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Proceedings of the Allied Academies Internet Conference

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VALUE PREFERENCES, POLITICAL ORIENTATION AND MORAL REASONING OF CERTIFIED PUBLIC ACCOUNTANTS

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ABSTRACT

Numerous studies have reported a significant negative relation between moral reasoning (as measured by the Defining Issues Test) and political conservatism. However, recent studies with accounting subjects (Bailey, et al., 2005; Bernardi, et al., 2004) and other subjects (Bailey, 2007) have found little or no relation and have called for more research. We use a sample of 284 practicing Certified Public Accountants (CPAs) to investigate this issue further and also present a variable composed of four value preferences that may explain the mixed results of prior studies. Our results indicate a statistically significant inverse relationship between moral reasoning and conservatism in univariate tests. However, this relationship disappears in multivariate tests, where a composite measure of four individual value preferences (broadminded, imaginative, salvation, and obedient) from the Rokeach Value Survey is highly significant in explaining variations in moral reasoning. Our findings add to those suggesting caution in the interpretation of scores from the Defining Issues Test.

Key Words: moral reasoning, political orientation, value preferences, Rokeach values
Data availability: Contact the authors

ADVANCED INDEX CERTIFICATES

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ABSTRACT

In this paper we introduce a new financial product named Advanced Index Certificates and we provide detailed descriptions of the product specifications. We show that the payoff of an Advanced Index Certificate can be duplicated by the combination of a zero coupon bond, a call option on the index and a put option on the index. We develop pricing formulas to price the certificates. Finally, we apply the pricing models to a certificate issued by Bayerische Hypo- und Vereinsbank AG to examine how well the model fits empirical data. The results are in line with previous studies pricing other structured products.

COMPARING FINANCIAL PERFORMANCE OF COMPUTER NETWORK AND INFORMATION TECHNOLOGY SERVICES COMPANIES

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Jean Walker, West Texas A&M University

ABSTRACT

Stock market volatility has been omnipresent in the information technology sector. This manuscript compares the stock performance of computer network and information technology companies across six different twenty-month periods between the years 1996-2006. The focus periods include the browser era, the Y2K era, the post-Y2K era, the post-9/11 era, the outsourcing era and the mobile/wireless era. The lowest stock market returns are in the post-Y2K and post-9/11 eras for four of the five computer network and information technology services firms in the research cohort. The highest stock market returns for the five computer network and information technology services firms are in four different periods. The firms in the study show a tendency to experience high industry correlation in a bear market but little correlation during a bull market. The results imply that the computer network and information technology services industry has characteristics that are consistent with being a blockbuster instead of a commodity.

THE TAX PREPARER PENALTY PROVISIONS OF IRC §6694(A): SOME REFLECTIONS ON THE POSITIVE AND NEGATIVE IMPLICATIONS FOR TAX PRACTICE

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ABSTRACT

Originally motivated by Congress' belief in widespread abusive practices by income tax preparers, as well as concerns that significant numbers of fraudulent returns were being prepared by income tax preparers, the tax preparer penalties of §6694 were enacted in 1976. The original intent was to curb abusive tax practices. Since their original enactment in 1976, the §6694 tax preparer penalty provisions have undergone 3 substantive revisions by Congress (1989, 2007, and 2008). The intent of the revisions was to increase the amount of the penalties and the types of tax work subject to the penalties and to decrease the range of ambiguity in which tax professionals may legally operate. In this environment, it becomes critical that tax practitioners be conversant with the complex expectations under which they must operate. This article discusses some of these recent changes and how the tax profession might best manage these changes.

FINANCIAL CRISIS AND SHORT SELLING: DO REGULATORY BANS REALLY WORK? EVIDENCE FROM THE ITALIAN MARKET

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ABSTRACT

The global financial crisis and its effect on stock market volatility seems persuaded the market regulators how destabilising short-selling can be and how it contributes to undermine market's confidence. Following the decisions of other market regulators, the Italian securities exchange commission (Consob) decided to prohibit the operations of short selling for the domestic trading since the 23th of September 2008, recognizing greater severity to those operations where banks and insurance companies stocks are underlying. The aim of this paper is investigate the impact on volatility and performance for those stocks subject to these restrictions. By analyzing the effect on daily price returns and volatility following the addition of short selling constrains, and using some control procedure able to isolate them from possible crisis induced movements, our results do not indicate a common impact of the restrictions.

