for entrepreneurship, some general ideas follow about using the MBTI in an entrepreneurship course.

Generate a discussion of individual factors of entrepreneurship and entrepreneurial orientation early in the semester. This can be done with reading assignments and student interviews with entrepreneurs, activities which provide a foundation for the use of cognitive style in subsequent activities. While the use of the MBTI is restricted, the Keirsey Temperament Sorter (Keirsey and Bates, 1984) affords a flexible, parsimonious alternative. After administering the instrument, a class session should be devoted to discussing cognitive styles and their relation to the demands of entrepreneurship, also emphasizing the connections with achievement, risk taking and creativity. After identifying cognitive styles, class time could be devoted to brainstorming the potential weaknesses and strengths of each type, particularly for an entrepreneurial career. This would provide the instructor with a basis for outlining the general tendencies of each type, and the concomitant strengths and weaknesses. Subsequently, the cognitive styles can be used in course activities, either in individual or group formats.

A range of learning activities would best address the individual needs of students, as well as maximize content learning (see Hood and Young (1994) for a thorough discussion). In general, activities might include role playing with like and opposite types, problem-based cases, field projects and entrepreneurial simulations that deal with both behavior and business issues. The emphasis in all of these activities should be opportunity identification and decision making in entrepreneurial scenarios. In devising assignments, it is important to include activities that play to all types' strengths and learning styles. Also, it is important to challenge students by creating activities that highlight some of their weaknesses, both in cognitive style and in learning

style. For example, the NT style excels at problem solving, but has difficulty with interpersonal interaction and may be hasty in decision making. This type of temperament is well suited to assignments that explore new opportunities, but also should be subjected to activities that highlight weaknesses, such as cases with interpersonal implications, implicit decision criteria and ethical issues. The SJ temperament is traditional and highly structured, and learns best with traditional classroom methods. Class discussions, role play, simulations and cases which emphasize creativity and the need for change are important to broaden this type of student's understanding of, and the ability to cope with, the demands of entrepreneurship. For the weaknesses of NFs, use activities that emphasize the importance of analysis and problem identification, and for SPs, devise activities that entail organized, timely decision making. Overall, the assignments should not only imitate entrepreneurial scenarios and address temperaments, but also focus on the development of communication skills, interpersonal perceptions and sound decision making processes.

This teaching methodology lends itself to both individual and group assignments. Both formats are recommended. For group assignments, grouping like temperaments for some activities, and different temperaments for others should promote the students' understanding of their own cognitive styles and tendencies, and those of others. Irrespective of whether the activity is an individual or group one, the instructor should query the students about what they have learned about themselves and about others, and how their discoveries relate to an entrepreneurial career. Perhaps the most important learning outcome is student awareness of the demands of pursuing an entrepreneurial career. This understanding may then enable their own opportunity focused learning processes, which will, hopefully, stimulate entrepreneurial vision and drive.

Assessment

It is important to evaluate the efficacy of the instructional delivery technique. While specific assessment would hinge upon the specific course and the instructor's learning goals, Sexton and Upton (1987, 1988) provide an excellent example of assessment guidelines for instruction that is individually-based. Overall, assessment should center on students' recognition of the demands of entrepreneurship, their own predispositions and the concomitant strengths and weaknesses, and how these predispositions are attuned to an entrepreneurial career. Also, awareness of the styles of others should be a criterion. Ideally, assessment would not only occur during and at the end of the course, but later as students have initiated their careers.

Future Research

The instructional approach offered here suggests a number of research questions. Obviously, the first issue is refining knowledge about the individual entrepreneur. More research is necessary to identify and define the psychological features of the entrepreneur. The characteristics and interrelationships of achievement motivation, creativity and risk taking would seem to be an integral part of this line of research, as are the cognitive preferences of

entrepreneurs. Moreover, the relationships between entrepreneurial predisposition and cognitive style may provide important insight into entrepreneurial behaviors, particularly if they can be integrated into trait by situation explanations of entrepreneurial behavior. Such a program of research may generate important information about entrepreneurial issues such as modes of entrepreneurial entry, teaming, strategy and venture outcomes.

There are also many important questions about entrepreneurship instruction. Do entrepreneurs have different modes of learning? What are the learning preferences of entrepreneurship students? Can students of entrepreneurship be conditioned to be more entrepreneurial? Are there particular delivery techniques that match learning style and content in ways that maximize learning? These are only a few of many questions, the answers to which may enhance entrepreneurship education.

CONCLUSION

Undeniably, the individual is an integral component of the entrepreneurial process. Evidence suggests that a particular psychological predisposition is associated with the entrepreneurial decision and subsequent entrepreneurial behavior. Additionally, preliminary evidence concerning entrepreneurial temperament indicates the potential importance of cognitive style in entrepreneurial behavior. Given this, attention to the psychological and cognitive components of aspiring entrepreneurs would appear to have substantial potential, but much is to be learned about entrepreneurship and how to teach it. A psychological model, when combined with other elements of entrepreneurship, learning style and innovative pedagogy, may be a vehicle to the enhancement of the efficacy of education in entrepreneurship. Hopefully, the ideas presented here will stimulate additional attention to educational methodologies that enhance entrepreneurial orientation and better prepare students to realize their aspirations. Ultimately, by incorporating all of the relevant considerations into a contingency model of entrepreneurship education, both content and instructional delivery may be enhanced.

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MANAGEMENT AND ENTREPRENEURSHIP CURRICULA, CONTINUOUS IMPROVEMENT, PRACTICAL RELEVANCE AND THE SEARCH FOR A CURRICULUM BASED ANSWER TO THEM ALL

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ABSTRACT

The following paper outlines a study conducted at a regional comprehensive AACSB accredited university in Arkansas. The empirical data shows that three key skills exist which should potentially drive the development of new courses in colleges of business. Critical thinking/problem solving skills, communication skills, and innovation/creativity skills were deemed the most important skills by 118 executives. The paper concludes with implications of such findings and a suggestion for the development and adoption of more entrepreneurially oriented business curricula.

INTRODUCTION

Recent developments with agencies such as the AACSB (American Assembly of Collegiate Schools of Business) have created an environment in many business schools in which continuous curriculum development is necessary to complete their respective missions. This paper outlines a continuous improvement process for a regional comprehensive institution in the mid-section of the United States. One might find that what one learns in going through a continuous improvement process is more important than the process itself. This process was designed to bring practical relevance back to the classroom. There is some cause for concern in such situations. Chia (1996) wrote that many of the efforts to bring relevance to management education were cause for concern because they tended to vocationalize the business curriculum. Chia argued that the most important aspect of management education is to carefully encourage the entrepreneurial imagination.

Business schools have been under siege to offer courses in entrepreneurship. *The Chronicle of Higher Education* estimates that over 400 schools nationwide offer classes in forming and running a business, while around 125 have organized entrepreneurship classes. It is clear from these arguments and trends that the face of business education has changed a great deal since its inception. However, it is not clear if the curricula have really improved or if they deliver what employers want. This study is an effort to develop such an understanding and offer a set of suggestions for continuing the path of continuous improvement into the future without destroying the entrepreneurial imagination of current and future business students.

RESEARCH QUESTION

This research has basically one research question. What skills do the stakeholders of universities want business students to have when they leave the university? This effort is an attempt to utilize a KSA (knowledge, skills, and abilities) approach to developing management education curricula. KSAs would serve as a baseline in the development of new courses and course materials. Courses would be developed for the expressed purpose of promoting the transfer and development of those abilities.

METHODOLOGY

This study was developed around a two phase research methodology. The first phase is ethnographic, or qualitative, in nature. In this phase, focus groups were used to generate descriptions of skills desired in graduates.

The second phase is a quantitative analysis based on the conceptual developments of the first phase. In this phase, a survey based upon the qualitative findings was administered to a randomly selected group of business executives and alumni.

QUALITATIVE SAMPLE AND METHODOLOGY

Because of the complex nature of the skills necessary for success, qualitative techniques were deemed as most appropriate for the research design. Qualitative research methods enable researchers to gather large quantities of information. Qualitative research allows the social scientist to gain some understanding of the nuances of the subject being studied. Understanding the subtleties of particular knowledge and skills will allow for further development of a model business curriculum.

The study's interviews were conducted in a focus group format. The groups were asked probing questions either to start or to encourage the discussion. Questions of this type were designed to prompt as much response as possible and, through their use, the focus groups often took on the properties of conversations. This effect was intended and reflected the idea of "conversations with a purpose" (see Patton, 1990, for a further discussion).

During the focus groups, respondents were allowed to discuss their feelings about a specific subject in detail. To the greatest extent possible, the direction of the interview was controlled by the interviewees. The researchers believed that allowing participants to control the interview would reveal additional information which would further augment what was known about the subject. Gummesson (1991) noted that this interview format allows the interviewer to enter the world of the interviewee and explore the way in which respondents think.

The participants in the qualitative effort were business executives and entrepreneurs who were perceived to be among the business elite in the state. Members of the group had at least five years experience and had demonstrated financial success. The group was developed in

such a way as to assure that demographic, industry, and functional background diversity existed. In total two focus groups were conducted with 11 participants in each group.

QUALITATIVE FINDINGS

The focus group conversations were recorded and transcribed. The transcriptions were then analyzed by the content analysis program called Ethnograph. The outcomes of the analysis are shown in Table 1. Only the top ten words or phrases are listed.

Word or Phrase (Skill)	Number of hits
Critical Thinking/Problem Solving	164
Ability to Communicate	127
Creativity/Innovation	96
Information Search (Research)	73
Ability to Team	61
Honesty/Integrity	54
Work Ethic	46
Relationship Building	34
Ability to Manage Time	29
Adaptability	17

It is important to note that the Chia (1996) study appears to conform to what the practitioners in this particular group desire. The traditional view of the entrepreneur is that he or she has the ability to take a systems view of situations, to critically analyze the situation, and to creatively solve the problem. They would then communicate the issues in such a way that it would capture the minds of those around them. Several of the words certainly relate to the quality of students in a general fashion. Certainly efforts can be made to teach work ethic, honesty, and integrity, although it is not clear what influence business curricula can have on these issues. However, critical thinking, creativity, communication, research, and relationship building skills can all be taught to most students in AACSB accredited business schools.

QUANTITATIVE SAMPLE AND METHODOLOGY

The words which emerged from the qualitative research were used as a guide for the development of a questionnaire. What is clear from the qualitative work was that certain skills appear to be important to the particular group of entrepreneurs and executives in the first phase of this study. The questionnaire included questions about critical thinking and problem solving skills, communication skills, the ability to be creative, and search for information. Executives responded to these twenty-one statements on a five-point Likert scale ranging from (1), Strongly Agree, to (5), Strongly Disagree. Included in the questionnaire in addition to these questions was the Katz (1974) skill typology.

In its original form the Katz skill typology was too broad for practical research use. Herron's (1990) extension of Katz's skill typology narrowed the skills under each category to a manageable level for research purposes. Under technical skills, Szilagy and Schweiger (1984) suggested a product/service skill category, an organizational skill category, and an industry skill category. Under the human skills category, leadership skills and networking skills were considered most important. Under conceptual skills, separate categories for administrative skill and entrepreneurial skill were provided. Herron's skill measurement scale had sufficient levels of reliability (reliability coefficient of .76) and validity. Each skill scale item used a five-point Likert scale ranging from (1) Not Important, to (5) Extremely Important.

A random sample of 200 top executives from across the country was drawn from the *Directory of Corporate Affiliations Plus*. An additional sample of 200 executives residing in the state of Arkansas were drawn from *The Directory of Corporate Affiliations Plus* because the university initiating the research is domiciled in that state. Finally, a sample of 100 business alumni was drawn. All five hundred of these potential participants received the questionnaire by mail. Follow-ups were not utilized. A business reply envelope was included and the questionnaire was developed and delivered using the Dillman method (1978).

RESPONSE RATES AND CHARACTERISTICS OF THE SAMPLE

The three samples had the following responses. The Arkansas business sample returned 19 percent of the questionnaires. The national sample returned 24.5 percent of the questionnaires and the alumni returned 30 percent of the questionnaires. The overall response rate was 23.4 percent. The response rate was considered sufficient for survey research. Non-response bias was checked on the two business samples with data from the *Directory of Corporate Affiliations*. *T*-tests were conducted on firm size by sales, employees, and educational level of the chief executive. None of these three *t*-tests were significant, suggesting no significant influence from non-response bias.

The executives from the national sample were 76 percent CEOs, COOs, Presidents, or CFOs. The majority of the respondents were from firms that were either manufacturing or services (88 percent). They had an average of 1,617 employees and experienced an average of \$20.2 million in sales. The Arkansas sample had a mean of 1,498 employees and \$13.1 million in sales. In the Arkansas sample 91 percent were CEOs, COOs, Presidents, or CFOs. The alumni had graduated an average of 6.4 years ago, held at least middle management positions, and worked in firms that employed an average of 645 persons.

QUANTITATIVE FINDINGS

Responses from the three samples were aggregated in an effort to understand which of the categories of the skills were most important. ANOVA was used as the primary statistical tool for this purpose since more than two skills were evaluated at one time. For statistical analysis purposes the skills were defined in four broad categories: the Katz skill scale, communications skills, problem solving skills, and an overall test of skill importance. These

four ANOVAs will be reported in the preceding order with Tukey *t* tests as the multi-comparison method and basis for ranking a skill as more or less important. The skill scale outlined seven skills thought to be important to managers. The results of the first ANOVA are reported in Table 2. It is important to remember that the skill scale ranges from 1 being not important to 5 meaning important.

Table 2 Results of The Katz Skill Scale		
Variable	Mean	Rank of Importance
Discovering Opportunities	4.44	1*
Motivating Employees	4.41	1*
Planning Skills	4.37	1*
Trends in the Industry	4.26	1*
Creating Relationships	3.96	5*
Evaluating Organization	3.84	5*
Design of Products and Services	3.46	7

F-ratio = 21.04, *p*-value < .001
* tied based on Tukey *t* multiple comparison

The Katz skill scale shows clearly that respondents valued some of the skills needed by managers more highly than others. The soft skills were more valued than were more technical skills. The human skills, as Katz called them, were far more valued by executives and alumni. The ability to be creative, motivate, plan, and understand the trends in the respective industry were seen as most important. The questions developed from the qualitative portion of this study led the researchers to more detailed questions about very specific skills and abilities. The following section focuses on the specific characteristics of skills that one needs to be successful.

OUTCOMES OF PROBLEM SOLVING SKILLS.

The analytic or problem solving skills of graduates of business administration have been traditionally viewed as among the most important in their ability to function in a managerial position. Six questions about the skills necessary to succeed were asked of the three sample groups. These items included questions about the need for analytic skills, critical thinking skills, creativity, problem solving skills, entrepreneurial tendencies, and ability to innovate. Table 3 displays the outcome of an ANOVA on these six items. Remember that the scale is reverse of the skill scale for this group of questions and that the lower the score the more important an item will be considered.

Table 3 Critical Thinking Skills ANOVA	
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Item	Mean	Rank
Problem Solving Skills	1.29	1*
Analytical Thinking Skills	1.31	1*
Critical Thinking Skills	1.41	1*
Creativity	1.58	4*
Innovation	1.58	4*
Group Decision Making Skills	1.68	6
Entrepreneurial Thinking is Important in My Job	1.92	7

F -ratio = 11.96, p -value < .001

* tied based on Tukey t multiple comparison

It is important to note that all of the skills listed under the problem solving ANOVA were considered important functions of the managerial job. The ability to analyze, understand, and critically evaluate, however, appear to be the most important skills of this group. This does not suggest that one should discount the importance of creativity in management education. Critical thinking and its counterparts are imperative skills in the development of the managerial or entrepreneurial mind.

EVALUATING THE IMPORTANCE OF COMMUNICATION SKILLS

Three critical communications skills were identified in the qualitative phase of this study: oral, written, and public speaking. Questions were asked about each of these skills. Table 4 presents the outcomes of the ANOVA for communications skills.

Table 4
Communication Skills ANOVA

Item	Mean	Rank
Oral Communication Skills	1.13	1*
Written Communication Skills	1.26	1*
Public Speaking Skills	1.63	3

F -ratio = 29.16, p -value = .00

* tied based on Tukey t multiple comparison

Written and oral communication skills were deemed equally important to executives and alums. It is imperative that one realizes how important both written and oral communications skills appear to be to the managerial function. The mean of both is near the SA or strongly agree category, which means that the great majority considered these skills extremely important

to the performance of their own functions as a manager. Public speaking was viewed as slightly less important than oral or written communication in general.

OVERALL EVALUATION OF SKILLS

The purpose of this research was to identify which skills were most important in the managerial function. Therefore, the skills ranked as most important in their respective category were run as a single ANOVA in an effort to see which of the skills would be deemed most important and therefore have the greatest effect on the curriculum. Table 5 presents the results of this final ANOVA.

Item	Mean	Rank
Oral Communication Skills	1.13	1*
Written Communications Skills	1.26	1*
Problem Solving Skills	1.29	1*
Analytical Thinking Skills	1.32	2*
Critical Thinking Skills	1.42	2*

F-ratio = 5.04, p-value = .005
* tied based on Tukey *t* multiple comparison

All of the skills in the analysis above are important to the performance of duties as a manager or entrepreneur and therefore should be considered imperative skills in the business curriculum. However, the respondents identified communications and problem solving skills as being the most important in the professional lives of managers.

CONCLUSIONS

The preceding analysis suggests that the soft skills, such as communication and behavior skills, are important in management education. In addition, harder skills, such as problem solving and critical thinking skills, are critical to the performance of duties of a manager.

Chia (1996) suggests that entrepreneurial imagination should play a critical role in the development of management curricula. He believes that the key role of business schools is to impart this entrepreneurial imagination to students of business administration. There are basically three skills which came out of this study as being most important: communications, problem solving-critical thinking, and creativity. These are listed in their order of importance to the respondents in this study. One might at first glance argue that the findings are not compatible with Chia's arguments. However, there is another view.

The entrepreneurial venture is the source of innumerable opportunities to be creative. In addition, such ventures reveal the ultimate in problem solving skills. Communications skills are

also key to the entrepreneur because of the need to transfer the vision from the individual to the entrepreneurial team, and then to potential investors and other stakeholders. From this perspective, Chia's arguments and the findings of this research are highly compatible.

SUGGESTIONS FOR CURRICULA DEVELOPMENT

The findings of this research are not surprising in content, but they are discouraging to educators because they suggest that management education in general is failing. Further, communication skills and problem solving skills have long been recognized by management educators as important. The inescapable conclusion is that management education is failing to inculcate critical skills. This is a pedagogic issue as well as a content issue.

The authors contend that an entrepreneurial based curriculum which relies strongly on experiential and practical teaching pedagogies to develop communications, problem solving-critical thinking, and creativity should be adopted. The traditional, lecture based, pedagogy has not been successful. Further, traditional lecture class rooms are anathema to the enhancement of creativity. In our view, it is imperative that classrooms become interactive, experiential and applied. The pedagogy must establish an environment in which entrepreneurial imaginations can find fertile soil and critical thinking skills can be developed. The environment is as important as the material.

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APPLIED MANUSCRIPTS

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.

Examining The Efficacy of Offering Service Learning For Credit With Sife And SBI: an Exploratory Study by Harriet Buckman Stephenson, of Seattle University, is an exploratory study examining the efficacy of offering a for-credit Students in Free Enterprise course that uses service learning based on the Small Business Institute learning model.

The Role of Affect And Expectations in Distance Learning: A Pedagogical Examination of Perception And Cognition in The Televideo Classroom by Sanford Kahn, of the University of Cincinnati and Thomas Osha, of the Cincinnati Bell Telephone, explores the role of affect and student expectations as a measure of the success of a distance learning televideo course.

Developing the Entrepreneurial Spirit by Arthur K. Fischer, June M. Freund, and Jane H. Crouch, all of Pittsburg State University, reports on a program designed to develop an entrepreneurial spirit among kindergarten through twelfth grade students.

Using Free Enterprise Themes to Promote Learning: The Parkin Experience by Larry R. Dale, of Arkansas State University, describes a supplemental program in free enterprise that used business and agriculture themes to generate excitement for learning and success in school.

Educating Native Americans about Free Enterprise by Lisa F. Borstadt, Ron S. Lee, and Sandra One Feather, all of Northern Arizona University, discusses two projects that address the goal of teaching the economically disadvantaged an understanding of the free enterprise system and how to be full participants in the system.

The Impact of Children's Theater on the Comprehension of Fundamental Economic Concepts by Joyce Ann Shotick, of Bradley University, describes the results of using children's theater as a teaching mechanism.

The Students in Free Enterprise Four State Investment Challenge by Scott Wyckoff, David O'Bryan, June Freund, and Mat Burton, of Pittsburg State University, and Tom Payne, of Students in Free Enterprise, describes an award winning approach to teaching high school students about the importance of financial markets in a free enterprise system.

EXAMINING THE EFFICACY OF OFFERING SERVICE LEARNING FOR CREDIT WITH SIFE AND SBI: AN EXPLORATORY STUDY

Harriet Buckman Stephenson, Seattle University

ABSTRACT

This exploratory study examines the efficacy of offering a for-credit SIFE course that uses service learning based on the SBI type learning model. Student consultants and their clients in two different Policy/Strategy sections offered the same quarter by the same instructor in an accredited business school engaged dissimilar clients. The clients in one section had recently been through an entrepreneurial training program for low income/welfare recipients to encourage self-employment as a job creation model. These clients had developed business plans and started mostly one person businesses with few of the businesses being able to support the owner. The clients and the class represented service learning for credit. The other SBI Policy/Strategy control section used traditionally secured SBI established businesses most of which had employees and revenues that supported the owners. Though the clients were significantly different, the students' perception of the value of the two courses were basically identical.

This exploratory story is particularly relevant to the debate going on nationally in academic circles of how to best handle service learning. As a volunteer activity, it is universally applauded. As a for-credit offering, there is less consensus, and frequently positions are taken without any solid, supporting research. SIFE is encouraging development of for-credit courses. This study looks at one model and demonstrates validity for the concept.

INTRODUCTION

The nineties have seen a growth in service learning in education for K through 12 to colleges, universities, and graduate schools. The evaluation studies are mixed in findings with the general consensus giving high marks to the potential of service experience as a learning model. Most service learning models are, however, used in extracurricular/ noncredit configurations. The Students in Free Enterprise (SIFE) program encourages formation of a class for credit to be offered at the collegiate level. SIFE participants engage in community service activities to promote the free enterprise system. A wide range of activities are represented such as tutoring grade schoolers in math skills, helping children start a micro business selling school supplies to their classmates. Some activities lend themselves to incorporation in existing classes. Specifically, the Small Business Institute (SBI) in-depth student consulting projects are especially well suited as SIFE projects and are well accepted as for-credit offering. Would SBI type projects clearly designated as service learning targeted to low income, or otherwise economically challenged, for whom such efforts could help empower

them to more fully participate in the free enterprise system, be able to hold the same claim to deserving of credit? Or, should that type of consulting project only be available as a not-for-credit offering? This paper presents a evaluation of a pilot study which offered a regular SBI class and a service learning SBI type class to examine the validity of offering credit for such service learning that specifically targets microenterprise, disadvantaged populations, populations not currently participating fully in the free enterprise system.

A model of service learning that gives credit with the project being a part of the learning curriculum is the Small Business Institute Program which by 1995 was in over 500 colleges and universities in the U.S. providing consulting to 6,000 small business owners by 18 to 20,000 graduate and undergraduate students a year. The SBI program was initially funded by the US SBA which ceased program funding in October 1995. At the time, the criteria for success of the program had gone from helping those in small business who could not afford private sector consultants but who were in dire need of help to producing consulting reports that could demonstrate increase in profits, revenues, and jobs created, probably more of a community based learning model than a service learning model per se. An evaluation of the SBI program clearly demonstrated it was successful by most any measure (Fontenot, 1994). Studies have looked at student satisfaction, client satisfaction, perceived impact on employment, revenues, skills enhancement of the national SBI program, of an individual SBI program, of the knowledge and skill differences between an SBI course and a "traditional" Business Policy course, and use of SBI for economic development. As universities respond to the increasing challenge of service learning, the SBI program may well lend itself particularly well to the task while providing an established learning methodology. However, the type of clients to select becomes an issue inasmuch as certain clients may be in a better position to show increase in revenues or employment than others, some could not afford a paid consultant but may not be viewed as viable enough for size of revenue, assets, or number of employees. Those criteria may be important if the funding agency being used to support the SBI program is looking for such hard data to get funding through Congress such as when the SBA used to fund the program. What criteria now will drive funding sources? Those criteria such as the role in economic development will still be important. The academic/learning community is concerned, regardless of the funding source, that it provides a valuable learning experience for the student and meets requirements of the courses in which the SBI type learning model is used. When criteria for client selection include those who cannot afford a paid consultant, those who need help but may not be in a position to grow in terms of employment, or others more clearly needing help, who will save the smallest of the microenterprises, what impact on student satisfaction and perceived education/learning value might there be? Could SIFE students help meet the need?

Is there a difference in student perception of value between service learning or community learning based on need of help to struggling microenterprises or start-ups and more established mainstream SBI cases. Instructors are faced with the reality, too, that it is highly unlikely that a one person, home-based operation barely scratching by is going to win national SBI competition since it has not happened in the approximately 10 years that such competition has been going on. So how could such targeted service learning be encouraged?

This study is an exploratory evaluation of two different courses using SBI type projects as the teaching learning method the same quarter; same days of the week, with a morning and an afternoon class of graduating seniors. The classes were taught by the same instructor. In the morning class, the cases were typically one person microenterprises all coming from recent graduates of an inner city entrepreneurial training program in the Central Area designed to provide self-employment as a job creation model for low income persons in the Central Area. The cases for the afternoon class came from the broad range of resource providers, networking members, past SBI clients, past students, SBA, faculty, etc. Would there be differences in perception of the students or the clients between the two sections? Would the differences or similarities be sufficient to warrant giving credit for each experience?

BACKGROUND

Evaluation and assessment of community based consulting by students, specifically the SBI model, is a well documented though relatively recent phenomenon (Borstadt & Byron, 1993; Burr & Solomon, 1977; Chrisman, Nelson, Hoy, & Robinson, 1985; Douglas & Lamb, 1986; Fontenot, Haarhues, & Hoffman, 1991; Fry, 1985; Hedberg & Brennan, 1996; Jackson & Watts, 1995; Kiesner, 1987; Sampsell, 1984; Sapienza, Smith, & Gannon, 1988; Stephenson, 1995; Stephenson, Konarski, & Phillips, 1991; Weaver & Solomon, 1985; Weinstein, 1990; Weinstein, Nicholls, & Seaton, 1992). Small Business Institute Directors track information on increase in sales, number of employees, wages, taxes revenues, and profitability. According to the July 1994 Small Business Institute Economic Impact Study (Fontenot, 1994), each of those factors is positively impacted by the SBI Program with SBI clients creating 10,697 net new jobs from 1991 to 1992 as a result of the SBI consulting they received, resulting in over \$203 million in employee wages.

Borstadt and Byron (1993) study included evaluation of other factors such as the Personal Improvement category with 41.2% of the respondents noting they "Become better organized" and 29.4% noting they experienced "Personal improvement as a business person." Thirty-eight percent noted "Improved understanding of market conditions for your products or services" and 23.5% "Obtained insights into public perception of your business." The process consultation that is utilized in the SBI Program stresses client and students sharing in the problem definition and solving. It is a joint exploration process which enables the owner to be more of a self learner in the long run. Those learning aspects are difficult to measure for both the owner and the students. Some efforts have been made in developing models to explore broader dimensions of outcomes (Stephenson, 1995).

When the SBI program/method is added to a traditional policy course Watts and Jackson's study (1995) concluded that the combined format met or exceeded the outcomes of the traditional Policy course (pp. 93-103). Fontenot et al. (1991) drew from a sample of 504 students across U.S. who had participated in the SBI program from 1974 to 1990. When comparing the capstone Policy course with the SBI course, the Policy course was perceived to be somewhat more effective in developing analytical skills and to be somewhat more useful in their

careers than the SBI course. For developing interpersonal skills and operational skills, the SBI course was perceived to be more effective than the Policy course.

A recent study by Hedberg and Brennan (1996) of 122 students responding to a survey reported positive views about the SBI experiences: “. . . it appears that students learn from their SBI project experiences, value its real world and applied focus, and recommend it be a required component of their education” (p. 32). One implication, however, was noted that “Good clients make a better SBI experience for the student.” Several of the students, had noted that better clients would be the most important way to improve their SBI experience. The authors admonish the instructor “to remember the goal of student learning when choosing clients to participate in SBI projects.”

Student learning in some increasing numbers of colleges and universities is including service learning which tends to have broader goals than meeting curriculum requirements for a course such as Business Policy/Strategy. It may be part of a senior synthesis course which has broad purposes. Service learning is a pedagogical tool with roots in traditional volunteerism, performing service or good work of own free will and without pay. Community-based learning is sometimes distinguished from service learning when it takes the form of internship and apprenticeships, travel abroad or study in another country. Peer-helping, which is similar, usually is separated from regular curricular subject areas and includes activities such as conflict mediation, peer and cross age tutoring, often begun or continued with state and federal funding. This might include the Vita programs and one might include SBI programs which may or may not be associated with credit. The SBI program in its initial practice by the SBA was close to service learning. Service learning is defined by the Commission on National and Community Service (CNCS, 1993) as:

A service learning program provides educational experiences:

- a. under which students learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs and that are coordinated in collaboration with school and community;
- b. that are integrated into the students’ academic curriculum or provides structured time for a student to think, talk , or write about what the student did and saw during the actual service activity;
- c. that provide a student with opportunities to use newly-acquired skills and knowledge in real-life situations in their own communities; and
- d. that enhance what is taught in school by extending student learning beyond the classroom and into the community and helps to foster the development of a sense of caring for others (p. 15).

From the *Wingspread Special Report* by the Johnson Foundation (1989), “Service, combined with learning, adds value to each and transforms both. Those who serve and those

who are served are thus able to develop the informed judgment, imagination, and skills that lead to greater capacity to contribute to the common good” (p. 1).

Richard J. Kraft (1996) notes “The common good must reflect an empowering benefit for both partners in the service relationship” (p. 138). Further, “when they are carefully tied to curricular objectives, contain academic content, involve the student reflections, and contain an evaluative component, they can be considered service learning. If these components are missing, they fit more comfortably into community-based learning or volunteerism” (p. 140).

“Yet, service-learning programs emphasize the accomplishment of tasks which meet human needs in combination with conscious educational growth. They combine needed tasks in the community with intentional learning goals and with conscious reflection and critical analysis” (Kendall, 1990, p. 20).

Such an experience is highly valuable. Indeed, “for a student to effectively master problem identification, analysis, and solving in a way to be acted upon which deals with the messiness of what actually happens. . . results from linking business education and service learning” states Edward Zlotkowski (1996, p. 8). Zlotkowski, Director of the Bentley Service Learning Project involving 15 of Bentley’s 16 academic departments, over 50 faculty members, and over 2,000 students in its work, speaks from an experienced base vantage point.

In fact, several schools are incorporating a community-based experience as a mandatory part of MBA orientation. Further, “. . . it becomes clear that the time has come to begin developing a national network of business school educators able and willing to share both methods and results” (Zlotkowski, 1996, p. 14).

The Small Business Institute Directors’ Association (SBIDA) is such a national network with over 500 SBI “instructors” in over 500 colleges and universities in the U.S. performing service learning for credit. Names of SBI Directors and Programs can be accessed at:

<http://www.sbaer.uca.edu/sbaer/databases/sbida/index.html>

Syllabi are willingly shared. Training manuals are available. Students in Free Enterprise will also be an active source of information and networking for service learning for-credit and not-for-credit.

Research findings exist on effects of service learning on academic and values development. Service learning is an effective pedagogy for both intellectual and moral development (Markus, Howard, & King, 1993). At this point, the SBI program is utilized more as a community-based learning model depending on the objectives of the learning.

The SBI program is closest to a “pure” service learning model for credit when a reflective component is added. For example, at the university in which this study was performed, the Strategic Policy class is the senior synthesis course for the university as well as for the Business School. A senior synthesis paper requirement is expected which includes an analysis of the senior capstone experience. The students are also to address the issue in their in-class presentation of the project as to what they learned from doing the project.

Whether it is a pure service learning model or community based as a significant part of a curricular requirement for credit has several constituents to judge/evaluate its effectiveness.

The objectives/mission of the colleges and universities must be met, which increasingly includes providing a service component to enhance ethics/morals and community service/good citizen issues of the university. The AACSB must be satisfied. The knowledge content/curriculum must be met. The SBI program will be available to expand the service learning reach as schools determine their own criteria for client selection to include the possibilities of a much broader clientele base from which to select such as: start up businesses, struggling one person home based microenterprises, business owners on welfare, not for profit organizations, and individuals who haven't and may not made/make a profit but who need help. What impact does the type of client (e.g., size of business, how badly it is struggling, no employees, earning below minimum wage, less than college education, or potentially other factors that a college student is less likely to identify with or possibly view as a contribution to ones own career path) have on the value of learning experience and other desired outcomes from such learning for credit? The question has been raised by earlier studies. Hedberg and Brennan (1996) are clear in the need to provide "better clients" to improve the SBI experience.

METHODOLOGY

Two senior capstone Business Strategy/Policy sections were offered in spring of 1991 by the same instructor, one class in the morning with 23 students and 11 Central Area clients, one class in the afternoon with 45 students taking 15 regular SBI clients. The class ended the first of June. In mid July a phone survey was made of all students who could be contacted who had been consultants in the two courses. Contact over a week of solicitations of students who were no longer on campus or even in the area for the most part, resulted in a lower than desired completion rate. The students graduated in June. Effort was made to be persistent enough to make contact with at least one student per team.

The same research person interviewed all the Central Area students and the Other afternoon class clients and students by phone. The staff of the agency provided phone interviews of the Central Area clients. Of the 11 Central Area clients that were surveyed there was 100% response. The students response rate was 13 out of 23 for a student response rate of 56%. For SBI clients, there were 9 out of 15 who responded for a 60% response rate. Of the 45 SBI students surveyed, 16 responded for a response rate of 36%. The response rate was thus higher for both the Central Area clients (100%) than for the SBI clients (60%) and higher for the Central Area students (56%) than for the SBI students (36%). It was not known if the students were themselves different between the two sections. The students appeared to select the morning class (7:45 AM) or afternoon (1:00 PM) based on how it fit into schedules and dislike or like of early morning classes. The students knew that the instructor used the SBI type learning method for both classes. All students graduating that spring had to take the course for graduation if they had not previously taken it. The students were not aware till attending the first day of class that there would be a specific group of cases for the morning class which would differ from the "typical SBI case."

Demographic Data for Participating Clients											
		Central Area					SBI				
a.	Years in business at time of study	1.4 average					5.3 average				
b.	In business now	100% yes					100% yes				
c.	Loan before students began	18% yes					25% yes				
d.	Work helpful getting a loan	27% yes					33% no 66% NA				
e.	Now employed?	100% yes					100% yes				
f.	Male/female	(9/11) 82%					(5/9) 56%				
g.	Age: 25-39	(10/11) 91%					(5/9) 56%				
	40-54	(1/11) 9%					(4/9) 44%				
h.	Ethnic						*.000 significant				
	African-American	(10) 91%					(1/9) 11%				
	White	(1) 9%					(7/9) 78%				
	Other						(1/9) 11%				
I.	Educational background						*.03 significant				
	Some + high school graduate	(3/11) 27%					(3/9) 33%				
	Some college	(6/11) 55%									
	College graduate	(2/11) 18%					(3/9) 33%				
	Post graduate						(3/9) 33%				
j.	Years experience in field prior to start										
	Minimum	0					5				
	Maximum	22					15				
	Average	7.4					9.7				
k.	Number of employees						*.004 significant				
	Employees:	0	.5	1	2	4	5	7	8	12	30
	Central Area:	8	0	1	1	0	0	0	1	0	0
	SBI:	72.7%	0%	9.1%	9.1%	0%	0%	0%	9.1%	0%	0%
		1	1	1	1	1	1	1	0	1	1
		11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	11.1%	0%	11.1%	11.1%

The experimental Central Area group differed significantly from the SBI client control group in ethnic background, education level, and number of employees. Ten out of 11 of the Central Area sample were African-American, one out of 9 of the SBI sample were African-American. Two out of 11 (18%) were college graduates from Central Area sample, whereas 6 out of 9 or 66% of the SBI clients were college graduates. Eight out of 11 Central Area had no employees, only one out of 9 of the SBI had none.

FINDINGS

The survey results for clients and for students are displayed in Table 1. There were a number of significant areas of differences which the study revealed.

Table 1			
1.	How satisfied were you with the business plan or feasibility study conducted by the students for your business? Conducted by you for your client? Extremely dissatisfied = 0, Extremely satisfied = 10		
	Central Area	SBI	F Probability
	Students 8.16	6.87	*.0313 significant
	Clients 8.36	6.66	.120
2.	How important was the written report to you (to your client) in developing marketing strategies for his/her business? Very important = 1, Important = 2, Somewhat important = 3, Unimportant = 4		
	Central Area	SBI	F Probability
	Students 1.85	2.19	.39
	Clients 1.72	2.67	*.0408 significant
3.	Perception of attributes of consultants/students (0 = low, 5 = high)		
	a. Professionalism		
	Central Area	SBI	F Probability
	Clients 4.7	4.4	.3054
	Students 3.07	4.06	*.0220 significant
	b. Business Knowledge (Rating of Client by Students and Students by Clients)		
	Central Area Students 2.7	SBI Students 3.6	F Probability *.0142 significant
	Central Area Clients 4.3	SBI Clients 3.1	*.0040 significant
	c. Perceived ability of the client to see applicability of recommendations by students.		
	Central Area Students	SBI Students	F Probability
	3.76	3.62	.75
	d. Perceived practicability of recommendations by clients		
	Central Area Clients	SBI Clients	F Probability
	4.6	3.6	*.0025 significant
	e. Open mind of client		
	Central Area Students	SBI Students	F Probability
	4.23	3.7	.25
	f. Overall value of analysis		
	Central Area Clients	SBI Clients	F Probability
	4.36	3.2	*.02 significant

4. How beneficial was the program using university students as marketing consultants to your firm? (4 = Not Beneficial, 1 = Very Beneficial)			
	Central Area Clients (11)	SBI Clients (8)	
Very Beneficial	4 (36%)	1 (12%)	
Beneficial	3 (27%)	6 (75%)	
Somewhat Beneficial	3 (27%)	1 (12%)	
Not Beneficial	1 (9%)		
Mean	2.09	1.46	F Probability = .82
5. How beneficial to your educational process was the program using student consultants (student question)/beneficial to you of the overall process (clients)?			
	Central Area Students (13)	SBI Students (15)	
Very Beneficial	6 (46%)	8 (53%)	
Beneficial	2 (15.4%)	7 (47%)	
Somewhat Beneficial	4 (31%)		
Not Beneficial	1 (8%)		
Mean	2.0	1.5	F Probability = .1003
	Central Area Clients (11)	SBI Clients (9)	
Very Beneficial	5 (45%)	2 (22%)	
Beneficial	3 (27%)	4 (44%)	
Somewhat Beneficial	3 (27%)	3 (33%)	
Not Beneficial			
Mean	1.82	2.11	F Probability = .44
6. Value the course on a scale of 1 to 10 with 10 being highest:			
	Central Area Students	SBI Students	F Probability
	8.1538	8.1563	.9964

The data in Table 1 show that there was a significant difference in student satisfaction with the students who had Central Area clients being more satisfied with the plan/study they did than were the SBI students. Clientwise, the Central Area clients were more satisfied with what was done for them than were the SBI clients, but the difference was not significant.

The Central Area students with Central Area clients felt the report was more important to the client in developing marketing strategies than did the other students. The difference was not significant. The Central Area clients also felt the report was more important in developing marketing strategies than did the SBI clients. The difference was significant.

The Central Area and SBI clients tended to rate the students similarly in professionalism whereas the students rated the perceived professionalism of the clients as significantly different with the mean of the Central Area students being a point lower. The SBI students tended to rate their client significantly higher on business knowledge than the Central Area students rated

their clients. The Central Area clients, however, rated the student consultants' business knowledge significantly higher than the SBI clients rated their student consultants.

The mean of perceived ability of clients to see applicability of recommendations was very close by both the Central Area students and the SBI students. Looking at the client's perception of how practical the student recommendations were, the Central Area clients mean on the rating was a point higher than the perception of the SBI clients on their student consultants perceived practicality of recommendations. The difference was significant.

The mean perceived open mindedness of client by the Central Area student of their clients was higher by about half a point (not a significant difference) than the SBI students perceptions of their clients. The Central Area clients rated the overall value of the analysis over a point higher than the perceived value of overall analysis by SBI clients. Thirty-six percent (4 out of 11) of the Central Area clients thought the program using university students as marketing consultants very beneficial to the firm compared with 12% or 1 out of 8 responding to this question by the SBI clients although 87% of the SBI clients responded very beneficial and/or beneficial compared with 63% of the Central Area clients.

One hundred percent of the SBI students responding rated the benefit to the educational process at Beneficial or Very Beneficial whereas 61% of the Central Area students rated it as Beneficial or Very Beneficial. In terms of perceived benefit overall to the clients of the consulting process, though a greater percentage of the Central Area clients 45% rated it Very Beneficial compared with SBI clients at 22% (2/9), when both "Beneficial" and "Very Beneficial" are added it is quite close with 73% for the Central Area clients and 67% for the SBI clients. When valuing the Business Policy course as they experienced it, the Central Area students and the SBI students were very close in their ratings with the means being within .03 points of each other, an insignificant difference.

SUMMARY AND FINDINGS

In summary, there were significant differences in Central Area service learning student consultants and student consultants that took "regular" SBI type clients:

<p>Central Area students were more satisfied than the SBI students with the product they delivered; Central Area students rated their clients at a perceived lower level of professionalism compared with SBI students assessments of their clients; The perceived business knowledge of Central Area student rating of their clients was almost a point lower than the 3.6 mean rating given the SBI clients; The importance of the written report in developing marketing strategy was more important to the Central Area clients;</p>

<p>The Central Area clients rated the students as being more knowledgeable than the SBI clients rated their student consultants; The Central Area clients thought the recommendations were more practical than did the SBI clients; and, The Central Area clients rated the overall value of analysis higher.</p>

These findings overall for both the SBI control and the service learning/Central Area experimental are similar to Weinstein's (1990) findings: For client satisfaction on a 10 point

scale there was a mean of 6.88 which compares at 6.66 with the SBI clients in this study and 8.36 by the Central Area clients. Four out of five Weinstein's clients found the report useful for developing marketing strategies for their business. All of the Central Area clients thought it was anywhere from somewhat important to very important as did 7 out of 9 of the SBI clients, with 2 out of 9 saying it was important.