While the results on the performance change show some difference in the trend of mean performance before and after the short selling constraint that is particularly relevant for those stock without traded options, the results concerning the volatility impact show a general increase of the post-restriction variance the most part of which can be attributable to the short selling bans. This finding appear contrary to the basic belief of market regulators to consider short selling ban as an useful tool able to mitigate volatility and speculative behaviors; new restrictions on short sellers are likely to reduce the amount of information incorporated into stock prices.

Keywords: Short selling, Event study, Stock performance, Stock volatility

JEL codes: C22, G14, G18

MANAGED EARNINGS: A CLOSER LOOK AT PENSION EXPENSE

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ABSTRACT

Relatively recent earnings management studies provide evidence companies manage reported earnings to achieve certain capital market reporting objectives. However, there seems to be limited empirical evidence identifying the specific financial accounts that companies use to manage their reported earnings.

This paper extends earlier research by not limiting the sampling technique to only those companies with actual earnings in a relatively small neighborhood very near to their actual capital market benchmark. This allows a much broader array of companies to be included in this study. Evidence indicates that pension expense is actively used by companies to manage bottom-line, reported earnings. Based on a proxy for premanaged earnings, companies hypothetically missing their capital market earnings benchmark (i.e. prior year earnings target) are predicted to reduce their actual pension expense to increase actual reported earnings; whereas companies hypothetically beating their capital market earnings benchmark (i. e. prior year earnings target) are predicted to increase their actual pension expense to reduce their actual reported earnings.

Both sets of companies are predicted to manipulate reported earnings in the direction that will move them closer to their capital market earnings benchmark (i.e. prior year earnings) than they would have otherwise been. Results suggest companies use pension expense to actively and predictably manage actual reported earnings.

AN INVESTIGATION OF THE EASE-OF-USE CLAIMS OF ENTRY-LEVEL ACCOUNTING SOFTWARE VENDORS

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Elizabeth Giordano, Towson University

ABSTRACT

The vendors of entry-level accounting software often claim that it is simple enough to be operated by end-users without a prior knowledge of accounting. To determine the validity of this claim, we analyzed over one thousand submissions to online accounting software user-groups and classified them as pertaining to the operation of the software, accounting concepts and procedures, or other issues. We found that, for two leading small business accounting software packages, a significant number of submissions were requests for assistance about accounting concepts and procedures. These results indicate that it is not possible for all end users of entry-level accounting software packages to operate these packages properly without some knowledge of accounting concepts and procedures. Approaches for overcoming this challenge are discussed.

IMPACT OF IFRS CONVERGENCE ON ACCOUNTING CURRICULA

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ABSTRACT

International Financial Reporting Standards (IFRS) is likely to become the mandatory financial reporting system in the United States for non-US and US firms raising capital in the United States. The transition from rules-based Statements of Financial Accounting Standards will not be easy and will impose significant costs to listing companies. Such transition will require major changes in accounting programs and curricula. This paper provides a blueprint for university accounting programs and related curricula which might meet the challenge posed to academia by the eventual adoption of IFRS in the US. Specifically, this paper recommends an increase in the number of accounting principles courses and in intermediate accounting as well as changes in pedagogy and curricula development. The recommended changes are consistent with a need to attract the brightest and most capable students to an accounting profession which will require greater critical thinking skills and powers of abstraction associated with a principles-based IFRS system

THE MORTGAGE CRISIS - ITS IMPACT AND RESTRUCTURE

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ABSTRACT

The rate of home foreclosures has risen dramatically in past years due to defaulting on residential mortgages. The impact set off a broad based financial crisis, resulting in a deep recession and in turn increasing financial distress faced by homeowners. As defaults began to escalate and foreclosures continued to occur, the result led to a ripple affect causing major financial institutions to collapse and thus leading to an overall meltdown of the U.S. economy, soon to be followed by other nations.

The U.S. government has engaged in a number of proposals to reduce such foreclosures and although there are signs of recovery, the progression is fairly slow. This paper examines the role played by the mortgage industry in the origin of the economic crisis, causes and its impact on the overall U.S. economy. It addresses how the mortgage crisis has had an effect on U.S. cities, current homeowners and first-time home buyers. The restructuring of the entire mortgage industry and financial arena has caused a remarkable tribulation for individuals across America and has transformed the manner in which homes were once purchased and sold. The negative impact of mortgage defaults and foreclosed homes on the borrowers, communities and financial institutions involved in the housing market are the primary focus of this paper.