	Weinstein Study	This Study	
Student Professionalism	4.05	Central Area Clients	4.7
		SBI Clients	4.4
Business Knowledge	3.43	Central Area Clients	4.3
		SBI Clients	3.1
Practicality of Recommendations	3.44	Central Area Clients	4.6
		SBI Clients	3.6
SBI Program of Some Benefit	93%	Central Area Clients	100%
		SBI Clients	100%
Education of Entrepreneur 60% college graduate		Central Area Clients	18%
		SBI Clients	66%
Age: 25-39	53%	Central Area Clients	91%
		SBI Clients	56%

The non-response bias may account for some of the differences that were found. It may be that only certain majors were represented in the student population. Fontenot et al. (1991) noted that marketing majors found the SBI course especially beneficial in utilizing or developing their Interpersonal Skills. CIS and marketing find the SBI course to be more useful in their careers than did other majors. The clients who were contacted may not necessarily represent even all the SBI clients for the quarter much less for years. The Central Area clients were surveyed by a Central Area program staff member. Did that influence the answers? Did the Central Area clients want to not seem ungrateful? Did the differences in data solicitor account for some of the differences? The Entrepreneurship Center research person surveying the students also surveyed the SBI clients. The students in the morning class may have been different from the afternoon students. Fewer students were in the class. Yet, from this exploratory study, we can say that at least of the clients responding they did differ significantly in some characteristics. The Central Area population represented non-tradition/service learning clients and the SBI clients being quite similar at least to those in another SBI program. These characteristics with this particular sampling of student respondents seemed to have little if any impact on student perception of worth of the classes with perception of value of classes in both cases to be quite high.

The client population of the Central Area differed in several aspects from the "usual" SBI client in this study control group in ethnicity, age, education, and number of employees. The SBI program nationally averaged over 10 employees (Fontenot, 1994), most of the Central Area sample had no employees. Though the Central Area students rated their clients as being less professional with less business knowledge, the Central Area student consultants were more satisfied with the business plan they did for the client than the student consultants of SBI ("regular") clients were. And in response to "If you had to value the Business Policy course

using a scale of 1 to 10 with 10 being highest, the means were 8.15 for the Central Area students and 8.18 for the SBI students.

This study did not begin to scratch the surface of the full range of benefits from a SIFE course for credit that uses the SBI format. Obviously there are considerable skill building opportunities as well as team building and communication and value issues which are integral parts of SIFE which the SBI supports. The focus was to explore the service learning outcomes.

This exploratory study does support a contention that a service learning focus for the SBI programs could very profitably meet the needs as one of the for-credit contents of a SIFE designed course. This could meet many constituent needs effectively while enhancing a contribution to the community. Further, it would successfully enhance the student learning process while promoting and enhancing participation in the free enterprise system.

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THE ROLE OF AFFECT AND EXPECTATIONS IN DISTANCE LEARNING: A PEDAGOGICAL EXAMINATION OF PERCEPTION AND COGNITION IN THE TELEVIDEO CLASSROOM

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ABSTRACT

The purpose of this paper is to develop, from a cognitive perspective, a didactical theorem in which an interdisciplinary communications strategy is an integral component of a distant learning paradigm. The study will explore the role of affect and student expectations as a measure of the success of a distance learning televideo course environment. Based on the authors' experiences in both a traditional and a distance learning televideo classroom, the paper will argue that, despite the power of television in the information society, psychological and physical involvement in the learning process, without regard to the abstraction of location, remains the keystone of student success. It will conclude that the absence of the classroom and lecturer's stimuli affects cognitive appraisal of the distant learning experience requiring a behavioral distant learning pedagogy that embraces nonverbal clues such as semiotics, music, facial clues, sound effects, gestures, humor, and gender.

INTRODUCTION

There comes a time in evolution where technological progress diminishes, giving way to social and cultural innovation. Today's students are the first generation to carry, as a part of their educational DNA, a preconceived notion of what a television or video broadcast should "look" like. Raised in the cacophony of mass media, education for our students has not been limited to the traditions of the classroom, textbook, and lecturer; abstraction from the source of information does not inhibit their ability to assimilate and disseminate factual data. Television is, for them, not high technology; it is their culture. From childhood to adolescence and into adulthood, television has been the most significant aspect of their learning experience. Whether it is Sesame Street or the intricacies of space exploration, with television, cable networks, video recorders, video games, personal computers, and the World Wide Web, they have lived, as no other generation has lived, in the world of instant gratification-real time learning. For them, the symbiosis of education and technology is not an exciting alternative to the traditional classroom challenge; it is an intrinsic part of their cognitive modality.

Jos Luis. L. Aranguren (1985), in his book *The Human Communication* argues:

"It seems then without doubt that the solemn distribution of knowledge by the professor and the intellectual submission of the students to the behavioral rules dictated to them, are activities turning to be more difficult to maintain in the present structure. The students are requesting that their expectations, interests aspirations and subculture be taken into consideration by the establishment. When the professors have the capability to be aware to those claims and the students are allowed to have an active participation by submitting their ideas, then the educational process turns into a two way communication."

Despite their affection for the multi-media culture, our students remain culturally socialized in the stereotypical formal classroom. They come with expectations about established classroom demeanor and etiquette. They understand, implicitly, the behavioral structure and relationships between students, faculty and class. The televideo classroom replaces these traditions, for the instructor and student, with uncertainties about classroom socialization. The conventional faculty-student relationship often becomes subservient to the technology of the distant learning process. Even with full motion, two-way reception, at best students and faculty can interact only as if they were sitting on opposite sides of a window, making it even more important for faculty to examine their interpersonal techniques in the distant learning perspective. The confidence of students among their peers in a conventional classroom becomes the fear of seeing their image on a television screen and the realization that their responses go beyond the limits of the classroom door in interactive televideo sessions.

Satiated by their multi-media world, our students expect that television images, whatever their source, are going to contain familiar communication elements. They are, if not overtly, subliminally conditioned to the visual and auditory stimuli that conforms to their preconceived notions of commercial television. While educators experiment with the "new technology," our students recognize, with immediacy, the lack of production professionalism endemic to even a simplistic music video. The reality is that our students spend more time in their video civilization than they do in classroom and leisure activities; they do not distinguish between recreational and educational television broadcasting. Details such as graphic layout, color, and organization, must be conducted according to recognized professional broadcast industry standards. Nonverbal codes are inherent to their culture; they expect vivid images, exhilarating action, and stirring music, not as an afterthought, but as a carefully planned part of their televideo learning experience.

Spontaneous decisions about course content and methods of presentation, must be replaced by in-depth planning and adherence to a precise schedule of lecture content and presentation. The ultimate success of a course is a function of its design, delivery and implementation, not the sophistication of the equipment and facilities. Merely transporting course pedagogy to a new medium disregards innovative pedagogical models and instructional designs that can take advantage of every student's ability to process multiple stimuli in a cognitive learning environment.

What is simple in the physical classroom becomes difficult and time consuming when used in a televideo presentation. Unlike the classroom lecture in which the message is coded in

words and perhaps role playing by the lecturer, the televideo classroom provides for an extension of the messages codification through the use of an infinite variety of visual stimuli. Lectures must be segmented in a manner similar to that of a recreational television program. Blank screens or pauses to make a thought are unacceptable. Time spent to have materials distributed or to otherwise interact with students is no longer an option; dead air time is an unnatural and costly use of the video technology. The integration of handwritten materials and overhead projections into the televideo lecture is of limited effect in a carefully orchestrated broadcast. The virtual classroom allows only one view at any given time; images and written materials are not available through the entirety of the class as they might be when presented on a blackboard, chart, or overhead projection. Written or projected materials leave the screen when the lecturer's image is returned. The smaller focal plane and unidimensionality of a television screen combined with the limited fidelity of its audio system diminishes the impact of these traditional teaching techniques. A rapidly changing input in the format of different camera angles, the use of closeups, supers, and dissolves, graphic imagery and multiple camera views have a significance in the success of the broadcast; they are a prerequisite to maintaining student interest and involvement in the video classroom.

The success of the video classroom is in establishing a small screen presence. In a conventional classroom, instructors are able to vary, emphasize, and punctuate their presentations through the use of voice fluctuation, physical movement, the ambiance of the classroom itself, and an interpersonal, often one-on-one contact with the students; in a televideo environment these techniques, are less effective. Physical movement, dress style, and vocalization take on a new importance in a television production. Faculty must be even more cognizant of their behavioral impact on the learning environment. Gestures such as the waving of one's arms, pounding on a podium, pointing and fumbling with lecture notes which are commonplace in the classroom become distractions and annoyances in a televideo presentation. The rise of an eyebrow, the wrinkle of a forehead, a smile, a squint, a frown, or a fixed gaze toward the audience, moves from the minuscule in a large classroom to exaggerated importance in a close-up on a television screen.

Student satisfaction appears to be directly related to the development of effective televideo course techniques. A study conducted by the United States Department of Commerce's Office of Technology Assessment (1995) concluded that:

“...simply placing technology into the classroom is not enough. Technology is related to increases in student performance when interactivity and other important features of instructional design are applied to its use.”

Butte-Glenn Community College, in association with the Satellite Telecommunications Educational Programming Network, a division of Educational Service District 101 in Spokane, Washington, has developed more sophisticated televideo course techniques and implemented them in its distance learning program. The improved courses experienced increases in student satisfaction (1996).

THE UNIVERSITY OF CINCINNATI EXPERIENCE

At the University of Cincinnati's Clermont College, a course in televideo technology was originally offered on traditional lecture only basis. Four years ago the course was expanded to include, through the collaborative efforts of the Cincinnati Bell Telephone Company, a televideo option using television to do little more than transmit the off campus instructor's image and voice to the students. Student satisfaction surveys and test scores in both the lecture class sections and in those offered in video format were equal.

Today, the course has been redesigned to take advantage of the latest in fully interactive and two-way televideo technology to deliver, not only the required instructional materials, but to assure that the course brings to students a variety of outside resources that are important to broadening the course's scope and content. During the first session of each twice-weekly class meeting, a representative from Cincinnati Bell Telephone Company anchors or hosts different experts in a discussion of the week's telecommunications topic. These presentations are designed to be sensory stimulating without compromising the integrity of the learning process. During the second weekly class meeting, the students meet with the course's instructor to conduct exercises and discussions which reinforce and enhance the topics covered by the telecommunications professional.

RESULTS OF THE PROGRAM

The collaborative effort has produced markedly higher student satisfaction survey results, as might be expected. Perhaps more surprising, test scores in the televideo course sections are significantly higher than those of the campus-bound course. Clearly, a well designed and implemented televideo course can be an effective educational tool, as demonstrated by the results at the University of Cincinnati.

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DEVELOPING THE ENTREPRENEURIAL SPIRIT

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ABSTRACT

This paper reports on a very successful program designed to develop an entrepreneurial spirit among kindergarten through twelfth grade students. As a byproduct of this process, university students gained considerable experience in researching and teaching entrepreneurial concepts and skills.

INTRODUCTION

Members of the Pittsburg State University chapter of Students In Free Enterprise (SIFE) are dedicated to the cultivation of the entrepreneurial spirit, and are committed to fostering better understanding of how the free enterprise system works. To this end they established the Free Enterprise Foundation, primarily with profits from chapter projects and funding from local entrepreneurs. They also received a grant from the Pritchett Trust, a local trust fund established to help finance worthy projects in the Pittsburg community, especially projects which help youth and their families. Through this Free Enterprise Foundation, PSU SIFE awarded grants to assist teachers in Crawford County school districts in purchasing equipment and supplies needed for projects which incorporate free enterprise educational concepts into the classroom.

Early in the 1995-96 school year, teachers were encouraged to apply for funding for projects which met one of the following goals:

-to encourage students to engage in entrepreneurial or business activities in school or in the community

-to enhance the teaching of business and economics in the classroom

-to prepare students for careers in the twenty-first century

Response from local teachers was enthusiastic, and the projects they proposed provided a variety of opportunities for students of all ages to benefit from free enterprise and economic education enrichment activities. After evaluating the applications, SIFE distributed \$16,500 through the Foundation to 32 teachers in 12 schools and 4 school districts. Awards ranged in size from \$250 to buy supplies for a Character Counts program in one school to \$1000 grants of seed money for starting school supply stores.

In addition to promoting the traditional free enterprise economic educational concepts, four of the grant recipients were asked to incorporate the teaching of business ethics into their projects. Students and teachers involved in each of these four projects selected a local

entrepreneur or business executive whom they most admired. They were invited to share with the students information about their personal background, their business beginnings, their current business activities, the ethical standards they maintain and their thoughts regarding the social responsibility of a business. After further conversations with their entrepreneur, students were to start a business using him or her as a business role model.

After completion of the projects, narratives were submitted for national judging as part of the Students In Free Enterprise/Rubbermaid "Good Business is Good Business" competition. The Free Enterprise Foundation was the subject of four news stories on local CBS, NBC, and ABC affiliates. The foundation was featured in six newspaper articles including a full page donated by the Pittsburg Morning Sun to list the grant recipients.

AWARD WINNING PROJECTS

Teachers who participated in these projects are enthusiastic supporters of the program and have demonstrated what can be done when they apply their creative talents to teaching basic economic and ethical concepts in the classroom. The four projects selected for first place by the national competition judges are outlined on the following pages. They show just what can be accomplished.

It might appear at first glance that this program merely placed an additional burden on the already overloaded teachers, asking them to do one more thing and add one more subject to their already crowded schedule, but this is not the case. The projects did require teachers to spend a considerable amount of time planning, implementing and evaluating, but this was time well spent since the projects had benefits much broader in scope than one might initially think. While the projects emphasized some aspect of free enterprise and economic education, they also proved to be valuable avenues for teaching basic skills such as mathematics and reading, providing opportunities for students to apply those basic skills, enriching academic subjects, encouraging student creativity, developing critical thinking skills, emphasizing the importance of integrity, self respect, teamwork and cooperation. In addition, the projects provided opportunities for active rather than passive learning, and involved the students in cooperative as well as collaborative learning activities.

While contributing to the learning environment for children, these projects moved the local schools closer to achieving the 8 National Educational Goals established by the National Educational goals panel. The achievement to these goals depends primarily on efforts at the state and local community levels. All four projects were interesting for students and got them actively involved in the learning process, a necessary ingredient for keeping students in school. The Pittsburg High School project was specifically designed to involve "at risk" students (goal 2). All four projects involved the practical use of math skills, with the Eugene Field project specifically designed to emphasize math skills (goal 5). All four projects, by design, emphasized citizenship. The mentors specifically stressed the ethical qualities, integrity as a person and as an entrepreneur, and social responsibility. All four projects also taught students how to do practical, productive things. Some, such as the Middle School production project and the Hobby Horse industry taught specific skills while they all taught economic concepts of free

enterprise which help them develop into productive citizens (goal 3). Profits from the Eugene Field project were used to fund a Drug Education Assembly which benefited the entire school (goal 7).

The four business speakers gave credit to business ethics, honesty, and social responsibility for their successes in business. Thus, the PSU SIFE students were able to provide fifth graders examples of what ethical behavior is all about. Many agreed that this will stay with those students throughout their school years and as they go to work for themselves. A very important dimension which was voiced independently by the four speakers was that there is a short-run and there is a long-run. There is the “now” and there is the “future”. They noted that it is important to keep your word today although there might be some cost involved in the future. But most often in the long-run being honest pays big dividends.

Several of the speakers talked about being open and friendly to customers. In each case customer relations turned out to be an important ingredient to the entrepreneur’s success. Another point which came up often was the idea of being active in the local community. To be a community leader in a non-for-profit environment turned out to be a way to succeed in for-profit business. This is something that is so important for the students to learn as fifth graders. Even at the university level faculty have difficulty teaching students the importance of community service. These entrepreneurs were able to make a direct connection between being an active member of the community and a respected community leader, and the successful and profitable discharging of their duties as administrators and entrepreneurs. It is easy to see that the SIFE students designed projects which were incredibly productive in getting across concepts which are quite difficult to get across to students at an early age or educational level.

Sandy Overman
Lakeside Elementary
“Hobby Horse Industry”

The fourth grade students at Lakeside elementary are getting their first experience in the business world as participants in the Hobby Horse Industry . They began this activity by filling out a job application and actually interviewing with a local human resource manager to fill positions such as supervisor, woodcutters, sanders, and drillers. A mini-manufacturing plant was created in the classroom, as the students used real power tools to produce 20 four foot tall wooden horses. Proceeds from the sale were donated to the local Salvation Army. An emphasis was placed on having the students learn the value of teamwork and how to delegate authority and duties. It is particularly valuable to develop these skills in budding entrepreneurs at an early age.

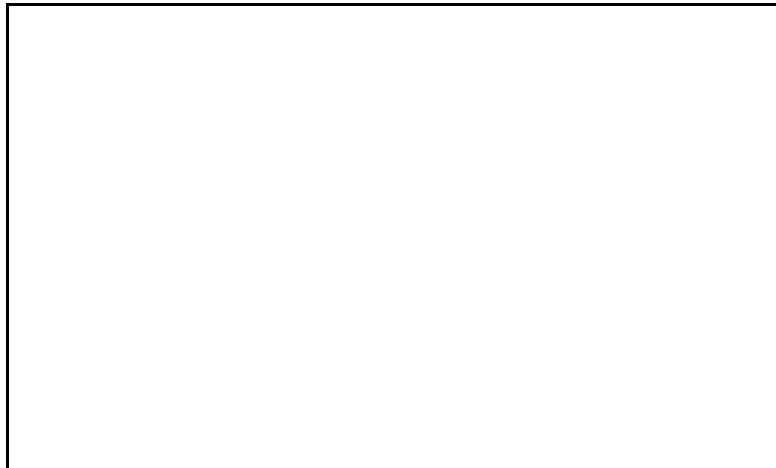
The person Ms. Overman’s class most admired and invited to speak to their class was Judy Westhoff from City National Bank of Pittsburg. Ms. Westhoff started as a teller 35 years ago and has consistently worked her way up to Senior Vice President. Judy is also a very active member of the community and a respected leader. The concept of ethics and social responsibility had not been discussed in great detail with the class prior to the speaker, but it soon became evident that the students were quick learners. Her speech was presented on a fifth grade level, and her use of anecdotal material helped to illustrate how ethics are a part of every day business.

Several students asked Ms. Westhoff what kinds of ethical situations she faced at work and how she solved them. She related that one area where ethics and social responsibility become apparent is in the approval of large loans. She noted that it is important to be both unbiased and fair in providing money for large projects.

Phil Carter
Eugene Field Elementary
“Eugene Field School Supply Store”

At Eugene Field Elementary, Phil Carter’s fifth grade students planned the advertising and financing programs, and set up the operation of their own store. The store sold items such as paper, pencils and pens. These amazing students then decided to reinvest their profits into a major drug awareness program for the rest of their school.

The students were tested before and after the project and test results showed an overall improvement of the students understanding of basic entrepreneurial terminology and practices. The pre-test showed most students had little or no knowledge of the terms being tested. The post test showed more than a 50 % increase in most students scores. Students were also required to keep inventory and maintain sales records daily. The results of the pre and post test scores are shown below.



This group of students chose Garren Shaw to come and speak to their class about ethics. Mr. Shaw is co-owner of a local record store which has outlets in three other cities. He got his start in business as a college student when he and a friend would travel to record shows to buy and sell records. From those early experiences of dealing from the back of a pickup truck to the evolution of having four stores, it’s easy to see how he could relate the qualities needed to be a successful entrepreneur. Mr. Shaw’s classroom speech stressed the importance of understanding customer relations and being active in the local community. He incorporated some of his past experiences into his speech, and showed how each was handled. He was careful to explain that some things done ethically have more far reaching effects than are apparent at the moment they occur.

Tom Zerr

Pittsburg Middle School
“Falcon Manufacturing”

The students at Pittsburg Middle School have used the grant money to go into the mass production business. After dividing into management and union teams, students negotiated a production contract with a local manufacturing firm, PITSCO. A production plant was built in Tom Zerr’s Technology classroom where students assembled and packaged 2000 rocket kits. The class was paid \$0.33 a kit and received a bonus for having a zero defect rate.

The students in Mr. Zerr’s class voted to have Dr. Harvey Dean be their guest speaker. He is the founder and CEO of PITSCO Inc., and was a top ten finalist for INC. magazine’s entrepreneur of the year. His company is one of America’s leading producers of technical and science education materials. PITSCO has been very instrumental in getting educational labs set up at Pittsburg Middle School as well as other school districts in the area. At the beginning of his speech, Dr. Dean placed the class in a dilemma by showing how ethics exist in the business world. The dilemma consisted of getting too much change back from a store and discussed how people often react in such situations. He used this example to show how ethics are hard to describe and can be a double standard. He felt that ethics came from one’s internalized values and that being honest was a large part of what he does to stay ethical. He encouraged the children to not give into peer pressure when making decisions, and do their best to make what they felt was the right decision. He also encouraged them to always keep their word. Although such a practice may cause them to lose money now, it will almost always pay large dividends in the future. The final point Dr. Dean made was that when you make the ethical choice you will always feel better about yourself in the long run.

Linda Garrow
Pittsburg High School
“Pitt High Supply”

Pittsburg High School's “Pitt High Supply” store was established through the cooperation of the school’s choral director, Susan Laushman, and her vocal students in conjunction with Linda Garrow and her marketing education DECA students. The goal of Pitt High Supply was to provide the high school students, faculty, administrators and support staff with a large selection of school supplies and snack products at competitive prices. Profits from the business were used to pay expenses for vocal students to attend choral competitions and for marketing education students to attend the DECA competition.

Profit was not the only reward for these student entrepreneurs, for they gained valuable business experience through their participation in this “retail laboratory”. Just as any entrepreneur should, they planned and set goals, surveyed their target market, negotiated contracts, located suppliers, developed an advertising campaign, scheduled employees work schedules, and kept accurate records. They also learned some valuable lessons from their chosen entrepreneur mentor.

Mark Fincher, owner of the successful Studio 1 photography business, was selected by the students because of the quality photography work he does with the local schools and because of his dedication to his work. As he told his entrepreneurial story he stressed the importance of long hours of work and the developing of a good relationship with customers but above all he emphasized honesty, the most important ingredient to a successful business.

OUTCOMES FOR SIFE MEMBERS

While the goals of the Free Enterprise Foundation grants are focused on kindergarten through high school students, one must not overlook the benefits which the SIFE students themselves received from participating in the program. This was a learning experience for them just as it was for the younger students. It furthered their understanding of entrepreneurship and the free enterprise system while as they developed skills which will benefit them in their chosen careers and throughout their productive lives.

SIFE students were responsible for developing, implementing, overseeing and evaluating this entire program, tasks which required them to be creative, to be focused, to set goals, and to engage in careful planning. As they worked with local businesses and entrepreneurs they honed their communication skills as well as their skills of persuasion. They sold their ideas and encouraged the executives to participate in the program as mentors, as advisors, and as contributors to the Foundation which funds the grants. They also learned the importance of teamwork and cooperation among members of their own group, but more importantly practiced cooperation among all the constituents involved in the projects (teachers, students, community leaders, business mentors, PSU advisors and involved parents).

Through this interaction with local businesses, the SIFE students came to better understand the qualities which a successful entrepreneur must possess. They learned the importance of having productive skills, of understanding how the free enterprise system is organized, the value of hard work, and the importance of a good education. More importantly, SIFE students came to understand and appreciate some of the inner qualities necessary in the development of an entrepreneur, qualities such as integrity, honesty, a sense of fairness, and the importance of returning something to the community which supports the entrepreneur. Perhaps the greatest reward SIFE students received from this project was the knowledge that they had become involved in the lives of young children and had made a major difference in their future lives. They learned that Good Business is Good Business.

USING FREE ENTERPRISE THEMES TO PROMOTE LEARNING: THE PARKIN EXPERIENCE

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ABSTRACT

The Arkansas State University Students in Free Enterprise [SIFE] team helped teachers in two Mississippi River delta towns develop, implement and test an innovative supplemental program in free enterprise that used business and agriculture themes to generate excitement for learning and success in school. Students in the districts were 83% African-American, with almost half of the people living well below the poverty line in one of the ten poorest counties in America. The most critical educational obstacle facing the children was a mastery of the basics: reading, writing, grammar and mathematics. Our SIFE team, with the financial backing of the Arkansas Farm Bureau, developed a series of innovative materials for grades kindergarten through six. These were introduced to 76% of the children in the school through a supplemental program that was voluntary for the teachers. The program utilized district teachers and College of Business and Education students from Arkansas State University to teach the lessons at grades Kindergarten through six.

A preliminary examination indicates that this program is an unqualified success. In 1989, the year before the project began, student test scores in the third grade reading section were at the 23rd percentile, meaning that only 23% of the students passed with minimum competency. These scores were some of the lowest in the state. The math score for the third grade was at the 26th percentile. The scores for the sixth grade were even worse at the 24th percentile for both math and reading. Midway through the project in 1993 the third graders were performing at the 94th and 95th percentile while sixth grades were at the 96 and 89th percentiles respectively. SIFE's direct involvement continues on a limited basis, but the teachers are making extensive use of the materials independently. The purpose of this research is to determine exactly what effects this innovative program had on students in the long run and why.

The first goal of this study was to determine if the program was responsible for the success of the students rather than other variables. For this purpose students were tested in three groups, one experimental group and two control groups. Variables included in the study were: sex; income level; performance in economics; a general aptitude test; instructor; program participation; and race.

A regression analysis using these variables was run using performance in the state reading and math tests for grades 3 and 6 as the independent variables. The only two factors that were significant predictors of success at the third grade level included: a) membership in the treatment group and b) general aptitude. More important, none of the other factors were significant including race, family income, sex or even the instructor. This provides a strong

indication that the SIFE enrichment program in free enterprise works with all groups of children, even the disadvantaged. The program teaches the importance of free enterprise in a creative manner and helps develop the basic skills and confidence required to succeed in the modern business world.

INTRODUCTION

The towns of Parkin and Black Oak are located in Cross County, Arkansas, on the Mississippi River, forty miles north of Memphis. These small towns with populations of less than 700 were once part of the thriving agricultural scene common along the delta. Now they are in economic decline. The area's public school population is 83% African-American and about 90% of the children qualify for the free lunch or reduced price Federal lunch program. The area is typical of many small towns along the delta with the problems of poverty: unemployment, despair, poor health/sanitation, dependence on public assistance, high drop-out and teen pregnancy rates. The most critical educational obstacle facing the children was a mastery of the basics: reading, writing, grammar and mathematics. No child will find any success without a command of these basic skills. In 1985 the state of Arkansas began administering the Basic Skills Test to the elementary students of the state. In Parkin, the results were bleak. Only 23% of the third grade students could pass the reading comprehension test at their grade level, the state average was 80%. The mathematics scores were equally dismal with 26% passing the diagnostic test. The sixth graders also did not perform to minimal standards, with reading and math scores at the 24th percentile. In past years frustrated administrators had created a special sixth grade class for students who were illiterate, ages 12 - 17, but were promoted because of age. These students were primary targets for a life of poverty and crime beginning when they dropped out of school at 18.

REFORM

A few years earlier the reform minded legislature, led by Governor Bill Clinton, began a process of change in education that would no longer tolerate these conditions. Money and standards were poured into the system beginning with college training programs for teachers and ending with a variety of reforms designed for the school district and the individual classroom setting. The faculty of the elementary school, under the leadership of Principal Jeannette Bennett and Superintendent Pete Whitby, worked as a team to devise a plan to improve the educational opportunities available to their students through a vigorous campaign to improve basic skills and ultimately end the need for that "special" sixth grade class. The SIFE developed enrichment program they chose for their schools emphasized the basics, but used two critical themes as the delivery vehicle; Free Enterprise and Agriculture. Teachers were trained in summer workshops conducted at Arkansas State University and through school site workshops to utilize the SIFE developed materials. SIFE students also conducted 15 enrichment seminars from 1991-1995 for the students at the school site.

SIFE Team members, under the direction of Sam Walton Fellow Dr. Larry R. Dale, had developed a series of materials for elementary grades under grants from the Arkansas Farm Bureau Federation. The materials included student workbooks and instructional teacher guides:

- 1) *Success: Your Personal Best,*
- 2) *Chickenomics: A Fowl Approach to Economics,*
- 3) *Drug Free Success,*
- 4) *Everything You Wanted to Know about a Deficit but Were Afraid to Ask, and*
- 5) *Goldie Locks and the 3 Bears.*

Also included were nine teacher guide and student publication sets:

- 1) *The Arkansas Adventures of Oliver the Owl,*
- 2) *Farmer Dan Works for You,*
- 3) *Life on the Farm,*
- 4) *Children's Literature Across the Curriculum,*
- 5) *Stay in School I and II,*
- 6) *Goldie Locks and the Three Bears Part II,*
- 7) five specialized units in math and science,
- 8) drug free lesson plans/SIFE drug free booklets, and
- 9) *Economics in the Newspaper.*

These were supplemented with a long list of student-oriented reading materials and teaching strategies. Teachers were encouraged to promote the program through the use of creative bulletin boards, learning games, worksheets, field trips and classroom learning experiences designed to help students master the basics and learn about the role of economics in their agriculturally-oriented world.

IMPACT OF THE CHANGE

The program transformed the classrooms of this small rural district. Achievement, as measured by test scores, improved dramatically. Table 1 demonstrates the improvement in test scores at the third and sixth grade level from 1985 to 1996.

By the 1994 school year the third grade scores had risen to 94% for math and 96% for reading, higher than the state average. The "special" class was disbanded in 1994, because it was no longer needed. The phenomenal success of this program brought the Governor down for a press conference and an Associated Press Reporter spent a week in Parkin detailing the success of this rural district as part of a series on educational reform. In 1991 the elementary school was honored by the National Center for Economic Education as one of 6 exemplary Developmental

Economic Education Programs (DEEP) in the nation. A preliminary examination indicates that this program is an unqualified success.

Year	Grade 3		Grade 6	
	Math	Reading	Math	Reading
1985	26%	23%	24%	24%
1991	35%	32%	32%	34%
1992	46%	50%	52%	50%
1993	67%	72%	69%	75%
1994	94%	96%	96%	91%
1995	94%	95%	96%	89%
1996	93%	92%	95%	91%

AN EMPIRICAL EXAMINATION OF THE RESULTS

The purpose of this research is to examine the record in-depth to determine precisely the effects developed from this innovative program. The first goal of this study was to determine if the program was responsible for the success of the students rather than other variables. For this purpose students were tested in three groups, one experimental group and two control groups. The experimental groups consisted of 98 students from several classrooms that had been exposed to 1 to 3 years in the program. Group two consisted of 38 students from the Parkin elementary school in classrooms that did not participate in the program, which was voluntary for the teachers. The third group consisted of 46 children from four other elementary schools in three districts from the surrounding area who had not participated in the program. A regression analysis was run on the data. The following dependent variables were considered in the study:

1.	Sex:
	Traditional evidence indicates that males tend to out-perform females in economics subject matter. If this trend holds it would indicate that the material might be more effective in working with boys than with girls.
2.	Income level:
	Family income was represented by a dummy variable based on student participation in the free lunch program. Students on free lunch were given a score of 1, reduced price lunch a score of 2, and self paid lunch a 3. Since a student's lunch status is based on family income and size it was the best indicator available to the researcher.
3.	Intermediate and Primary Tests of Economic Literacy (ITEL and PTEL):
	These tests indicated if economic knowledge increased through the program.

4.	A General Aptitude Test (GAT6 and GAT3).
5.	Instructor: A dummy variable was utilized to determine if the instructor was a critical variable.
6.	Program Participation: Dummy variables were used to represent program participation with: 1 the control group, 2 non-participating Parkin students, and 3 the test group..
7.	Race: A dummy variable was used to examine race as a factor with 1 representing Black, 2 representing Hispanic, and 3 representing White.

No other programs were started in the district with the basic skills thrust that needed to be tested for in the study. The independent variables used in this study were the student's Math Achievement Scores [grade 6 (MAS 6) and grade 3 (MAS 3)] and Reading Achievement Scores [grade 6 (RAS 6) and grade 3 (RAS 3)].

FINDINGS

A regression analysis, using the GBSTAT program, was used to determine if there was any relationship between math and reading scores and any of the other factors as dependent variables. The results are displayed in Tables 2 and 3.

Table 2				
Regression Results Using Math Scores (MAS 3 or MAS 6)				
	Primary Level		Intermediate Level	
Sex	9.48	[1.44]	.041*	[5.97]
Income level	.64	[1.93]	.91	[.81]
PTEL (ITEL)	1.19	[.71]	-.28	[.18]
GAT3 (GAT6)	.002*	[7.01]	.0035*	[8.78]
Instructor	10.18	[2.01]	12.12	[1.99]
Program Participation	.002*	[44.31]	.001*	[49.11]
Race	.33	[.94]	.18	[1.77]
Absolute value of t-statistic in brackets			*Significant at .01 level	
Table 3				
Regression Results Using Math Score (RAS 3 or RAS 6)				
	Primary Level		Intermediate Level	
Sex	1.11	[0.54]	.947	[1.02]
Income level	.74	[.03]	1.99	[.91]

PTEL (ITEL)	.09	[3.01]	.08	[1.16]
GAT3 (GAT6)	.037*	[17.88]	.055*	[28.11]
Instructor	15.12	[21.71]	18.92	[91.09]
Program Participation	.028*	[36.34]	.031*	[41.71]
Race	.36	[5.94]	.58	[2.07]
Absolute value of t-statistic in brackets				* Significant at .01 level

As shown in Tables 2 and 3, the factors that were significant predictors of success at the third grade level included:

1) Membership in the treatment group.

The single most significant predictor of success for both groups of students, using both the MAS3 and MAS6 scores as the independent variable, was being in the class in Parkin that received the reading and math enrichment programs. This provides a strong indication that the program was a critical factor in the improvement of the student's ability in those critical areas.

2) Score on the GAT.

The second most important predictor of success on the tests was general aptitude. As expected, brighter students did better in math and reading.

None of the other factors were significant. This provides a strong indication that the SIFE enrichment program works with all groups of children, even the disadvantaged. Interestingly enough the low income and Black children from the treatment group actually had a 2.3 average higher score than their White and higher income counterparts in the control group, even though race and income did not prove to be statistically significant as a predictor.

Basically the sixth grade group had the same results with treatment group membership and general intelligence as the most significant predictors. One other factor was a significant predictor, but only in the math formula, and that was sex, with boys doing considerably better than girls.

CONCLUSION

The results of this study indicate that disadvantaged students from a rural Delta school district noted significant gains in both reading and math scores as the result of a comprehensive innovative program developed by the Arkansas State University SIFE team that integrates free enterprise understanding with agriculture education, the social sciences (particularly economics) and language arts. Family income, teachers, race and, for the most part sex, were not significant barriers to learning with this program.

There was one significant exception noted at the sixth grade level where boys scored higher on the MAS 6 and the ITEL than girls. For some reason no difference exists at the third grade level. While further study would prove useful it would seem that we are doing something to discourage girls from finding math and the science of economics interesting by the time they reach their early teen years. If this is true then something needs to be done to reverse that trend.

Since 1993 these same materials have been made available to teachers in 137 districts throughout Arkansas. A number of schools have adopted the program and report that it has been improving student performance.

EDUCATING NATIVE AMERICANS ABOUT FREE ENTERPRISE

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ABSTRACT

This paper discusses two SIFE projects that address the goal of teaching the economically disadvantaged an understanding of the free enterprise system and how to be full participants in the system. In particular, the projects are aimed at educating young people who are members of the Navajo and Hopi Tribes, who, due to numerous social, economic, and political reasons, have many barriers to overcome in merging a traditional cultural society with a free enterprise system.

The SIFE team at Northern Arizona University developed and delivered two projects to Native American youths on the Navajo and Hopi Indian reservations. The first project was a two-hour money management/banking skills seminar that was taught at six different reservation high schools, reaching about 400 senior high school students. The seminar covered money management skills, including tips for being a good consumer and how to budget, in addition to information on the basics of opening and maintaining checking and savings accounts.

The second project was a small business curriculum for elementary school children. This experiential-based learning project was delivered to Cameron Elementary School on the Navajo reservation in addition to other local schools in Flagstaff, Arizona. SIFE students conducted six 45-minute modules over six weeks designed to teach children the fundamentals of running a business. The school children conceived, started and ran their businesses through at least one production cycle prior to the close-out session, where SIFE students helped the children determine their business profit and decide whether or not to continue their businesses.

INTRODUCTION

Northern Arizona University (NAU), located in Flagstaff, Arizona, with a population of about 50,000, is nestled in the foothills of the San Francisco mountains in the northern part of the state. The state of Arizona has twenty-one different Indian tribes and the city of Flagstaff is adjacent to both the Navajo and Hopi Indian reservations. These reservations consist of sparsely populated open land that is used primarily for communities, farming, livestock, and religious purposes. One of the major focuses of the rookie SIFE team at NAU was to target several projects towards the education of Native Americans about how businesses operate and how a free market economy works. Tribal members living on the reservation suffer from poverty, high rates of unemployment, and low incomes in comparison to the U.S. population as a

whole. A critical need for economic and business education exists due to extremely poor economic conditions, a severe shortage of business enterprises, a scarcity of financial institutions, the sovereignty of the tribes (which have their own tribal governments and tax systems) and an apathetic attitude among many tribal youths.

BACKGROUND ON THE NAVAJO AND HOPI TRIBES

The Navajo tribe has the largest land base of any tribe in the United States, covering 25,351 square miles in the states of Arizona, New Mexico, and Utah with a population of 219,198 members¹. The Hopi Tribe has a land base of 1,622,511 acres with 7,863 members⁴. Currently, economic conditions on the reservations are very poor, in large part due to the lack of basic infrastructure necessary for economic development. Navajo housing units lack basic modern necessities with 50.85 percent without complete plumbing, 46.95 percent without complete kitchen facilities, and 77.5 percent without telephones.¹

Due to the lack of a sound economic base, unemployment ranges from 38 to 50 percent on the Navajo Reservation and 65.37 percent on the Hopi Reservation. Per capita income for the Navajo Reservation is \$4,106 and \$4,566 for the Hopi Reservation. As a result, the percentage of Hopis and Navajos living below the poverty level is over 56 percent. Due to the scarcity of business enterprises on the reservation, the bulk of Native Americans' personal income is spent in bordering towns and cities. The Navajo Nation Office of Economic Development estimates that as much as 70.6 percent of personal income leaves the reservation.

BARRIERS TO ECONOMIC DEVELOPMENT

The sovereign status of Indian tribes has, in some ways, contributed to the lack of reservation economic development. As government entities, tribes are immune from lawsuits by banks and other financial institutions. As a result, land and other assets cannot be pledged as collateral because "the trust status" prohibits their ownership from being transferred to non-Indians.² However, in certain cases the "trust status" can be waived. This has been occurring with increasing frequency to enable individuals and businesses to obtain loans. Sovereignty also means that each tribe has its own government structure complete with taxing authority and control over land use. Individuals cannot own land on the reservation. Therefore, anyone wishing to start a business must go through a complicated and lengthy site lease process in order to locate a business on a particular site.

Another impediment to economic development is the fact that banking institutions are few and far between on reservations. The vastness of the land base and the sparse population of the reservation makes it economically inefficient for banks and other financial institutions to locate there. The Navajo reservation has four financial institutions in three states to serve the needs of its people and "these institutions are far from adequate to meet the needs of the Navajo people."³ Meanwhile, the Hopi reservation currently has no major banking institutions on its lands.⁴ The scarcity of existing financial institutions on the Navajo and Hopi reservations also

contributes to the lack of understanding Indian residents have regarding fiscal responsibility, the value of savings and investment, and the intermediary function of banks.

The complicated legal arena under which tribes operate is another hindrance in the development of reservation businesses. Since tribes must operate under several laws (federal, tribal, and state), a large amount of legal red tape must be overcome by lending institutions. In general, tribes are exempt from U.S. laws that allow a creditor to seize personal assets as collateral when a person defaults on a loan.⁵ Personal loans to residents of the reservations typically come from family or friends.

NEED FOR ECONOMIC EDUCATION

Traditionally, there has been little private sector business development on reservations due to the lack of an existing infrastructure conducive to and supportive of the success of reservation businesses. Hamp Merrill, Coordinator of the Arizona Office of Indian Programs, compiled the following list of reasons for the lack of free enterprise on the reservation: “lack of continuity in tribal government; lack of direction from tribal government; lack of experienced managers to run businesses; lack of business training; and the lack of access to marketplaces.”⁶ As a result, a great need for education about how a free market economy and businesses operate exists. Additionally, as the reservation economies develop, the demand for financial services is increasing, invoking a need to educate the Native American population about financial markets.

Today’s Indian youth struggle to balance their Indian tradition, culture and dismal economic reality with those of modern America. Young people on the reservation find it difficult to obtain basic job skills while in high school since few businesses such as fast food restaurants are located on the reservation. Unemployment is high and the impetus to better oneself by getting a good job is an unrealistic expectation since the means often do not exist.

As a result, many reservation high school students have a pessimistic attitude about their futures. The following education statistics are a reflection of this apathetic mind set. The percentage of the Navajo population 25 years or older with a high school diploma is 43.5 percent. Reservation high schools report that approximately 15 percent of their high school graduates apply to a four-year college and only 2.9 percent of the students who attend a four-year degree program successfully achieve a bachelor’s degree or higher.⁷ Thus less than two-tenths of one percent of Navajo high school students successfully complete college. The education statistics for the Hopi tribe are similar; 62.6 percent of students graduate with a high school degree but only 3.3 percent of tribal students who start college successfully attain a bachelor’s degree or higher.⁸

SIFE EDUCATIONAL PROJECTS IMPLEMENTED ON THE RESERVATION

The Northern Arizona University SIFE team developed and implemented two projects focused on educating members of the Navajo and Hopi tribes. The first is a two-hour money management/banking skills seminar that was delivered to over 400 students at six different reservation high schools. This project addresses the goal of teaching the economically

disadvantaged how to be full participants in a free enterprise system by teaching fiscal responsibility, the value of savings and investment, and the intermediary function of banks. The second is a small business project and curriculum for elementary school children which addresses the goal of teaching the economically disadvantaged an understanding of how to operate a business.