The subprime mortgage crisis is an ongoing real estate and financial crisis caused by a substantial rise in mortgage delinquencies and foreclosures in the United States, with unfavorable consequences for banks and financial markets around the globe. The crisis, which had shown signs in the closing years of the 20th century, became apparent in 2007 and has since resulted in weaknesses in financial industry regulation and the global financial system.

Approximately 80% of U.S. mortgages issued in recent years to subprime borrowers were adjustable-rate mortgages (Lockett, 2008). After U.S. house prices peaked in mid-2006 and began their steep decline thereafter, refinancing became more difficult. As adjustable-rate mortgages began to reset at higher rates, mortgage delinquencies increased. Securities backed with subprime mortgages, widely held by financial firms, lost most of their value. This resulted in a decline in the capital of many banks and U.S. government sponsored enterprises, tightening credit around the world.

The crisis can be attributed to a number of factors that were pervasive in both, the housing and credit markets and emerged over a number of years. The causes were prominent due to the inability of homeowners to make their mortgage payments, the adjustable rate mortgages resetting, borrowers over-extending, over lending and speculation during the boom period.

The risks to the broader economy created by the housing market downturn and financial market crisis were primary factors that were taken into consideration by central banks around the

world, to cut interest rates and governments to implement economic stimulus packages. The effects were also extensive on global stock markets due to the crisis, resulting in an overall global melt down and leaving economies disconcerted and worried.

The mortgage industry played a vital role in the recession faced by the U.S. economy in 2008. An estimated 1.5 million households defaulted on their home loans and were driven to foreclosure in 2009 (Les, 2009). This has resulted in the restructure of the mortgage industry and consequently limiting individuals to purchase homes due to lack of flexibility. The purpose of this research is to determine how the mortgage crisis has impacted the U.S. economy.

The prevailing recession is a financial crisis that focuses on the U.S. housing market, where the affects from the subprime mortgage market are visible in the credit markets, as well as domestic and global stock markets. The subprime mortgage crisis has put the U.S. economy into the worst recession since 1982 (Amadeo, 2009). Between 2000 and 2006, the number of home foreclosures continued to rise in America. A number of studies and data analysis suggested a strong connection between the rise in foreclosures and the subprime mortgage lending market and thus, the federal government began to scrutinize the practices of subprime mortgage lenders. The adjustable-rate mortgage (ARM) loan has played a major part in the subprime mortgage crisis. In an adjustable rate mortgage, the interest rate will eventually reset or adjust at some future point in time. This type of loan starts with a relatively lower interest rate that appeals to borrowers, but in due course of time it will reset to a likely higher interest rate and sometimes a significantly higher interest rate.

According to reports generated by The Federal Reserve, conditions in financial markets across cities in the United States, have generally improved in recent months. Household spending has shown signs of stabilizing but remains constrained by ongoing job losses, lower housing wealth and tight credit. Businesses are cutting back on fixed investment and staffing but appear to be making progress in aligning inventory stocks with sales. Although economic activity is likely to remain weak for some time, the Federal Reserve continues to anticipate that policy actions to stabilize financial markets and institutions, fiscal and monetary stimulus and market forces will contribute to a gradual rise in economic growth and price stability. Economic projections from the Federal Reserve and Reserve Bank's are hopeful that GDP will return to 2-3% in 2010, and unemployment will level out in 2010 and 10% with moderation in 2011. Figure one provides a visual illustration of the economic impact of the crisis on U.S. cities.

restrictive underwriting standards for borrowers with less than perfect credit could reduce the number of potential homebuyers by 500,000 (Brady, 2009). Less favorable loan terms in the form of higher interest rates and down payments will reduce the amount buyers will have to spend on new homes. It is proving to be more troublesome for those with bad or damaged credit when applying for a new mortgage or restructuring in current times. Conventional loans are usually not available in this circumstance, leaving only those loans offering much higher interest rates. Income requirements are the same for a first time conventional mortgage loan or for restructuring. The maximum amount of income allocated to a mortgage payment cannot exceed 28% (Lee, 2008). The difficulty comes with proving to the lender that the home buyer's monthly income will be sufficient to cover the higher monthly mortgage payment.