An added dimension to both of these projects is the fact that four of the NAU SIFE team members are Native Americans. Two graduate students: Sandra One Feather (Master of Business Administration - Oglala Lakota/Navajo tribes) and Ron Lee (Master of Public Administration - Navajo tribe) and two undergraduate students: Pearl Begay (Business Administration - Navajo tribe) and Brenda Van Keuran (Business Administration - Navajo tribe) participated in the projects. These students provided positive role models for reservation youth by helping to deliver the presentations and answering questions during and after the sessions. Additionally, media coverage of the Projects was provided by several local newspapers including: *The Navajo Times*, *The Navajo/Hopi Observer*, and *the Gallup Independent*.

MONEY MANAGEMENT/BANKING SKILLS SEMINAR

This project was delivered by SIFE student members in a two-hour seminar that focused on teaching high school seniors on the reservation how to manage money and acquainting them with a knowledge of basic banking skills. Six reservation high schools and Indian dormitories were targeted this semester including Hopi High School, Tuba City High School, Grey Hills High School, Flagstaff Bureau of Indian Affairs Dormitory, Winslow Bureau of Indian Affairs Dormitory, and Mingus High School. The number of senior students attending ranged from 30 to 80 at the various high schools, with a total of approximately 400 students. Based on attendance estimates made by the high school counselors, the number of SIFE students assigned to each location varied to ensure that enough students were on hand to work with the high school student groups. A total of 16 different SIFE students were involved in the delivery of this project at the six seminar locations.

Funding for the project was obtained from Bank One of Arizona. Executives from the bank helped SIFE students prepare the seminar and provided materials consisting of hand-outs on money management, a budget planner, and sample blank checks.

The content of the seminar consisted of a one-half hour lecture on money management skills, including ten basic rules of money management, tips for being a good consumer, and how to prepare a monthly budget (including a discussion of monthly income, fixed and variable expenses). This was followed by a one-half hour interactive group exercise where the high school students were divided into small groups to prepare their own budgets. Some groups were instructed to prepare the budget as if they were college students and others as if they were going to live on their own and work to support themselves. SIFE students worked with each group to develop their budgets, which then were critiqued by the group as a whole. Following a break, the lecture resumed on the basics of opening and maintaining checking and savings accounts. This was followed by an activity where students practiced how to write and endorse checks.

Finally, the value of saving was demonstrated with some numerical and graphical examples of the compounding of interest.

The reservation high school students knowledge about money management and banking also was measured. A concept-matching quiz containing 9 questions was designed and administered to the high school students before and after the seminars. The mean pre-test score was 3.9 (43 percent) and the mean post-test score was 6.8 (76 percent) with 41 percent of the students scoring 100 percent on the post test.

Feedback obtained from both high school students and counselors has been overwhelmingly positive. On a scale of 1 to 3 with 1 being No Value and 3 being Very Valuable, 87.5 percent of the students responded that the seminar was very valuable in increasing their personal knowledge of money management. Comments from the students included: "Had so much fun", "I really learned a lot from SIFE", "I really enjoyed it", and "This was a very good lesson and I think I have learned a lot". The high school counselors also filled out a workshop evaluation form. On a scale of 1 to 5 with 5 being excellent and 1 being poor, the workshop scored a perfect 5 on all workshop dimensions including content, delivery, level, pace, and overall workshop evaluation. Additionally, the counselors have requested that we return this semester to repeat the workshop for the younger high school students, as well as repeating the seminar each year.

ELEMENTARY SCHOOL BUSINESS PROJECT

The NAU SIFE team developed and implemented an Elementary School Business Project. The pilot project was conducted last fall semester for a combined fourth, fifth and sixth grade class at a charter school in Flagstaff. This project is currently being delivered to the sixth grade class at Cameron Elementary School on the Navajo reservation, in addition to two classes in the Flagstaff Public Elementary Schools.

The objective of the project is to teach students the fundamentals of running a business. This is especially important for Native American youth as it exposes them to the concept of business ownership as a viable career choice. Due to the scarcity of businesses on the reservation, these children typically have not been exposed to a market based economy, nor to entrepreneurial role models.

The project consists of curriculum delivery (six modules taught over six weeks) and assistance with the formation and operation of a small business. The elementary school students, organized into groups, developed and managed a service or production business. When possible and with the cooperation of the classroom teacher, the business project was tied into students' classroom learning in the areas of math, writing, and computer skills.

The curriculum modules were designed with the intent of teaching several key concepts in each 45-minute session. SIFE students utilized role-playing, skits, and interactive dialogue with the school children to teach the students an understanding of key concepts. At the end of each module the students were given an assignment to have ready for the following week. Following is a brief description of each of the six core modules. (More detailed project descriptions and related supplementary materials can be obtained upon request from the authors.)

Module 1:	Concept of a Business
<p>The key concepts taught in this introductory session included service or product, entrepreneur, demand, and government vs. private business. The school children, organized into small groups by their teacher, were assigned the task of deciding what type of business they wanted to operate. SIFE students helped with the generation of ideas and asked that the children finalize their decisions by the following week.</p>	
Module 2:	Market Research
<p>SIFE students discussed ways to determine if demand for a product or service exists. They helped the children design a business survey with instructions to administer the survey (to friends, family, or neighbors) and bring back their results the next week. Included in the survey were questions relating to how much customers would be willing to pay for the products or services.</p>	
Module 3:	Product/Service Cost
<p>The cost of supplies and labor (wages) and how to price a product or service were discussed. The school children were assigned the task of finding out how much various raw materials, supplies, and resale products would cost for their businesses.</p>	
Module 4:	Income Projections
<p>Information gathered in modules 2 and 3 were utilized to derive product/service prices and quantities. Key concepts defined were revenue, expenses, and profit. The classroom teacher integrated this material into a number of math lessons.</p>	
Module 5:	Financing
<p>Having already determined how much money they will need, the school children wondered where the money would come from to start up their businesses. The key concepts introduced include savings, loans, interest (cost of money), and equity investment. In most cases the money comes from the children's allowance, and loans or equity contributions of their parents.</p>	
Module 6:	Marketing
<p>Advertising, promotion, and customer service were discussed in this module. The children designed their own signs and advertisements. In most cases the advertising was done at the school and in flyers sent home to parents.</p>	

Following these six modules the school children started their businesses with the help of SIFE students, the classroom teacher and parents. Our goal was to help the students establish their businesses in order to run them through at least one production cycle. Some of the start-up businesses included a school snack bar, holiday gifts and ornaments, jewelry, a school yearbook,

candles, and sports trading cards. Typically, the most convenient location for these businesses was at the school itself.

After the students experience the operation of their businesses, the SIFE students followed up with a classroom close-out session. In this session they helped the school children compute their profit. Also discussed was whether or not they would continue to operate their businesses and how the money earned would be used to pay back loans and be distributed to the workers and equity holders. To conclude the project, the SIFE students rewarded the school children with certificates of completion and pencils or stickers.

Finally, a pre and post test consisting of 16 concept-matching questions was administered to the class to measure what the students learned from the business project. The mean scores on the pre and post tests at Mountain Elementary School were 58 and 77 percent respectively. Additionally, the verbal feedback from the children, their parents and the classroom teacher was very enthusiastic. This semester, the mean pre test scores at the two Flagstaff Public Elementary School classes was 57 percent as compared to a mean pre-test score of only 34 percent at Cameron Elementary School on the Navajo reservation. Since these projects are currently underway, the post tests have yet to be completed.

FUTURE PROJECT APPLICATIONS

Based on the enthusiastic and overwhelming response to these projects, our SIFE team continually receives requests from other schools for implementation. Counselors and teachers at the reservation high schools have requested that we repeat the money management/banking skills seminar every year for their senior high school students, in addition to repeat performances for the younger high school students. This semester, requests from two different classes at a Flagstaff public elementary school for our elementary school business project also were received and fulfilled.

Future projects targeted to reservation students and schools currently are being explored. The National Education Center for Women in Business in Greensburg, Pennsylvania has been contacted so that SIFE can host a Native American Young Women's Entrepreneur Camp next year in conjunction with the Center for American Indian Economic Development at Northern Arizona University. Additional seminars focusing on the role of banks in business formation and operations are in the planning stages.

ENDNOTES

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 3. *Tiller's Guide to Indian Country: Economic Profiles of American Indian Reservations.* Edited and compiled by Veronica E. Velarde Tiller. BowArrow Publishing Company. Albuquerque, NM, USA, 1996, pg. 217.
 4. *Arizona Department of Commerce: Community Profile: Hopi Indian Reservation.* Arizona Department of Commerce, Phoenix, AZ, USA, 1994.
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- Note: More detailed project descriptions and related supplementary materials can be obtained upon request from the authors.

THE IMPACT OF CHILDREN'S THEATER ON THE COMPREHENSION OF FUNDAMENTAL ECONOMIC CONCEPTS

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ABSTRACT

"All the world's a stage and all the people are merely actors" is a familiar Shakespearean quote that identifies a unique characteristic of human behavior: people of all ages enjoy interacting with others in a theater setting. Interaction can range from a prominent role in the presentation to answering questions addressed by the characters. Children's theater is an exciting method of involving audiences in a specific situation by soliciting responses from the students to help the actors solve their problems. The interaction in children's theater can serve as a powerful teaching mechanism.

The purpose of this paper is to analyze the impact of children's theater on elementary school students' understanding of fundamental economic concepts and describe methods of implementing this dynamic teaching method. The goals of this project were to prepare and present a humorous play explaining the free enterprise system for elementary school students, and to measure the impact this teaching tool had on their basic economic knowledge. Although children's theater has been used in the classroom for students to experience drama has frequently been cited in the literature, the impact that interactive teaching has on student comprehension is limited.

In this paper, the historical aspects of drama in the classroom and how it has been used as a pedagogical technique for teaching economic concepts are discussed. Next, the objectives for using an interactive approach with students are identified and the method of preparation and presentation are explained. The results of the pretest and post-test instruments are summarized. Finally, conclusions and implications of children's theater for educational purposes are offered.

HISTORICAL PERSPECTIVE

People have always been fascinated by theatrical presentations, whether it was a few children reenacting their day or a full scaled production on stage. As John Allen (1979) explains, much of our history has been passed along through theater. For example, the ancient Greeks frequently presented plays that depicted military conquests to the citizens so they would learn of such events. Elizabethan grammar schools used a considerable amount of acting in Greek and Latin as well as in English. Additionally, Jesuits in the seventeenth and eighteenth centuries used drama as a method of portraying the spirit of humanism in order to teach their doctrines to the people.

As important as theater has been to providing both literary and educational experiences for adults, it has only been this century that children's theater has become recognized and accepted as a method of education. During this time, children's theater has flourished in America both as an artistic form and as an educational vehicle. However, it was not until the 1940's that theatrical groups experimented with the actor-audience relationship to determine the most suitable form of presentation. According to Goldberg (1974), innovative acting companies found that the actors' ability to improvise, work as a team, and to devise programs with an important message are all essential to accomplishing education through theater. Although many acting groups have successfully combined all three elements, Goldberg noted that educators and professional theater people were suspicious of each other, and therefore, the employment of such acting companies in the classroom has remained limited.

The educational importance of creative theater cannot be minimized. Robert Leech (1964) in his dissertation on the education of theater emphasized the need for recognition by the adult community to accept the creative approach of the theater. This philosophy of theater for children proposes to enrich children's lives by allowing them the opportunity to participate in the production. Leech purports that drama must possess sincerity, simplicity, excitement, and imagination in the authorship of the script, technical elements of the stage settings, and the delivery by the actors. The coordination and implementation of a play that incorporates all these aspects can have long-term impact for the children.

USAGE OF CHILDREN'S THEATER AS A PEDAGOGICAL APPROACH

Children's theater is a dramatic technique that provides children the opportunity of involvement by encouraging them to answer questions regarding the characters or their situation.

According to Goldberg (1974), children's theater is a formal theatrical experience in which a play is presented to an audience of children. The goal of children's theater is to provide the best possible theatrical experience for the audience by employing all of the techniques and principles of the theater, using some of them in special ways. Nearly always, children's theater is reserved for performance by adult actors.

The key factor for the success of teaching economics to children is motivation (Schug, 1973). Children's theater is a means of tantalizing their interest to learn about the characters and their dilemma. Children and adults alike are captivated by watching and interacting with actors who portray characters that are humorous, mysterious, or dangerous. Bolenbaugh (1989) found that incorporating drama into economic teaching provided the motivation for learning. Moses Goldberg (1974) stated that pedagogically, children's theater can be a powerful force with far-reaching consequences. Through children's theater, learning is increased by the motivational situation of an enjoyable diversion over the typical formal classroom. The play teaches indirectly by exposing truths and ideas to the choice of the spectator. Goldberg explains that the learning that occurs during a theatrical presentation becomes the learner's responsibility, by which such self-chosen learning is faster and more thorough than formal lecture.

According to Kenneth L. Graham (1963) there are five benefits to using theater to teach children: entertainment, psychological growth, aesthetic appreciation, the development of a future audience, and educational exposure. The educational exposure of economic concepts is enhanced because of the interaction of the actors with the children. Participation results in acquiring new information or enhancing existing knowledge (Redington, 1983). If children view the play on film, there is less opportunity to interact with the actors, thus reducing the motivational situation and reducing the potential for learning. However, the use of live actors who incorporate opportunities for students to comment and respond to situations and questions posed by the characters, offers the student the motivation to participate in the story of the play.

Like drama, teaching often has an entertainment quality in order to gain and maintain students' attention and interest. If students are motivated to pay attention and respond to what is being explained, they are more likely to comprehend and apply that information later (Shotick and Walsko, 1997). Children's theater is an ideal way to captivate students and encourage them to participate in the action. Opportunities for children to interact with the production is important to maintain their attention. By constructing a plot, conflict, and resolution regarding economic choices in the dialogue of the play, children learn these abstract concepts. According to Anderson, Boyer, and Robidoux (1982), theater production develops enthusiasm for understanding economic concepts. In their project, a script containing six economic concepts was written by their students. The use of a puppet and narrators were employed in the presentation. The remaining students in the school who viewed the resulting theater production tested approximately 30% higher than the similar student body who did not view the production.

Economics is a discipline that has long been labeled the dismal science. As Watts and Smith (1989) point out, it is very hard, if not impossible, to incite excitement to learn a gloomy discipline. However, with some creativity and enthusiasm, the abstract concepts can be applied to real life examples to which children can relate. The essence of economics is understanding the decision-making process and be able to apply it to specific situations. Learning to make good decisions can often occur when students witness the repercussions of poor decisions or the success of good decisions through the characters' experiences.

OBJECTIVES OF CHILDREN'S THEATER FOR TEACHING ECONOMICS

To implement children's theater into the teaching of economics, four objectives were established. The first objective was to explain basic economic concepts to elementary students and to provide them with an opportunity to apply that knowledge to their own personal background. The play was written so that one character would explain productive resources to another character and then ask the student to tell what they produce at home and at school. By describing the concepts through enactment and then encouraging the students to relate the concepts to personal experiences, economic education was greatly enhanced.

The second objective of this project was to motivate children to learn about making decisions. The use of silly animal characters in the play was an attempt to generate enthusiasm for studying basic facts about issues and problems that bear economic significance. By bringing

economic situations to life, students were able to identify with the economic problems and alternatives for solutions. The process of identifying with the characters motivated students to remain attentive and learn how these characters make important economic decisions.

The third objective was to positively influence children's attitudes about the free enterprise system. Through participation in the theater, young children learned how consumers and producers determine what is sold in the marketplace. The children were able to relate to such activities as shopping with a parent or watching them at work. Children are often directly involved in economic activity when comparing prices during a shopping expedition, producing a service or good when performing a task at home or at school, or saving for a more expensive item to be purchased later. These young children were able to relate to similar economic problems faced by the characters. Observing the play helped children to gain an appreciation of our economic system. Through interaction with the characters, children developed empathy for the difficult economic choices that family members must make everyday.

The last objective was to provide opportunities for role awareness. Through the characters, students became conscious that they are active participants in our free enterprise system. They often times emulate their parents and want to know about their roles in society. Children's theater allows the children to observe how decisions are made and develop an understanding of their roles as consumers and producers in our society.

ELEMENTARY STUDENT AUDIENCE

As children grow and develop, their tastes and preferences change. At early ages, six to nine years old, these young people are actively trying to make sense of their economic world (Ross, 1993). They are energetic, yet their attention span is quite short. Children at this age enjoy strong visual impressions that allow them to respond both physically and emotionally. Children's theater is an excellent teaching method to cultivate such reactions because both visual and auditory senses are stimulated. By receiving both visual and oral messages, children are motivated to direct their attention toward the action (Selwyn, 1995). Thus, the children concentrate on the actors' interactions and the information provided by the actors.

Children at this age are attracted to new ideas in a familiar setting. They are intrigued by their immediate environment in which they are continually learning to adapt. For example, children at this age enjoy stories and plays about animals with which they are well acquainted. The different reactions of the animals to different situations are fascinating to this audience (Goldberg, 1974). Thus, a children's play in which the actors are simple animals creates a comfortable setting in which the children can pay attention and enjoy learning.

METHOD OF APPLYING CHILDREN'S THEATER TO ECONOMIC EDUCATION

Children's theater plays can be produced from original manuscripts or other literary features. The play for this project was adapted from the *Master Curriculum Guide in Economics/ K-2*, entitled "Pinky's New Bow Tie." Originally a puppet play, the script was edited to be a theatrical production presented by college students from a local university. There

were two unique aspects of this play. First, a children's theater production with SIFE members at Bradley University was an exciting way to present the information. Second, the play offered many opportunities for the characters to solicit responses from the children concerning the application of the economic concepts. For example, the children were asked if they could think of natural resources that are used to produce goods and services. This interaction of the young children with the characters aided in maintaining the children's interest and encouraging them to think of other types of producers.

The advantages of using SIFE members to present the children's theater were threefold: 1) they were anxious to help teachers in the community; 2) many of them have some formal training in economics at the college level; and, 3) they were flexible to the time schedules to share their talents with young students. The children readily received the college students as actors in the play and replied to the questions. The college students' economic knowledge was helpful in directing the discussions that the actors had with the children.

EVALUATIVE METHOD

Pretest and post-test instruments were designed to measure the increase in children's comprehension of the economic concepts addressed in the play. The test instruments consisted of six multiple choice questions about fundamental economic concepts. These concepts included economics, money, education, businesses, consumers, and resources. The pretest was administered by the teachers the day before the production. The post-test consisted of the exact same questions as the pretest and was administered the day following the performance.

Over 2,000 elementary students viewed the play. However, due to the limitation of time to administer the pretest, the sample consisted of 768 students who took the pretest and 751 students who answered the post-test. These students ranged from first to fourth grades. The income level of these students' families varied across all levels. The average age of the teachers was 37 years old, indicating that younger teachers might be more willing to try different teaching techniques. Approximately 35% of the sample was comprised of parochial students and the remainder were students in the public school system.

In order to determine the significance of the play on children's learning, the student's t-test for differences between pretest and post-test scores was conducted for each school, each grade, as well as for the total sample. The appropriate degrees of freedom were applied to the specific cases at the 5% level of significance.

RESULTS

Test scores, on average, were significantly higher on the post-test than the pretest for all six questions. Each question on the post-test received a significantly higher percentage of correct answers than on the pretest. The relative frequencies of the correct responses by each question are displayed in Table 1. Of the children who participated in the entire project, 33% answered question number one correctly on the pretest, whereas, 61% answered that question correctly on the post-test. The first question focused on the definition of economics. It would

appear that children at this age do not have an understanding of the meaning of economics. This question received the greatest increase in correct responses on the post-test. This was particularly encouraging because economics as the study of choice was the focus of the play.

Table 1: Relative Frequencies of Correct Responses
($N_{\text{pretest}}=768$, $N_{\text{posttest}}=751$).

<i>Question</i>	<i>% Correct Pretest</i>	<i>% Correct Post-test</i>
1 - Economics definition	32.94	60.85
2 - Importance of money	58.72	74.17
3 - Staying in school	80.09	81.09
4 - Goal of a business	69.27	74.04
5 - Consumers	58.86	62.25
6 - Resources	51.04	62.45

More than 58% of the students in the pretest selected the correct answer to the second question regarding the importance of money; whereas, almost 75% selected the correct answer in the post-test. At such an early age, children are learning about money. The improvement on the post-test instrument would indicate that the children acquired some important information about the purpose of money. The third question received the greatest percentage of correct responses on both the pretest and post-test. This question pertained to the importance of staying in school in order to obtain a good job. This suggests that teachers, parents, and friends have reinforced the need to attain an education. The last two questions regarding consumers and resources received the smallest increase on the post-test. The high pretest score was attributed to the notion that children today have personal experiences as consumers at an early age.

Only 7% of the students answered all the questions correctly on the pretest; whereas, 19% answered all of the questions correctly on the post-test. This indicates that many of the students had acquired some understanding of fundamental economic concepts after having been exposed to the play. These results are displayed in Table 2. Before viewing the play, slightly more than half the students responded correctly to at least 3 questions. After viewing and participating in the play, almost three-fourths of the children answered at least 3 of the questions correctly on the post-test.

The total sample was divided by school and the means and standard deviations were computed. These descriptive results are shown in Table 3. Every school had a significantly higher post-test score. St. Phil's school had a mean of 4.81, the highest average score of all the schools in the pretest. This school also received the highest average score in the post-test, 5.19.

Every school demonstrated an increase in their post-test scores after participating in the children's theater. This would indicate that regardless of the income, educational environment,

or teacher attitude at the various schools, the students learned fundamental economic concepts from the play.

Table 2: Relative and Cumulative Relative Frequencies of the Number of Correct Responses ($N_{\text{pretest}}=768$, $N_{\text{posttest}}=751$).

<i>Number of Correct Responses</i>	<i>Relative Frequency</i>		<i>Cumulative Relative Frequency</i>	
	<i>Pretest</i>	<i>Post-test</i>	<i>Pretest</i>	<i>Post-test</i>
6	.07	.19	.07	.19
5	.22	.30	.29	.49
4	.25	.23	.54	.71
3	.21	.15	.75	.86
2	.15	.08	.90	.94
1	.08	.05	.98	.99
0	.02	.01	1.00	1.00

Table 3: Descriptive Results of Pretest and Post-test by Schools

<i>School (sample size)</i>	<i>Pretest</i>		<i>Post-test</i>		<i>T-value</i>
	<i>Means</i>	<i>S.D.</i>	<i>Means</i>	<i>S.D.</i>	
Dunlap (60)	4.17	1.51	4.94	0.91	3.21**
Illini Bluffs (61)	3.76	1.23	4.60	1.21	3.79**
Mossville (23)	3.22	1.51	4.22	1.65	2.14*
Northmoor (117)	2.82	1.47	3.58	1.64	3.78**
Princeville (111)	3.80	1.29	4.32	1.40	2.87*
St. Phil's (52)	4.81	1.05	5.19	1.21	1.68*
St. Thomas (194)	3.50	1.34	4.19	1.39	4.97**
SVDP (79)	3.87	1.32	4.55	1.15	3.43**
Woodrow Wilson (71)	2.31	1.16	2.96	1.76	2.93*

The average scores for each grade are displayed in Table 4. Post-test scores were significantly higher for each grade level. The average number of correct answers on the pretest for fourth graders was 4.47, the highest score for all four grade levels, which would be as expected. Post-test scores for all grade levels increased after having viewed the play, suggesting that the play was appropriate for these four grades. The second graders had the most interesting scores. Although they received the lowest pretest and post-test scores, the increase in post-test scores for the second graders was the greatest of the four grades. This indicates that the second graders in this sample had received less instruction in economics than the other

grades before participating in the play and therefore, they had the most potential to learn from the play.

Table 4: Descriptive Results of Pretest and Post-test by Grades.

	Pretest		Post-test		T-value
	Means	S.D.	Means	S.D.	
Grade (sample size)					
First (127)	3.19	1.32	3.91	1.44	4.09**
Second (209)	2.81	1.43	3.67	1.46	6.08**
Third (250)	3.74	1.29	4.47	1.25	6.03**
Fourth (182)	4.47	1.21	4.98	1.22	3.94**

Results from the pretest and post-test for all participants can be seen in Table 5. As a whole, the entire sample answered 3.61 questions correctly, on average, on the pretest with a standard deviation of 1.45 questions. The children answered 4.16 questions correctly, on average, on the post-test with a standard deviation of 1.44 questions. The entire sample received a significantly higher post-test score after having been exposed to the children's play.

This would indicate that children's understanding of economic concepts had increased due to the children's theater at all schools and at every grade level.

Table 5: Results of T-tests of the Entire Sample: Pretest and Post-test Scores

	Pretest		Post-test		df	T-value
	Means	S.D.	Means	S.D.		
Total Participants	3.61	1.45	4.16	1.44	1.84	8.12**

CONCLUSIONS AND IMPLICATIONS

The objectives of using children's theater to teach economics were fourfold. First, fundamental economic concepts were defined within the dialogue of the play and interactive questions were addressed to the students for their participation. From the testing procedure, it is evident that the students increased their understanding of economic concepts. Second, the interaction of the characters with the children provided them with an opportunity to think about the decision making process. Encouraging the students to discuss examples of making economic choices motivated the children to analyze the impact of such decisions.

Third, to create a positive attitude towards our economic system, the characters in the play discussed the benefits of the free enterprise system and how those advantages pertain to them. The children learned that money is an important means of distributing goods and services in our economic system. Finally, the characters taught the students about their economic roles

by enacting the processes of consuming and producing. Recognizing familiar situations in which the children have been involved enhances their understanding of their roles in our society.

Children's theater can be used to integrate economics into the social studies curriculum for elementary students. The use of theater can be valuable for teachers by presenting or reinforcing selective economic concepts. Few children know what economics is unless someone takes the time to define and explain it to them. The opportunity to combine economic content with theatrical entertainment has the synergistic effect of increasing their understanding of our free enterprise system.

Second graders had the lowest pretest score but demonstrated the most improvement in their post-test scores. In this sample, the seven year old children displayed the greatest capacity to learn using children's theater as a means of teaching economics. This would imply that this creative yet simplistic teaching method is best suited for this age.

Young children have an earnest desire to learn about their environment. Children are anxious to learn, but hate to be taught. Children learn best when they recognize and identify with the characters that the actors portray even though they are unaware that "teaching" is occurring. Thus, substantial learning can happen during the presentation of children's theater. Regardless of school, teacher, or grade, children can learn from participating in children's theater. This unique way of teaching provides opportunities for all types of children to learn about our free enterprise system.

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THE STUDENTS IN FREE ENTERPRISE FOUR STATE INVESTMENT CHALLENGE

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ABSTRACT

Students in Free Enterprise (SIFE) is a partnership between higher education and business whose primary objective is to promote an improved understanding of economic issues among college and university students through experiential, entrepreneurial activities. The educational impact of SIFE extends beyond its participating students, however, because SIFE also encourages these students to share this knowledge with their various publics. Students in local SIFE chapters essentially assume the role of an economic educator as they seek innovative methods to convey their economic knowledge to others in their communities.

On May 19, 1996 at Kansas City's SIFE International Expo, the entry from the Pittsburg State University SIFE team - the "Four State Investment Challenge" - was selected as the 1st Place Winner of the Shopa Foundation's Best Educational Project. The entry was selected in a triple blind reviewed process by three executives from 84 entries submitted for the special competition. The Pittsburg State University SIFE team received a 1st Place trophy and \$3,000 in cash for this award winning project.

This winning approach to teaching high school students about the importance of the financial markets in a free enterprise system is serving as a national SIFE model that can be followed to educate high school students about financial and economic issues while simultaneously reinforcing this knowledge among the 'student-teachers' and allowing these student-teachers to use their unique talents to develop innovative methods to convey their knowledge to others. It can be used by other rural (or urban) schools to teach the importance of the stock markets in a creative, innovative, and fun manner and at a very low cost.

OVERVIEW

Approximately 500 United States colleges and universities participated in the Students in Free Enterprise (SIFE) program in 1995-96. Each April, the national SIFE organization sponsors regional competitions in 12 cities across the U.S. and one international location. Typically, each region has four or five leagues consisting of six teams each. A corporate judging panel selects two winners in each league who advance, along with other regional winners, to compete the next month in Kansas City for the SIFE International Championship.

In a SIFE Regional Competition, students have a 30 minute forum to present the results of their free enterprise and entrepreneurial projects completed over the course of the school year. Approximately 90 Regional Competition winners advance to the SIFE International Expo. The top teams are featured in full page advertisements in several major publications. SIFE also sponsors several special competitions, separate from the main competition, that are sponsored by corporations or corporate foundations. One special competition is The Best Educational Project sponsored by the Shopa Foundation which carries a \$3,000 cash award for 1st Place, \$2,000 for 2nd Place, and \$1,000 for a 3rd Place finish.

INTRODUCTION

“Most Americans know that there is no such thing as a free lunch. The problem is most Americans have never been taught why.” The National Council of Economic Education stated over forty-five years ago that, “youth had relatively little understanding of how our market economy functions even though they were expected to perform as productive workers, knowledgeable consumers, prudent savers, and informed investors.” Is the situation any better now? According to William H. Donaldson, chairman of the New York Stock Exchange, “If America were an economics class we’d all be failing.” In a recent Gallop survey, a self-assessment of respondents’ knowledge of economics resulted in eight out of ten rating themselves as fair or poor (Parliament, 1996). Today the shocking fact is that fewer than half of the high school students have studied economics. Results from an economic literacy test given by PSU SIFE to students enrolled in a business course at three public regional universities showed a high score of 75 percent and an average score of 65 percent. This means that most of the adult and high school population do not even comprehend the most basic of economic concepts and issues facing the country. “The true effect of economic illiteracy is both pervasive and pernicious.”

This lack of knowledge regarding economic issues and consequence comes at a time when the rate of savings as a proportion of disposable income by Americans is at a low of approximately 4 to 5 percent. Children who don’t see the importance of savings, do not save or invest for their future. “The price of economic illiteracy is more than this country can afford: Young people unfamiliar with the basics of saving, investing, the uses of money and credit.” PSU SIFE wanted to address the issue of American students’ apparent lack of knowledge about savings and investing. The result was the “Four State High School Investment Challenge.”

According to the National Council on Economic Education, “The only way to develop an economically literate citizenry is through the schools, in the classroom, one teacher at a time, one student at a time.” PSU SIFE recognizes that students learn best by doing, so they designed a project that offered area high school students the opportunity to participate in a simulation designed to give a “hands on” learning experience that is a realistic, fun, and competitive exposure to the stock market. For nine weeks students test their investment prowess against others as they managed a mock portfolio initially valued at \$500,000. Students teams were evaluated by return on investment and competed for prizes and prestige. While the concept of

an investment game is not new to the educational setting, the PSU SIFE project was entirely developed and conducted by the PSU SIFE student members. This resulted in a learning experience for both the high school participants and the university students responsible for execution of the project.

The remainder of this paper is organized as follows. The next section describes the procedures used to implement this educational idea with the goal of providing the interested reader sufficient information so that they could use this project at their institutions. The results section presents the results of our pre- and post-test measures of the participants' stock market knowledge and their ending portfolio values. The last section includes recommendations for improvements in future investment projects.

PROJECT IMPLEMENTATION

The "Four State Investment Challenge" began in fall 1995 and is now in its third year. Initially the Investment Challenge involved classes at two local high schools. The second year saw the Investment Challenge expanded to ten schools in Southeast Kansas. This year (1996-97) twenty-four schools from the four state area (Arkansas, Kansas, Missouri, Oklahoma) representing 33 classes participated in the Four State High School Investment Challenge.

The Four State Investment Challenge involved months of planning by the PSU SIFE students. During the months of September to December, an outline of the project was developed. This preparation included establishing a budget for the project; finding a major sponsor for the project; signing up schools to participate in the Investment Challenge; securing local sponsors for each school participating; establishing the rules of the contest; developing work schedules to handle daily transactions once trading commenced; and preparing public relations/media materials. The students arranged for the local CBS television affiliate to act as the major sponsor for the Investment Challenge. This affiliate agreed to air 141, 15 second spots from February through March, including regular stories on each Friday's Evening News and Monday's Morning Show.

The SIFE students then focused on prizes for the top three teams, teacher stipends, educational materials, and administrative costs before establishing a budget for the project. The budget was a key factor in securing individual team sponsors. Each team participating in the Investment Challenge is sponsored by a business in their community. Letters explaining the Investment Challenge were sent to high schools in the four state area of Arkansas, Kansas, Missouri, and Oklahoma asking if a business or social studies class would like to participate in the Investment Challenge. The response was greater than expected, with many schools requesting that more than one class be allowed to participate. In fact, several high schools teachers contacted PSU SIFE requesting information after learning of the contest from colleagues.

By December a list of participating schools was finalized and included 24 schools in a four-state area within a 90 miles radius of Pittsburg State University. A PSU SIFE student was assigned as a liaison to each participating school. Local sponsors were then found for each school and schools were informed as to their sponsor. Table 1 presents the participating schools for the 1996-97 investment challenge.

Table 1: Participating Schools in the Four State Investment Challenge

St. Mary's-Colgan High School, Pittsburg, KS	Webb City High School, Webb City, MO
Siloam Springs High School, Siloam Springs, AR	Vinita High School, Vinita, OK
Franklin Technology School, Joplin, MO	Neosho High School, Neosho, MO
Carthage High School, Carthage, MO	Labette County High School, Altamont, KS
Galena High School, Galena, KS	Bentonville High School, Bentonville, AR
Riverton High School, Riverton, KS	Chanute High School, Chanute, KS
Miami High School #1, Miami, OK	Miami High School #2, Miami, OK
Miami High School #3, Miami, OK	Girard High School, Girard, KS
Oswego High School, Oswego, KS	Northeast High School, Arma, KS
Jasper R-5 High School, Jasper, MO	Bartlesville High School, Bartlesville, OK
Dewey High School, Dewey, OK	Commerce High School, Commerce, OK
Pittsburg High School, Pittsburg, KS	Southeast High School, Cherokee, KS

The next step for the PSU SIFE Investment Challenge Committee was to develop instructional materials for the participating teachers. PSU SIFE knew from the 1995-96 project that many of the teachers would need materials to supplement their limited knowledge of the stock market. To fill this need, PSU SIFE students prepared a 12 page set of teaching materials with overheads and pre- and post-tests.¹ In addition, PSU SIFE purchased for each participating school the *Wall Street Journal*, and for each class the Classroom Edition of the *Wall Street Journal*.

Each high school teacher received a teaching packet including the instructional materials, a list of participating schools, rules and guidelines, fax cover sheets, and the Dartboard, SIFE, and Standard & Poor's Top Ten Pick for 1997 portfolios. PSU SIFE recognized that the high school teachers were being asked to put in a considerable amount of time on this project thus each high school teacher received a \$50.00 stipend as a token for their efforts. Table 2 presents the contest time line and Table 3 the contest guidelines.

Table 2: Four State Investment Challenge Time Line

1.	January 12 to 18.
	Delivery of teaching materials and Investment Challenge Packets to Schools.
2.	January 21 to March 21.
	High school teachers administer pre-test (before instruction begins). High School teachers mail pre-test to PSU SIFE.
3.	March 23
	Investment Challenge trading period.
4.	March 23 to March 29.
	Final results and winners announced.
	High school teachers administer post-test and return the results to PSU SIFE.

Table 3: Guidelines for the Four State Investment Challenge

1.	The trading period was to be from January 21 to March 21 1997. Market hours are between 8:30 AM and 3:00 PM. Orders placed after the market closes will be processed at the stock's opening price the following day.
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2. Each team (class) will be given mock funds of \$500,000. Any unused funds will be held in a non-interest bearing account.
3. Each teams (class) may make an unlimited number transactions; however, teams should remember that each transaction incurs a commission charge.
4. Commission charges or: 1) trades of \$1 to \$50,000 incur a 1% commission charge 2) trades more than or equal to \$50,001 incur a 1/2% commission charge.
5. Teams must maintain a stock portfolio consisting of a minimum of five stocks, but not to exceed 15.
6. Trades require the following information: name of school, teachers name, company name of the stock, ticker symbol of the stock, what exchange the stock is listed on, the number of shares to be bought or sold and the price of the stock and/or range. Three methods are available for stocks to be traded 1) phone 2) fax 3) E-mail. Trades are executed at the time of the call or time logged on the fax or E-mail.
7. Each school on Monday morning will receive a summary of their portfolio's performance and their overall rank in the challenge. KOAM's Friday evening news and Monday's Morning Show will announce the top ten portfolio performances.
8. At the Contest's Finish the cash value of all teams (classes) portfolios will be calculated. The team's will be ranked based upon return on investment . The highest ranking team wins. If a tie should occur for either first, second or third, trading between tied teams will be extended one day.
9. Teams will compete against each other, KOAM Morning personalities, a Dartboard portfolio, S & P portfolio, and a portfolio consisting of 10 SIFE sponsors. Only the high school teams would be eligible to win the contest.
10. Teams could win two ways: 1) by having the highest ranking ROI 2) by beating the ROI of Dartboard, S & P and SIFE portfolios. The first through third ranked ROI by teams will receive brokerage accounts to actually invest in the stock market. This is "real money" in which they may make a profit or loss. The first place team will receive a \$1000 brokerage account, the second place team receives \$500 and the third place team \$250. The first place team also receives an expense paid trip to the Kansas City Board of Trade. Special prizes will be given to teams having a higher ROI than the Dartboard, S & P and SIFE portfolios.

Trading could occur from 8:30 a.m. to 3:00 p.m. so a school could call in buy and/or sell orders multiple times per day. Each transaction was logged as to the time it was received either by phone, voice mail, fax or E-mail. Transactions were entered by PSU SIFE students as time permitted, but the price used was the one that existed at the time the order was received by SIFE. We used the FastQuote listing on the Internet to determine prices.

The clerical process of checking price quotes and updating the data base was a learning experience for the PSU SIFE students; the trading volume initially seemed overwhelming. High schools were constantly calling to check on their standing, before determining their next moves. Any questions concerning transactions receive required PSU students to contact the high school to resolve the issue. PSU students found themselves working eighteen hour days to keep up with the paper work. By the end of the Investment Challenge the PSU SIFE students had developed work schedules and patterns to solve the bottlenecks created by the continuous trading. For both the high school students and PSU SIFE students, this instantaneous trading provided a glimpse into the real world complexities of investment management. Table 7 shows an example of a transaction report sent to a high school.

To make the contest even more interesting for the students, The KOAM Morning Show personalities selected a stock portfolio and tried to match wits with the students. Each Monday morning students could tune in to compare their team's results against the TV personalities as well as other teams. For schools having multiple classes participating, the interschool

competition adds initial incentive to perform at the highest level. PSU SIFE members created a Dart Board portfolio by throwing darts at the Wall Street Journal. They also created a portfolio consisting of ten SIFE National sponsors. Additionally, a portfolio of Standard and Poor's Top Ten Picks for 1997 was used for comparison purposes. Table 4 reports the Dart Board Portfolio, SIFE Portfolio, and S&P Portfolio.

Dartboard	SIFE	S&P Top 10 for 1997
Aldila	AT&T	3 Com Corporation
Alza	American Express	Columbia/HCA Healthcare
Casey's General Store	American Greetings	Conseco
Graco	Coke Bottling	Ensco International
Haggar Corporation	General Electric	Informix Corporation
Manugistics	Leggett & Platt	MBNA Corporation
Panavision	NPC International	Meredith Corporation
Polyvision	Rubbermaid	Pogo Producing
State Financial	Staples	Rhone-Poulenc Rorer
Sun Energy	Wal-Mart	TYCO International

\$500,000 will be invested evenly in each of the ten stocks at the start of the challenge, and this portfolio will remain unchanged throughout the challenge period. A 1 percent commission will be charged to both the purchase and the final sale of each stock at the beginning and end of the challenge.

RESULTS

From the point of view of the high school teachers and students, the investment challenge provided an opportunity to experience stock market dynamics. While tracking their stocks students were forced to pay attention to what was going on in the economic environment. One participating teacher best reflects the prevailing sentiment of the participating teachers:

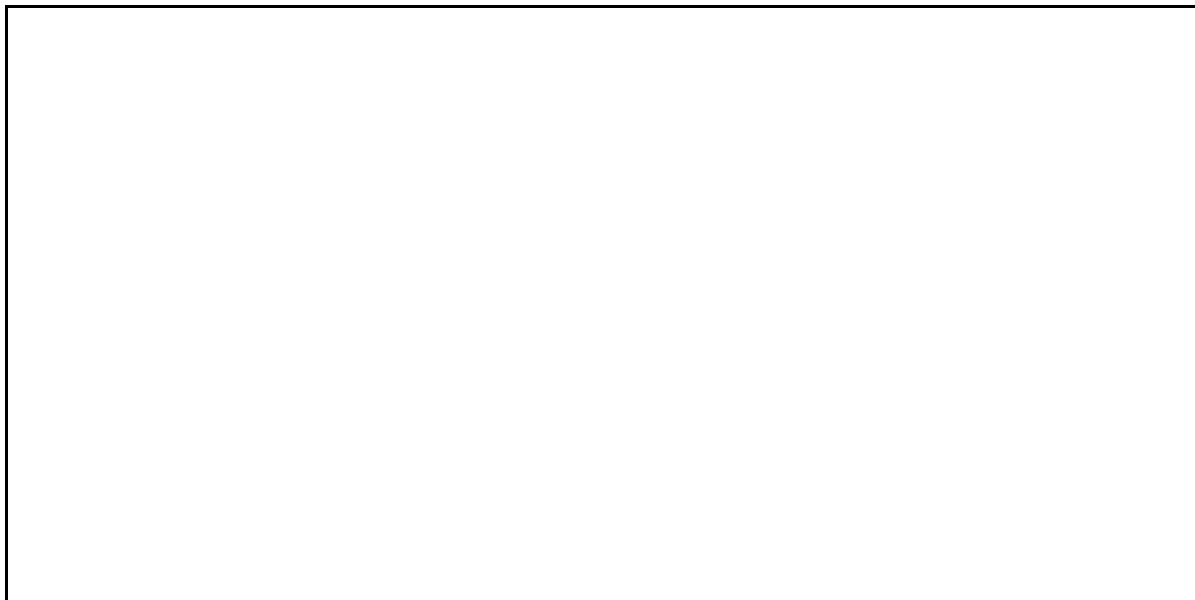
I learned a great deal myself. I have never actually been exposed to the Wall Street Journal or the buying and selling of stocks. I feel like I have gained a valuable information and understanding through the SIFE project.

The teacher went on to say that the assignment was exciting for the students, they began to feel as if they were in control of the \$500,000. She stated that the students, "... were very critical of every stock that was purchased, as well as discussing thoroughly each stock that was sold." Thus, students not only learned about the stock market, they also learned importance skills necessary to the successful functioning of a group. Pre- and post-test results also provide documentation of student learning. These results are presented in Table 5.