The threat to the U.S. and global economy created by the housing market downturn and subsequent financial market crisis were primary factors in several decisions made by central banks around the world to cut interest rates and governments to implement economic stimulus packages. Effects on global stock markets due to the crisis were dramatic. Between January 01 and October 11, 2008, owners of stocks in U.S. corporations had suffered about \$8 trillion in losses, as their holdings declined in value from \$20 trillion to \$12 trillion. Losses in other countries have averaged about 40% (Greenspan, 2009). Losses in the stock markets and a decline in housing value resulted in a further downward pressure on consumer spending. Although several causes of the crisis were given focus and attention, there were still many of the root causes of the crisis that had yet to be addressed. A variety of solutions were proposed by government officials, central bankers, economists and business executives worldwide.

With the entire U.S. economy in a state of distress, the government stepped in and began examining some of the dubious lending practices which started the worldwide recession. As a consequence lenders have been forced to enact stricter loan requirements and funding obligations to reinforce the need for government legislation. Although this strategy has provided measures to reduce future abuses and irresponsible actions, it offers very little to no help to borrowers who are struggling to avoid foreclosure and keep their homes. Homeowners and buyers today can expect much more rigorous requirements from the lenders. Credit score requirements are becoming increasingly strict and if looking to restructure an existing mortgage, it is imperative to have money for closing costs and a substantial down payment along with solid documentation of proof of income and verification.

In conclusion, the sub-prime mortgage is the main contributor for the housing bubble and mortgage crisis. Having performed studies and analysis of the cause, origin and effect of the crisis, the overall picture is much clearer than before. As mortgages default, hedge funds default, mortgage lenders shut down and massive credit write downs for Wall Street is the end result. The crisis was a result of a significant concentration of risk due to leverage options. Over the past few months, investors of all types are experiencing massive losses and are being forced to liquidate these securities at significant losses. The de-leveraging process has begun and banks and brokers, who were also large mortgage investors, are unable to absorb the extra supply. The U.S. is now faced with a large supply of quickly deteriorating securities coupled with limited demand.

Although household spending has shown signs of stabilizing but remains constrained by ongoing job losses, lower housing wealth and tight credit. Businesses are cutting back on fixed investment and staffing but appear to be making progress in bringing inventory stocks into better alignment with sales. Although economic activity is likely to remain weak for some time, the government continues to anticipate that actions to stabilize financial markets and institutions,

fiscal and monetary stimulus and market forces will contribute to a gradual recommencement of economic growth and price stability. Governments have enacted large fiscal stimulus packages, by borrowing and spending to offset the reduction in private sector demand caused by the crisis. In addition, the U.S. has executed two stimulus packages, totaling nearly \$1 trillion during 2008 and 2009.

It is important to keep in mind, that this crisis was not a natural and inevitable catastrophe. The current depressed state of consumer and business attitude can be attributed to specific failures on the part of policymakers, regulators and bankers. Firstly, governments and central banks failed to constrain an expansion of credit that drove an unsustainable increase in housing prices. Secondly, regulators failed to perceive the risks inherent in the financial system and bankers exploited the flexibility they were granted. Banks created marketable securities out of mortgage debt without a reliable assessment of the credit quality of that debt.

The mortgage crisis is still ongoing and it is still unclear how large the final effects will be. Many institutes and organizations have different views of how large the effects have been and will be in the near future. However, having scrutinized and compared literature from various sources pertaining to the mortgage crisis, it is evident that the crisis which is still on-going has hit rock bottom and passed its state of turmoil. The U.S. housing market is showing signs of recovery in several cities across the nation. Although apparent and slow in nature, the mortgage industry with the aid of the government and various financial institutions is progressing in a positive and profound manner. Changes in the mortgage industry are constantly being monitored regularly, to ensure safe lending practices and to assist current and new homebuyers in purchasing, refinancing or selling of properties. In quintessence, the U.S. mortgage sector is improving and advancing towards complete containment and recuperation of the crisis at a gradual pace and ever evolving simultaneously.

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TEACHING SOUND FINANCIAL DECISION MAKING: CAN THE GAAP CASH FLOW STATEMENT MISLEAD?