The financial results for the participants were also impressive. Table 6 reports the ending portfolio values for the 33 teams, ranked from low to high with the S&P portfolio serving

as the benchmark. The most striking feature of the results reported in Table 6 is that all 33 teams beat the S&P portfolio.

Table 5: Pre-test and Post-test Comparisons



What did the PSU SIFE students gain from participation in the Investment Challenge project? This experientially-based learning experience gave the students first hand experience running an educational project. The students were entirely responsible for all logistic problems involved in staging and executing the project. One example would be of the time involved in receiving buy and sell orders, up dating the team data base, and notifying teams of their standings and/or problems with the buy/sell orders. As is true in most teaching situations, the PSU SIFE students learned more about the functioning of the stock market by having to explain its idiosyncrasy to the high school students and their teachers. Negotiating skills were developed and “fine tuned” by the students in arranging team sponsorships and in negotiation with KOAM for their major sponsorship of the contest. Team work was the key to a successful Investment Challenge; student truly know what it is like to work as a team member and team responsibilities inherent in pulling off a successful project.

Table 6: Portfolio Values Relative to the S&P Top Ten



CONCLUSION

While this project explains the stock market and how it functions, it tended to emphasize the quick return which can be made in playing the market. Unfortunately the Investment Challenge is constrained by the use of classes whose composition may change from semester to semester, hence the nine week limitation. An extension of this project would be to establish high school Investment clubs so that a long-run approach to investing could be used. The project could also be expanded to allow participants to invest in alternative investments, such as options, futures, or commodities.

This is only the third year for the Investment Challenge and, although we have tried to make it as realistic and educational as possible, we realize there is always room for improvement. PSU SIFE encourages any questions or suggestions.

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index2.html; about2.html.
Parliament, C. 1996. Economic Literacy: An Important Goal. *Choices*. 4th Quarter: 4-6.

ENDNOTE

- 1 A copy of this material is available upon request from PSU SIFE at 316.235.4574 or by E-mail at jfreund@pittstate.edu.

Table 7: Sample Transaction Report Sent to Participants

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Date	Time	Ticker	Stock Name	Action	Shares	Price	Total Price	Commission	Price	Effect on Cash	Close	Value
1/24/97	Open	INTL	InterTel Corp	Bought	430	17	\$7,418	74.18	\$7,492	(\$7,492)	12	\$5,050
	Open	PEP	Pepsi Co.	Bought	465	35	\$16,275	162.75	\$16,438	(\$16,438)	32	\$14,880
		KO	Coca Cola	Bought	675	57	\$38,644	386.44	\$39,030	(\$39,030)	60	\$40,240
		ORCL	Oracle Corp.	KILLED	0	41	\$0	0.00	\$0	\$0	39	\$0
		MSFT	Microsoft	Bought	250	95	\$23,781	237.81	\$24,019	(\$24,019)	97	\$24,180
		DAL	Delta Air	Bought	200	82	\$16,475	164.75	\$16,640	(\$16,640)	85	\$16,900
		PNCL	Pinacle Micro	KILLED	0	5	\$0	0.00	\$0	\$0	3	\$0
1/27/97	Open	INTC	Intel	Bought	260	151	\$39,130	391.30	\$39,521	\$10,697,897	133	\$34,670
		MSFT	Microsoft	Bought	410	96	\$39,334	393.34	\$39,728	(\$39,728)	97	\$39,660
		NTK	Nortek	Bought	1245	25	\$30,503	305.03	\$30,808	(\$30,808)	23	\$28,010
		CEN	Ceridian	Bought	770	38	\$29,260	292.60	\$29,553	\$10,707,866	37	\$28,490
		PEP	Pepsi Co.	Bought	560	34	\$18,970	189.70	\$19,160	\$10,718,259	32	\$17,920
1/30/97	Open	DAL	Delta Air	Sold	200	80	\$15,975	159.75	\$15,815	\$15,815	85	\$-16,900
		PEP	Pepsi Co.	Bought	400	35	\$13,800	138.00	\$13,938	(\$13,938)	32	\$12,800
1/6/97	Open	HSY	Hershey	Bought	250	44	\$10,969	109.69	\$11,078	(\$11,078)	52	\$12,930
		PEP	Pepsi Co.	Sold	400	32	\$12,750	127.50	\$12,623	\$12,623	32	\$-12,800
		NKE	Nike	Sold	590	65	\$38,498	384.98	\$38,113	\$38,113	68	\$-40,260
		INTC	Intel	Bought	250	157	\$39,313	393.13	\$39,706	(\$39,706)	133	\$33,340
1/28/97	Open	INTC	Intel	Sold	260	138	\$35,750	357.50	\$35,393	\$35,393	133	\$-34,670
		BRKa	Berkshire Hath	Bought	3	35462	\$106,386	531.93	\$106,918	\$10,630,500	37300	\$111,900
		KO	Coca-Cola	Sold	675	62	\$41,513	415.13	\$41,097	\$41,097	60	\$-40,240

FREE ENTERPRISE EDUCATION MANUSCRIPTS

Manuscripts which appear in this section of the *Journal of Entrepreneurship Education* describe award winning, free enterprise education applications. These applications have been selected as the best examples of free enterprise education in the United States by the Students in Free Enterprise Competition Judges.

Design a Winning Web Site by Billye Hansen, of University of Central Oklahoma, was selected as the 1997 First Place Winner in the AT&T *Best Interest Project* Special Competition. The purpose of this special competition is for students to

develop methods of teaching others about free enterprise and electronic commerce through the Internet.

Business Partners: a Study of Entrepreneurial Growth by Arthur Fischer, June Freund and David O'Bryan, all of Pittsburg State University, tied for the 1997 First Place Winner in the BusinessWeek *Best educational Project* Special Competition. The purpose of this special competition is for students to develop outstanding business related educational projects which have the potential for application nationally.

College Students Becoming Involved in Corporate Ethics by Orville E. Bach, Jr. of Walters State Community College, was selected as the 1997 First Place Winner in the Rubbermaid Foundation *Good Business is Good Business* Special Competition. The purpose of this special competition is to teach others how ethically operated business benefits society.

Teaching as Learning: Undergraduate Students Design Simulation Activities on Free Enterprise for Elementary Aged Children by L. Wayne Plumly, Jr., Glenda L. Akins, and Donald K. Parks, all of Valdosta State University, tied for the 1997 First Place Winner in the BusinessWeek *Best educational Project* Special Competition. The purpose of this special competition is for students to develop outstanding business related educational projects which have the potential for application nationally.

DESIGN A WINNING WEB SITE

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ABSTRACT

When Students in Free Enterprise (SIFE) introduced a new competition during the 1996-97 school year, AT&T Best Use of the Internet, the University of Central Oklahoma's SIFE team researched web sites which would meet the following contest criteria: How successful were the students in using the Internet to teach others about free enterprise? UCO-SIFE's webmaster designed a site that won the international competition in Kansas City, Missouri, in May 1997 and a \$3,000 prize. The goal was to create a versatile web site that was easy to use with numerous links for students for research purposes, for businessmen who needed to update information, and for "John Q. Public." The web site was located at www.busn.ucok.edu/sife/index.htm. This paper describes basic rules for web sites as well as the winning web site design. The UCO-SIFE site highlighted national debt information links as well as social security solutions, because yearly entitlement increases affect the debt and the free enterprise system. From the web site, readers could link to 48 states with hundreds of links to newspapers in various cities as well as Canadian newspapers and news links. Readers could find business information from around the world through the UCO-SIFE Magazine Rack. Entrepreneur information, a government resource center, www reference sites, the Electric Law Library, links to small business files, Small Business Development Centers, and all Oklahoma State agencies were provided. UCO-SIFE has acquired www.sife.net for use in the 1997-98 AT&T Best Use of the Internet contest.

INTRODUCTION

No one knows how many computers are connected to the Internet, how many people have access to the Internet, or are actually accessing the Internet on a regular basis. By some estimates, 33 million people in the U.S. will be on the Internet by the year 2000 (Morlan, 1996, p. 18).

The Internet is playing a larger role in today's world in ". . .the dissemination of news, sports, weather, and business information and has become an important arena for activism and political campaigning" (Stipp, 1996, p. 9). Once used solely by scientists, computer programmers, and engineers, this worldwide interconnected computer network is rapidly becoming a standard medium for communication and research for everyone (Matyska & Zeliff, 1996).

Recognizing the importance of the Internet in teaching others about free enterprise, the Students in Free Enterprise (SIFE) organization introduced a new competition, which was

sponsored by AT&T, to over 500 international SIFE teams. Any SIFE team could enter AT&T's Best Use of the Internet by presenting a two-page summary describing their project and the number of persons reached by the project. The purpose of this special competition was to encourage and reward SIFE teams to use the Internet to teach free enterprise.

The Students in Free Enterprise webmaster at the University of Central Oklahoma designed their web site to be easily accessible with an easy-to-use system although it contained a vast amount of information. Business instructors and SIFE advisors can use this project to effectively provide ideas to their students on designing an award-winning web site.

Web Site Design

Style needs to be emphasized when designing a web page. "Style is the element that keeps the reader interested" (Williams, 1996, p. 133). Typically, browsers on the web "hop around from place to place while glancing to see what's interesting or useful" (p. 133). UCO-SIFE's webmaster created in a concise manner an eye-catching home page which showcased the SIFE logo, school/location/access information and bulleted links including a table of contents, information about SIFE, UCO-SIFE projects, people of SIFE, favorite web sites, a guest book, what's new section, and a SIFE search page.

One of SIFE's special competitions is the Jules & Gwen Knapp Charitable Foundation Halt the Deficit/Reduce the Debt contest. UCO-SIFE took a different approach to educating citizens about the national debt by teaming with Economic Security 2000, a national grassroots non-profit organization devoted to Social Security's reform. Yearly entitlement increases are tied to the debt thus affecting our free enterprise system. The Social Security Commission's December 1996 findings offered three alternatives to "saving" Social Security; the commissioners could not agree on one solution. UCO-SIFE wanted the public to be able to research information to form their own opinion on how best to save Social Security, so ES 2000 had a prominent place on the home page.

In creating an effective web page, some basic rules are universal:

Proofread carefully because there is a potential of millions to view it.
Place the important information first, grabbing the reader's attention with important content and perhaps a bit of "flash."
Use the KISS rule (Keep It Simple) and don't overuse graphic elements or pictures.
Aid readability with white space.
Include a return e-mail address.
Make each page one complete idea or thought (Williams, 1996).

There are numerous sources for effective web page designs. Some of the most helpful are:

www.cohums.ohio-state.edu/english/People/Locker.1/kolhome.htm

This page helps you learn to use the web, do research on the web, or design homepages

<http://www.wiley.com:80/Compbooks/horton/cookbook.html>

This lists several good sources for creating and designing web pages including *The Web Page Design Cookbook* by William Horton, Lee Taylor, Arthur Ignacio, and Nancy Hoft, John Wiley & Sons, Inc., 1996.

<http://www.lne.com/Web/>

This is the support site for the HTML and Java books written by Laura Lemay and published by Sams.Net.

<http://www.netscape.com/>

This site contains public-domain artwork for use on web pages.

http://k12.cnidr.org:80/janice_k12/k12menu.html

This web site features the latest in web research.

http://www.wiley.com/compbooks/catalog_19.htm

This site lists many books available on web site development.

UCO-SIFE Links

In addition to the previously mentioned features of the UCO-SIFE home page, other links are available to browsers. Some of these are listed below.

Additional national debt information. Web browsers can link to the Department of the Treasury, contact members of Congress, and get vital information on any member of Congress. Readers can link to economic information from the U.S. Census Bureau, find out what publications are available through the Government Printing Office, contact the White House, search the United States Code by topic, learn how their Senators and Representatives voted, find World Wide Web Federal information sources, link to News and Observer (a large news service on the Internet), and even find out how much the Canadian national debt is.

Newspapers/news. UCO-SIFE web page readers can link to 48 states with hundreds of links to newspapers in various cities. There are even links to Canadian newspapers and news links. Local business news is virtually at any browser's fingertips.

Magazine rack. Many magazines can be found through UCO-SIFE's Magazine Rack link, including *The Economist*, *USA Today*, *Barron's Online*, *Money Daily*, *BusinessWeek Online*, *Forbes*, *Investor's Business Daily*, *U.S. News Online*, *Time*, and *Fortune*. Readers can find business information from around the world.

Entrepreneur information. Of particular interest to small businesses trying to locate information on the web is the Information for Entrepreneurs link. Links on consumer protection; financial information; Internet marketing; patents, trademarks, and copyright; Small

Business Development Centers; family-owned business; international trade; legal information; small business start-up information; and tax information aid entrepreneurs in their information search.

Government resource center. This page links browsers to every government web site. One can find information from the Agriculture Department, Bureau of Labor Statistics, Census Bureau, Commerce Department, Internal Revenue Service, Social Security Administration, and the Government Printing Office, as well as many other agencies. The government BBS can also be accessed through the FEDWORLD link. There is even help in searching government World Wide Web sites.

The Electric Law Library. One reason our free enterprise system in the U.S. is so "free" is because of America's judicial system, so browsers can look up the law for a multitude of subjects. Business law, business regulations, and bankruptcy can be researched. Business forms and law practice forms are readily available through links.

Oklahoma State agencies. To aid Oklahoma businesses and consumers, 30 pages of names, addresses, and phone numbers can be found for any Oklahoma State agency through this link. Because the listings are alphabetical, locating a source is much easier than the blue pages of the telephone book which are listed by departments.

Small business files. Anyone wanting to become an entrepreneur or a more informed citizen can visit this web page and read about credit worthiness and types of financing, how to approach your bank, how to design a business plan, or link to SBDC Oklahoma offices. Within Oklahoma, many state government offices that can help small businesses are listed. State and national bulletin boards (BBS), set up to provide information for small businesses, can be found through this link. Addresses are shown for selected trade associations in different fields of interest in a link found on the Small Business Information Files page.

Small Business Development Centers. Not only can Oklahomans link to SBDCs, but a national search of Small Business Development Centers is also provided. Texas, Washington State, Wisconsin, California, Pennsylvania, Illinois, Tennessee, and Missouri SBDCs can be directly accessed.

Other links. Numerous other links are available to UCO-SIFE browsers. One can conduct a career search, find virtually every business address in the world, read about entrepreneurs who have made it big, locate any Zip +4 Zip Code, and find an address even if only a partial address is known. A click of the mouse links browsers to other SIFE web sites. Essays on What is Free Enterprise?, What is Students in Free Enterprise?, The Building Blocks of a Free Enterprise System, The "Free" of Free Enterprise, and The "Enterprise" of Free Enterprise teaches others about free enterprise, thus meeting the criteria set forth in AT&T's Best Use of the Internet guidelines.

Successful Web Sites

Because the Internet can be overwhelming to novice users and has been likened to ". . . entering the Library of Congress" (Matyska & Zeliff, 1996, p. 1), web site creators need to study successful web sites. Williams (1996) lists several award winning sites. What distinguishes

such pages are the use of common elements (such as toolbars), stunning graphics, open, readable designs, and, of course, lots of *useful* content (pp. 139-140).

<u>Site</u>	<u>URL</u>
The Coca-Cola Company	http://www.cocacola.com/
Town School for Boys	http://www.town.pvt.k12.ca.us/
Netscape Communications	http://www.netscape.com/
Cupertino Union School District	http://www.cupertino.k12.ca.us/
Apple Computer, Inc.	http://www.info.apple.com/education
Estonia (an international delight!)	http://www.edu.ee/

AT&T will sponsor three categories for the 1997-98 SIFE competition including using the Internet to teach youth, teach teachers, and teach aspiring entrepreneurs and business people.

UCO-SIFE has changed its address to www.sife.net to be able to expand its depth for these three categories.

CONCLUSION

The suggestions described in this paper could be integrated into any web page. One is only limited by the creativity and time constraints of the webmaster. With information via the Internet increasing and accessibility improving, the minds of learners are opened to a new and powerful source of information. Arranging that information into an award winning web site design becomes a challenge.

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- Williams, B. (1996). *The world wide web for teachers*. Foster City, CA: IDG Books Worldwide.

BUSINESS PARTNERS: A STUDY OF ENTREPRENEURIAL GROWTH

Arthur Fischer, Pittsburg State University

June Freund, Pittsburg State University

David O'Bryan, Pittsburg State University

ABSTRACT

This paper reports on the Free Enterprise Foundation created by the Students In Free Enterprise chapter at Pittsburg State University. The Free Enterprise Foundation is an ongoing program which was originally created to encourage PSU students to get involved with free enterprise education in the local community. It has allowed students majoring in both business and education to practice and hone their skills in realistic settings. While implementing the program, students have gained experience with activities (such as fund raising, grant application formulation, judging programs, and so forth) which they would not have been exposed to at the university level, but which may be very valuable in their careers.

THE PROGRAM

Overview

The Free Enterprise Foundation began when SIFE students approached local business people to see about raising money, which would then be given to schools in the region in support of teaching free enterprise concepts to K-12 students. Since then, eighteen corporate sponsors have helped to give \$41,595 for ninety grants to sixty-three teachers in fifteen schools in five local school districts. Much of the money raised also came from the group earnings of SIFE projects such as selling programs, food and drinks, and clothing items at home athletic events. Funds distributed were \$3,095 in school year 1993-94, \$6,250 in 1994-95, \$16,500 in 1995-96 and \$15,750 in 1996-97. Grants were awarded in amounts of \$250, \$500, \$750 and \$1,000.

Educational objectives varied for the two academic populations. PSU SIFE students were to learn about generating funds (from earnings and support of the business community), developing a foundation and managing significant fund amounts, disbursing funds through awarding grants in a structured decision-making process, and following and assessing the use of these funds in various educational programs. These activities allowed business majors to practice their skills. They also gained insight into how educational programs develop the work force of the future and instill the free enterprise concepts that will be the foundation of future generations. For the education majors it allowed them to visit schools and be involved with the educational process in realistic settings, but also gave them insight into the generation of funds and the need to interface with the business community to ensure the viability of many of their academic programs.

For the K-12 teachers, the Free Enterprise Foundation also had educational objectives. These were to provide teachers with resources they can use in the classroom year after year, provide teachers with the resources they need to integrate economic concepts across curriculum lines, and provide students with hands-on learning activities, allowing them to develop economic skills they can use the rest of their lives. These educational objectives were dedicated to the cultivation of an entrepreneurial spirit as well as the fostering of a better understanding of how the free enterprise system works. Basically, the Free Enterprise Foundation was established in order to provide teachers with the resources needed to incorporate free enterprise economic educational concepts into their classrooms.

The Process

The first step was to assess the feasibility of such a program. Student teams interviewed many community leaders and business people about the possibility of financial support, as well as the likelihood of contributions of time, expertise and products. Most of the business people contacted were supportive of the program to varying degrees, so student planners were encouraged to proceed to the next step. They visited a number of school districts, schools and teachers to see if there was both a need for such a program and support for teaching free enterprise concepts through hands-on activities. With strong encouragement in this area generating funds was the next priority.

PSU SIFE students are used to earning money through a variety of entrepreneurial activities, but they knew that there was a need to raise more than they could generate through school activities. Going into the business community, they found some businesses which provided money, while others donated products that K-12 students could use or sell in student stores. Still others provided advice, and one supporter even provided a sales outlet for a student group which created a mini-manufacturing plant. This support from the business community was essential for the ongoing dynamics of the program as well as its being successful year after year.

With the inception of the Free Enterprise Foundation the SIFE students, as typical of young entrepreneurs, recognized the need for additional funds. They researched alternative fund sources and discovered the Pritchett Trust. The SIFE students contacted the Trust and determined the types of proposals funded. Feeling confident that the Free Enterprise Foundation met the guidelines of the Trust, the SIFE Team began preparation of it's application. While composing the initial Trust application, the students became aware of the need for accountability. Procedures were established to assure that the funds were accounted for and spent in line with the terms of the Trust award. Students experienced what it actually meant to be accountable to an external agency and to have their own Foundation's actions scrutinized by another organization.

As funds were being raised, promotional materials and application procedures were being distributed to the regional academic community. Applications were received from all levels, K-12. Teachers applied by submitting a one to two page proposal describing how their proposed projects would meet one of three criteria: (1) that the project encouraged students to

engage in entrepreneurial activities in the classroom and community, (2) that the project enhanced the teaching of business and economics, or (3) that the project helped prepare students for careers in the 21st century.

Each year the students began the Free Enterprise Foundation project by forecasting how much of the previous year's earnings and current receipts could be designated to the project. A Free Enterprise Committee was named which then determined a time table to ensure that the funds would be in the hands of local teachers by November 1. The SIFE committee began by visiting and sending letters and informational materials to local businesses asking them to match the SIFE contribution. The Committee also developed a judging sheet to assist judges in selecting the winning grants. The applications were judged in a blind-refereed process by a panel of local business people, faculty from the schools of business and education and SIFE students. At this time, a formal award presentation reception was planned. The awards reception was a chance for businesses and teachers to meet. Each winning teacher was assigned a SIFE student liaison to work with him or her throughout the year.

Types of Activities

Funded activities were divided into four categories: simulated entrepreneurial activities, real entrepreneurial activities, economic activities, and general educational activities.

Simulated entrepreneurial activities. Teachers in this category were awarded grants to create simulated businesses in their classrooms. Teachers purchased materials for classroom restaurants, delis, supermarkets and a variety of other retail stores. Students filled the roles of both employee and consumer as they learned first hand about basic economic concepts. Student activities included coin recognition, learning about opportunity cost and budgeting funds - all at a level that they could understand. These teachers successfully created hands-on activity-centered learning situations.