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ABSTRACT

A person who is “entrepreneurial” constantly seeks different and better products, services and processes. A process is how something is done and entrepreneurial thinkers search for better ways of doing things, instead of blindly accepting what is considered standard or required by others. For example Generally Accepted Accounting Principles (GAAP) are the standard guidelines and rules used to prepare, present, and report financial statements for a wide variety of entities, including small businesses. As such, GAAP are taught in business schools to prepare students for employment in corporations and to own and operate their own businesses. Even though GAAP provide the standard rules for reporting, are the methods really the best tools for small business owners to use when making business decisions? This paper provides an alternative approach to the indirect cash flow statement, called the Patton Cash Flow Statement (PCFS). After conducting an exploratory case study, we contend that the PCFS is a better tool for small business owners to use when making financial decisions than what is currently required by GAAP. We also encourage other entrepreneurship educators to question and challenge what is considered standard practice and to work together to develop more appropriate and teachable tools in all business functional areas to help small business owners make better decisions.

INTRODUCTION

According to the U.S. Census Bureau, the annual number of start-up firms has been relatively stable for decades, hovering around 600,000 per year. Stangler and Kedrosky (2010) point out that the number remains constant over time despite changes in economic conditions and markets, and longer-cycle changes in population and education. Conversely, the number of university entrepreneurship programs has been on the rise for several years. According to Kuratko (2005), there were only a handful of programs in the 1970s. In 2005, there were over 1,600. With this kind of trend in entrepreneurship education, educators are constantly evaluating what should be taught and how to teach it.

Entrepreneurship majors leave their respective universities with aspirations of creating a business that will be one of the 600,000 annual start-ups. Our responsibility as entrepreneurship educators is to provide them with all the necessary knowledge and skills to become successful in that endeavor. In fact, our responsibility is extensive considering the impact of an entrepreneur's success or failure. Successful entrepreneurs provide change that spurs growth in our markets and economies. Successful entrepreneurs provide valuable products and services to society and create new jobs. On the contrary, if entrepreneurs fail, their employees lose their jobs, customers

lose access to products and services, and there are fewer changes and innovations to spark economic growth.

A company with solid liquidity is not only able to meet short-term financial obligations, but also has enough cash to take advantage of attractive business offers as they arise. It is important for business owners to understand their financial position in order to maintain adequate financial control of the company and make sound business decisions.

This study provides an introduction to an alternative method of analyzing the cash flow of a small business. The method we introduce is called the Patton Cash Flow Statement (PCFS). We believe this new method is more appropriate for small business owners to use because it is easier to understand and provides a more realistic view of a company's cash flow and liquidity. Further, we contend that the PCFS may be more appropriate to teach students and advise small business owners instead of GAAP's indirect method cash flow statement.

LITERATURE REVIEW

Understanding cash flow is commonly viewed as one of the most important skills entrepreneurs can have in order to make sound financial business decisions that ensure firm survival and growth. We see entrepreneurial finance classes being offered in many premier universities such as MIT, Babson, and Harvard. In fact, the first line of Harvard's course description reads, "Entrepreneurial Finance is designed to help managers make better investment and financing decisions in entrepreneurial settings," (Sahlman, Lassiter, and Nanda, 2010).

Beyond entrepreneurship educators, entrepreneurs themselves and their financial advisors also place great emphasis on the importance of understanding and managing cash flow. Anderson, Envick, and Roth (2001) surveyed 103 entrepreneurs and 95 financial advisors to determine what they thought were the most important financial topics for entrepreneurs to understand. Entrepreneurs were surveyed because of their experience in dealing with the financial function of operating a business. The financial advisors were surveyed because of their expertise and also because they provide services to entrepreneurs. Both groups used a seven-point Likert scale to rate the importance of 30 different finance topics for entrepreneurs. The entrepreneurs identified "cash management and projecting cash flows" as their number one ranked topic. It ranked at number two for financial advisors. The financial advisors identified "forecasting and financial statements" as their number one ranked topic and this ranked at number two for entrepreneurs. And both groups ranked "financial ratio analysis" at number three. It is clear from these results that both entrepreneurs and their financial advisors believe that effectively managing cash flow is essential for success, as well as understanding financial statements and ratios.