Real entrepreneurial activities. Teachers in this category received funding to start actual businesses with their students. The students were responsible for nearly every facet of the operation of their businesses - from purchasing and marketing to hiring personnel. These teachers successfully created entrepreneurial laboratories in their classrooms. These were learning environments in which students are given opportunities for real rather than imagined experiences, active rather than passive learning, and actual decision making with real consequences. Students at one elementary school have actually started training for work in the school supply store when they enter kindergarten. Teachers in K-4 have implemented a curriculum which pertains to handling money, inventory control, banking, loans and loan repayment, and so forth. Upon entering the fifth grade, students elect officers of their school store, actually visit a local bank and secure a loan, work out a repayment schedule, run the store for a school year, and return to the bank to pay off the loan. The fifth grade students then decide how to invest or spend the profits from the school store.

Economic activities. Teachers in this category were awarded funding to initiate highly creative and innovative economic education projects in their classrooms. The grants provided educators with unique opportunities to integrate the study of economics into their overall

classroom curricula. Students enhanced their knowledge of economics as they also improved their reading, math, language and social skills. Most importantly, they came to realize the vital role that economics plays in every part of their lives.

General educational activities. Teachers in this category were awarded funding for projects which were used to enhance the general academic skills of their students. Teachers purchased materials for math, reading, science, geography and computer projects. The students learned how their knowledge of these subjects will better prepare them for career in the 21st century.

EVALUATION

It was decided early in the conceptual development of this program that evaluating the on-going activities would be a major part of the program. However, it turned out that there were actually two stages of evaluation for this program. The first stage was the internal evaluation process which each teacher and SIFE advisor conducted. A second stage came when the entire program was submitted for external review by the media and outside judging panels.

Internal Review

An internal review process was a requirement for all ninety of the grants awarded. These usually took the form of a comparison of a pretest administered to the students before the teacher started the project with a posttest administered after project completion. As would be expected, behavioral and cognitive skills were always enhanced through these programs. However, the most gratifying revelation was the degree of improvement observed. Many of the teachers found that students gained real insight into subjects the teachers had been trying with little success to convey. When the students were able to experience and "play through" these activities, they were later able to enunciate new concepts and demonstrate a much higher level of learning.

Examples of the types of learning include a teacher who had been struggling to have her young students understand the concept of money and to learn the difference between the various dollar bill denominations. After the students participated in running a student store, they quickly learned how money is used to buy products and how to make change. Other students set up an assembly line to make a product which was marketed by a local retailer. Through this process the students demonstrated a leap of learning as to where products come from, as well as great insight into what it takes to plan for and produce any product.

Although the internal review process was developed to focus on student outcomes based on pre- and post tests coupled with teacher observations, there was another level of evaluation that was equally gratifying. Local business and community leaders who were involved with the program frequently wrote to provide their support for continuing these activities. This is exemplified by Dr. Harvey Dean, founder and CEO of Pitsco, Inc, the leader in the field of technology education, who wrote "[We are] excited to support the SIFE Free Enterprise Foundation. Our vision at Pitsco is to revolutionize the way education happens, a vision which

seems to be shared by SIFE. We're confident that the funding provided through the foundation will allow schools to provide additional hands-on materials that otherwise may not have been provided through their general budget."

The SIFE students learned what it was like to evaluate the success of their selected grants for the year. This evaluation process required the students to mentally judge if each grant had actually met the selection criteria and thus justified its selection. Their written qualitative evaluation provided a framework to assist next years' selection committee so as to enhance the quality of awarded grants. Teachers were risk takers in the classroom who implemented curriculum outside the ordinarily prescribe outline. These teachers communicated the same entrepreneurial spirit to their K-12 students. As observed by Monica Murnan, Ed.D. the Free Enterprise Foundation has provided the opportunity for local educators to grow professionally and demonstrate an awareness that entrepreneurs should be socially responsible citizens of the community. Dr. Murnan goes on to say "I am pleased to see how a business based organization joins its resources with an educational based organization in order to benefit children.

External Review

The PSU SIFE chapter submitted reports of this program to various outside agencies. The results have been especially gratifying in that many observers have found the program to be noteworthy. Not only has the local press run many articles, but the Free Enterprise Foundation was also the subject of four news stories on the local CBS, NBC and ABC news affiliates. Recently, the Governor of Kansas spotlighted the program at his Kansas Education Summit. Further afield, the program was voted the #1 Friend of Education by the Kansas National Educator's Society, selected as one of the top three educational programs in the country by the staff of Business Week Magazine and the National Federation of Independent Businesses, was chosen by the USA Today and Coalition on Educational Initiatives as one of the top 50 grassroots educational programs in the country, and was nominated for the National Council on Economic Education National Awards for Teaching Economics program.

CONCLUSION

The SIFE Free Enterprise Foundation has been an outstanding effort in an on-going program of student learning through experience. SIFE students have grown in their appreciation and understanding of entrepreneurship through the process of community education, raising funds, and creating a program of education outreach. In addition, by providing quality economic education, the teachers who have received these grants have helped thousands of students to become productive members of the workforce, responsible citizens, knowledgeable consumers, prudent savers and investors, and effective decision makers in a global economy.

COLLEGE STUDENTS BECOMING INVOLVED IN CORPORATE ETHICS

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ABSTRACT

This paper details the involvement of the Students In Free Enterprise team at Walters State Community College in Morristown, Tennessee with a local chamber of commerce and Champion International Corporation in addressing the ethical considerations of Champion's discharge of effluents into the Pigeon River.

INTRODUCTION

Several years ago our Students In Free Enterprise (SIFE) team at Walters State Community College (WSCC) was having a meeting to discuss potential projects for the upcoming academic year. Three of the students were from neighboring Cocke County, and wondered aloud if anything could be done to clean up the infamous Pigeon River which had been severely polluted since 1908 by Champion International, Inc.'s paper mill just across the state line in Canton, North Carolina. Above the Canton mill the Pigeon River was a clear, trout-laden mountain stream; however, below the mill Champion's discharge of effluents caused the stream to have a dark, murky color with an offensive, rotten eggs smell. Also, dioxins, classified as a probable human carcinogen by the U.S. Environmental Protection Agency (EPA), were found in the effluent discharged by the mill. The WSCC SIFE students felt that Champion's pollution was strictly a matter of business ethics. Most of the students had attended SIFE expositions in Atlanta and Kansas City and knew firsthand from keynote speakers that strong business ethics were highly valued by America's top CEOs.

STUDENT INVOLVEMENT

Our SIFE team decided to invite Mr. Bob Seay, the executive director of the Cocke County Chamber of Commerce to speak on the economic impact caused by the polluted Pigeon River. Mr. Seay stated that while the citizens just across the state line in Haywood County, North Carolina enjoyed a clean river and full employment, Cocke County suffered from the coffee-colored, smelly river, which flowed right through downtown Newport, Tennessee. The county usually had the state's highest unemployment rate--20% at the time of his presentation. Mr. Seay went on to describe how the pollution hampered the chamber's efforts to promote tourism, real estate development, agricultural development and especially the recruitment of quality industry. He said that the number one goal of the Cocke County Chamber of Commerce was to achieve a clean Pigeon River.

Our SIFE students, even the ones who were not residents of Cocke County, found Mr. Seay's presentation very moving and were highly motivated to do something. Our SIFE team was still a relatively new organization on campus but they recognized Champion's pollution as a textbook case dealing with corporate social responsibility and business ethics. Mr. Seay explained that the EPA had taken over the water permit authority from the state of North Carolina and would soon be conducting a public hearing to consider how much effluent Champion would be allowed to discharge under a new permit. He encouraged Walters State and the SIFE students to become involved in making a difference in the lives of thousands of citizens who lived in Cocke County.

Our SIFE team president, Cathy Hager, submitted comments to the EPA regarding Champion's new water quality permit; in her comments Cathy included a quote from Mr. Reginald Jones, General Electric's CEO, "Economic performance is no longer enough. Business is properly expected to act in the public interest as well as the shareholder's interest." The students also urged the college's business division to conduct a study examining what a clean river would mean to Cocke County as a community service, especially since Cocke County was one of the college's ten service counties. With my background in resource economics I agreed to perform "An Economic Impact Analysis on the Recreational Benefits of a Restored Pigeon River" and my colleague and significant SIFE supporter, William H. Barnett, II, Professor of Accountancy, agreed to perform "A Financial Analysis of Champion International Corporation's Ability to Provide for a Clean Pigeon River." Our studies found that a clean Pigeon River would enhance Cocke County's economy by several million dollars and that Champion could achieve this by lowering their earnings per share by only eight cents (from \$2.65 to \$2.57).

In addition to becoming involved in public hearings and writing letters to newspapers and state and federal representatives, our SIFE students decided to take their case to the firm by writing top executives at Champion's corporate headquarters in Stamford, Connecticut, as well as members of Champion's board of directors. Also, the SIFE team invited officials from the Canton mill to our campus. The students thought they had the perfect solution to the pollution problem. Most of the pollution resulted from chlorine bleaching to make their milk and juice cartons white instead of the natural brown color. Since most paper milk and juice cartons were painted various colors, including brown for chocolate milk, the students suggested that the company market the new, natural brown color as safe, dioxin free and friendly to the environment. They told the company officials that many consumers, especially young ones, would respond to such a campaign.

Much to the students' disappointment, Champion officials were not interested in this approach. Responses from corporate headquarters to the students' thoughtful and energetic letters were rather terse and arrogant. At this point Champion embarked on a very controversial public relations campaign which included a four-prong approach: 1) to publicly deny any pollution of the river, 2) to bring public pressure on state and federal officials to allow the company to continue to discharge substantial effluents into the Pigeon River, 3) threatening to close the mill (despite their very profitable operations) and 4) embracing the slogan "Our River, Our Jobs, Our Future." The campaign turned out to be a public relations disaster and attracted

national media attention. Anti-Champion sentiments began to reach a fever pitch in Tennessee. Tennessee's governor floated the river and called it a disgrace and denied Champion's request for a variance to Tennessee water quality laws. The Tennessee legislature threatened a boycott against Champion products. North Carolina's governor and state legislature in return threatened a boycott against Tennessee's pride and much of its joy--Jack Daniels and George Dickel whiskey (this alone caused a controversy in North Carolina!).

During this period of the debate our SIFE students attended an ethics conference at Carson-Newman College in Jefferson City, Tennessee. The featured speaker was Mr. Paul Pullen, a Carson-Newman graduate who was the Ethics Compliance Officer at Raytheon Corporation. Mr. Pullen presented the corporate ethics programs of ten major companies. The students were quite surprised to find that one of the featured companies was Champion International and that the chairman of the corporate ethics project with the Business Roundtable was the CEO of Champion International. Our students took home a copy of "The Champion Way" and read it carefully. In it they found such statements as:

1. "Champion wants to be known as an open, truthful company."
2. "Champion wants to be known as a company which strives to conserve resources, to reduce waste, and to use and dispose of materials with scrupulous regard for safety and health."
3. "We take particular pride in this company's record of compliance with the spirit as well as the letter of all environmental regulations."
4. "Among the many elements of "The Champion Way," honesty and integrity in dealing with the company's various constituencies stands out as being understood and practiced throughout the Company."
5. "In particular, Champion is perceived as taking actions that mark it as a good corporate citizen."
6. "This is demonstrated...in taking on increasing responsibilities for overcoming environmental pollution...."

Given the behavior of Champion in East Tennessee and the condition of the Pigeon River our SIFE students did not believe that Champion was practicing what it was preaching. The students continued to correspond with Champion officials. Photos of the polluted river were submitted to top management at Champion as well as their board of directors. SIFE students obtained water samples from the river and had them analyzed. During SIFE competitions in Atlanta and Kansas City our SIFE students detailed their involvement with this project complete with photo documentation of the condition of the river. The project that always generated the most questions from the business executives who served as judges was the SIFE team's involvement with Champion and the condition of the Pigeon River. The students also kept

Champion management informed of the SIFE team's presentations to hundreds of executives from companies from all across America.

Slowly Champion began to moderate its message regarding the condition of the Pigeon River. There was also a change in management at Champion. In the fall of 1996 our SIFE team obtained color photos (taken in October, 1996) documenting heavy discharge of effluent from the mill into the Pigeon River. The students submitted the photos to Champion's new CEO, other high level officers at the company and members of the board of directors, once again asking the company to become a good corporate neighbor to East Tennessee by cleaning up the Pigeon River. The students pointed out that they would be using this case as part of their entry in the SIFE Rubbermaid Foundation Good Business is Good Business competition, the purpose of which is to teach others that long-term business success is dependent upon ethical behavior and that ethically operated businesses provide value to their customers, community and society.

This time the students received a very favorable and positive response from company officials. Champion's new CEO, Mr. Richard Olson, offered to fly seven SIFE students to the firm's technical research center in West Nyack, New York. To quote Mr. Olson in his letter to the students, "There you will be able to talk with any of our people who have been involved in our Canton improvement efforts, so that you can judge for yourselves based on facts, not perceptions. We may well disagree at the end of your research regarding the nature of ethical behavior--we believe that we have acted ethically in our efforts to improve the Pigeon River water quality. In any event, I believe your SIFE project will be better positioned to win the competition if you can take the time to examine the issue as completely as possible." Indeed the students spent the better part of two days with top company officials discussing how to reduce pollution at the mill as well as the ethics and social responsibilities of this case, and while there were disagreements (one of the students asked the officials to simply "let the river speak for itself"), all agreed that the open channels of communication and discussions were very beneficial. The students' visit to Champion was prominently featured in The Knoxville News-Sentinel ("Students Go to the Source").

As of January, 1998, Champion has indeed significantly improved the condition of the Pigeon River, though many residents of East Tennessee believe that still more needs to be done. A healthy, open line of communication was established between college students and top management of a major corporation. Most significant, college students learned the importance of being directly involved with the leadership of corporate America in attempting to truly make a difference in the quality of lives of citizens in their community.

TEACHING AS LEARNING: UNDERGRADUATE STUDENTS DESIGN SIMULATION ACTIVITIES ON FREE ENTERPRISE FOR ELEMENTARY AGED CHILDREN

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ABSTRACT

Many states and school districts have directed teachers to infuse instruction on economics into their existing curriculum. Students In Free Enterprise (SIFE) at Valdosta State University has tailored free enterprise instruction to fit local third grade curriculum constraints. The SIFE educational program was awarded BusinessWeek's Best In-Depth Educational Program Award at the 1996-97 International SIFE Exposition. This paper examines the literature and empirical evidence to support this novel approach to economic education. The paper outlines the program and support materials.

INTRODUCTION

During the last several decades, economics in elementary and high schools has taken on a much greater level of importance in the economics profession. It is widely recognized that very few members of our democratic society receive any formal exposure to the principles of free enterprise beyond the K-12 classrooms. Unfortunately, most teachers in the early grades possess little or no formal training in economics and student textbooks and instructional materials provide insufficient if any coverage of economic concepts. Bosshardt and Watts (1994) found that “teachers in these grade levels who decide to cover even a little economics may improve their students’ economic understanding a great deal compared with classes where no economics is provided.”

The paper discusses an experiment in learning which not only assists early grade teachers in their instruction of free enterprise principles but also increases the learning of those who are teaching. The paper is divided into three sections: Teaching As Learning, which briefly critiques recent literature on cross-age tutoring; The Educational Project, which outlines the learning experience; and the Conclusions and Suggestions, which summarizes and suggests changes for future applications.

TEACHING AS LEARNING

As a learning community, many of today's colleges seek teaching strategies that generate effective learning while meeting the many outcomes required of higher education. Outcomes for colleges are becoming similar to those required of large corporations. The gentleman scholar and absent-minded professor have given way to the knowledge technician and the academic entrepreneur (Rodden, 1993). Colleges are striving to promote climates characterized by a strong sense of direction that build student involvement. Students developing responsibility for their own learning (Davis & Murrell, 1994) is the focus as colleges begin to function as an academic-industrial complex.

When the focus is on the learner, it is apparent that colleges are not able to cause student learning. Faculty appreciate that experience is one of the greatest teachers yet postpone that experience until the course work is completed. As creative, energetic, patient, and courageous teachers seek new and more effective methods of teaching, many are recognizing that colleges can provide experiences that will lead to a variety of enhanced learning opportunities (Shedletsky, 1996).

Many understand that the development of a climate conducive to learning is our true goal and that our teaching models may need to change drastically if we are to meet this goal. The report by Davis and Murrell (1994) encouraging responsible student behavior by engaging students in meaningful activities further states that "what it takes to succeed in college demands that institutional policies and practices must focus on the development of a climate in which students actively participate in the larger college community. Opportunities for interaction and involvement with faculty and peers must be provided or student outcomes will be relatively slight." Course activities designed to promote student responsibility for their own learning are one way in which students can more fully engage in academic experiences and apply course content as they learn.

Organizations dedicated to the improvement of teaching and learning such as the National Board for Professional Teaching Standards and the Holmes Group, are working to ensure comprehensive, quality teaching. They recognize that new, collaborative methods are needed to enable teachers to reach students (Foxwell, 1993). As colleges of education also recognize, collaborative methods between formerly disparate groups such as colleges of arts and science, nursing, and business, enable teachers to reach students in new and more meaningful ways. This reform of college delivery systems may be the key to more effective learning for children.

Research on teaching methods and procedures, student performance, program strategies, and classroom grouping schemes report that one area that enhances enthusiasm for learning and increases skill development is cross-age tutoring and collaborative teaching for reading, writing, science, math, and social studies (Cotton, 1995). Students being taught by students benefit greatly from this form of instruction.

Students who were tutored by older students outperformed those in comparison groups on examinations in forty-five of fifty-two studies of cross-age tutoring (Pressman & Dublin, 1995). A study by Martha Rekrut (1992) found results to indicate significant differences in learning between tutoring groups and control groups. The study was conducted to examine

tutoring as a pedagogical tool to enhance learning in the tutor. Members of tutoring groups, as well as students being tutored, appeared to learn better than the control groups.

A growing body of research suggests that students learn most efficiently when they teach something to someone else. Many teachers report that they truly began to understand their subjects as they developed activities to teach them to others. Cross-age tutoring enables students to learn by having them teach. To bring a student to a higher level of skill, “the tutor must understand what he teaches. He discovers new insights, new approaches, and new ways of attacking the lesson. He makes the lesson his own as never before. He has the opportunity to test himself, to reaffirm his abilities, and to assume responsibility” (1970 National Commission on Resources for Youth in Pressman & Dublin, 1995).

The Rural Education Alliance for Collaborative Humanities (REACH Report) stresses the value of cross-age tutoring as enabling students to learn by having them teach (Blodgett, 1992). A review of the literature on adult learning suggests that an adult educator must develop expertise in understanding leadership as it relates to groups so s/he can strive to organize varied group interaction and action opportunities and to select learning experiences which facilitate both individual and group learning effectiveness. S/he must also recognize that each adult educator is also a member of the group in which s/he is a collaborative member as the group attempts to synthesize material and develop activities. (Even, 1973)

To combine the positive effects of cross-age teaching experiences and a method for developing responsibility in a meaningful way, Students In Free Enterprise (SIFE) and faculty at Valdosta State University in South Georgia collaborated on a highly innovative and creative educational project to apply the principles of learning effectiveness for college aged students and the principles of economics education in local elementary schools.

THE EDUCATIONAL PROJECT

The SIFE college students created, organized, and executed the demand and supply puppets learning experience for over 650 third grader students in eight different schools. The educational objectives of the project were: (1) to teach economic concepts such as supply, demand, and price adjustments; and (2) to create an understanding of the workings of the market system. Both learning outcomes were lower-order cognitive objectives. In order to reach the third grade students in a meaningful way, the concepts had to be presented in a “fun way.” Life-size supply and demand puppets were constructed to capture the student’s attention. SIFE students constructed a candy store composed of cardboard and construction paper. The college students wrote a 45-minute skit which created a simulated market place with active student participation. As an introduction, SIFE students discussed basic terms such as free enterprise, business, and markets. Music was used to keep the students attention and sign were used to allow the third graders to recite each definition with the puppets. The supply and demand puppets conducted three different short skits to demonstrate the interactions of demand and supply and the establishment of market prices. A fourth scenario actively involved the third graders where a market price had not been established. Utilizing the candy store setting,

students played the role of either a candy supplier or a candy consumer. They carried out their transactions with play money.

Each child was given a piece of candy and a coloring/activity book. The coloring/activity book was designed to reinforce the concepts demonstrated during the presentation. The book presented: (1) written definitions of the terms used throughout the skit, (2) several sketches of the demand and supply puppets interacting, (3) a demand and supply maze where each puppet starts at opposite ends of the grid and the goal is for the puppets to meet in the maze, and (4) several exercises for parents and/or teachers to interact with the third grade students about the lessons taught in the presentation.

A verbal pre- and post-test was administered to the third grade students. The results showed a 113% increase in knowledge of the operation of the free enterprise system. Several days following the presentation, each child was required to construct a booklet showing what they learned from the presentation. Comments made by teachers at each of the eight different schools indicated the project's educational goals were met.

CONCLUSIONS AND SUGGESTIONS

Cross-age tutoring enables students to learn by having them teach. The demand and supply puppet program allows not only for effective learning to take place in elementary schools, but also affords the college student a meaningful opportunity to enhance their own understanding of free enterprise. Future programs may have greater impact by reducing the number of children at each presentation and by increasing the number of student-active scenarios. Research into the long-run impact of this approach on learning is necessary.

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