Generally Accepted Accounting Principles (GAAP) are used by firms to prepare, present, and report financial statements. The three statements used to help entrepreneurs understand their financial position include: 1) the balance sheet, which is a snapshot of a firm's financial resources and obligations at a single point in time; 2) the profit and loss statement, which summarizes a firm's financial transactions over an interval of time; and 3) the cash flow statement, which reflects a firm's liquidity and includes only inflows and outflows of cash and cash equivalents. The indirect method of the cash flow statement is almost universally used because FAS 95 requires a supplementary report similar to the indirect method if a company chooses to use the direct method. The indirect method uses net-income as a starting point, makes adjustments for all transactions that involve non-cash operating activities, then adjusts for all

cash-based operating transactions. In general, an increase in a current asset account is subtracted from net income, and an increase in a current liability account is added back to net income. This method converts accrual-basis net income (or loss) into cash flow by using a series of additions and deductions.

One of the authors of this paper, a financial advisor to small business owners, found some preliminary evidence that GAAP's indirect method cash flow statement may be misleading to small business owners when making important financial decisions for their businesses. As a result, a new cash flow statement method was developed and used for multiple clients with remarkable success. This new method is called the Patton Cash Flow Statement.

THE PATTON CASH FLOW STATEMENT

Due to the proprietary features of the Patton Cash Flow Statement (PCFS), only a limited amount of information is provided in this paper. The overall concept is disclosed without a full explanation of how it is generated.

In summary, the PCFS was developed by, and has been used extensively by one of the co-authors of this paper to show changes in cash in a more comprehensible, readable and common sense format. It is designed to use only a limited amount of commonly used business line items with descriptive subtotals that are intended to be easily understood by financial and non-financial readers of the PCFS.

It starts with the amount of cash the business operations are generating or consuming. Other items are grouped or subtotaled in a manner that shows how much on-going cash is consumed by the business in the form of capital expenditures made in order to maintain capital levels, sustain debt service and pay taxes. This amount is referred to as a business's Core Cash Flow.

Other groupings include out-of-the-ordinary, non-operational items such as payment of dividends, balloon loan payments, asset sale proceeds or long-term funding from sources such as equity or long-term debt. Notably, capital expenditures are segregated into amounts spent to support on-going operations of the business and amounts expended for expansions or major improvements.

The PCFS is designed to succinctly show the on-going cash generated or consumed by the business' operations and capital structure. Management of working capital components is highlighted and the primary drivers of liquidity and shareholder values are also part of the PCFS.

We believe the PCFS provides key financial information, not elsewhere available on the basic financial statements, in a straightforward, common sense format not provided by the indirect method cash flow statement required by GAAP. It has been used by multiple companies in a wide range of industries. The co-authors of this paper believe the PCFS is effective for businesses of any size. However, to date, the PCFS has been applied to entities that range from early stage to about \$60 million in sales.

METHODOLOGY

In the interest of looking more closely at the possibility that GAAP's indirect method is misleading, and to further investigate the utility and validity of the PCFS, we embarked on an exploratory case study with graduate students at our university.

The course used for this study was a graduate course in financial accounting research and communication. An intermediate accounting textbook was used in the course. One of the topics covered was the cash flow statement with a significant amount of class time devoted to illustration, discussion and preparation of the GAAP statement. Students prepared several cash flow statements and demonstrated their understanding of related complex issues and calculations. All seven students had earned an undergraduate degree in accounting. Four of the seven were currently employed in public accounting and one had completed an accounting internship in public accounting and one in industry but was currently a full-time student. Another student was in the joint JD/MBA program and consequently a full-time student. The seventh student had recently retired from the military and had not yet begun his accounting career.

The students were placed into groups by using The Four-Communication Styles Approach (Carney, 1977). The four dominant communication styles include “doers” and “thinkers”, who tend to focus on the task at hand and “influencers” and “connectors”, who primarily focus on the relationships in the group. Creating groups with balanced but compatible styles is important for achieving group goals. This resulted in placement of four students in Group #1 and three students in Group #2.

Two cases were handed out after an in-class demonstration illustrating the preparation of the PCFS. Both cases contained the same financial information: (1) a two-year comparative balance sheet, (2) an income statement for the year and (3) additional details of transactions and events that occurred during the year. Both cases also provided information about the small corporation that was the subject of the case. The company had originated as a sole proprietorship by Thomas, an individual with absolutely no accounting knowledge and a total lack of understanding about the cash flow statement. Consequently, he relied completely on his controller, who was currently unavailable and unreachable, when making financial decisions.

At this point in the case, each group was given a different decision that Thomas had to make very quickly. Group #1’s problem dealt with an opportunity to buy merchandise inventory at a substantial discount (see Appendix A) and Group #2’s problem dealt with an opportunity to purchase fixed assets for expansion purposes (see Appendix B). In both cases, the situation was described as a “golden opportunity” and decision-making time allowed was only three days. Students were required to prepare both a GAAP cash flow statement and a PCFS. They were told to make a recommendation to Thomas, and to be sure to support their recommendation based on all four statements that they had. Further, they were instructed to clearly state the information on the two statements that they had prepared (GAAP cash flow and PCFS) that led to their decision.

RESULTS

Both groups of students recommended using the Patton’s Cash Flow Statement for making their respective decision. Members of Group #1 strongly felt that the GAAP statement was “misleading.” They indicated that the Patton statement was more informative and more closely related to free cash flow. Members of Group #2 indicated that they began their discussion by relying on and referring to the GAAP statement, but decided that the information presented therein was “not representative of how the company is doing.” They were concerned about getting reliable information about the overall financial picture of the company and the results of operations, and they felt the core cash flow, which is part of the Patton approach, was more indicative of true cash flow and preferred it over the cash flow from operations presented in

the GAAP statement. Further, the analysis of changes in working capital, which is also part of the PCFS, was also beneficial. It allowed them to focus on operating liquidity. When queried, members of both groups felt that preparation of the PCFS on a monthly or quarterly basis would be beneficial, especially for small business.

Through this exploratory study, we have reason to believe that the GAAP indirect method cash flow statement can be misleading to entrepreneurs and small business owners. Further, our results indicate that the Patton Cash Flow Statement may provide more information, more clarity of sources and uses of cash, and be easier to understand for entrepreneurs and small business owners who are making important business decisions.

The result of our study coupled with the successful use of PCFS begs the question, “Are we providing entrepreneurship majors with the right knowledge, tools, and skills to make sound financial decisions for their businesses?”

CONCLUSIONS

Based on the results of our exploratory study, as well as consulting experience of one of the authors of this paper, we contend that the PCFS a better tool than GAAP’s indirect cash flow statement for making business decisions. For more information about the PCFS, interested readers should contact one of the authors of this paper.

We encourage entrepreneurship educators to be entrepreneurial thinkers, and to work together in developing better tools and methods for students and practicing entrepreneurs to use to make better business decisions. This is not limited to finance and accounting practices and it is equally important to explore alternative methods in information technology, marketing, human resources management, and other business functions, especially as they relate to small business.

While we understand that GAAP methods are required for reporting purposes, and understand that the traditional financial statements must be taught and understood by business students and business owners, it is essential to provide them with alternative tools that might be better for decision-making purposes that could be the difference between success and business failure.

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EVALUATION OF *FINANCIAL FITNESS FOR LIFE* PROGRAM AND OUTLOOK IN THE MISSISSIPPI DELTA

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ABSTRACT

In Fall 2008 the College Access Challenge Grant, sponsored by the U.S. Department of Education, chose 13 school districts in Mississippi's Delta and Southwest regions to receive the Financial Fitness for Life (FFL) curriculum. We hypothesized that learning the FFL material could positively influence the long term goals of increasing college attendance for disadvantaged youth. We find that the students surveyed did increase their knowledge, especially on Themes 1, 4, and 5. However, their self-perceptions did not improve and we find no correlation between the behavior variables and the improvement in test scores. The experiment was less than ideal in a few areas, so improving the design and carrying out the experiment under more ideal conditions may yield different conclusions.

INTRODUCTION

In 2008-2009, thirteen school districts in Mississippi were chosen to participate in a pilot program that is part of the College Access Challenge Grant sponsored by the U.S. Department of Education and administered through the Institutions of Higher Learning in Mississippi. The Mississippi Council on Economic Education was asked to offer financial literacy opportunities for teachers and students as one way of achieving the goal of assisting low-income students and families learn about, prepare for, and finance postsecondary education. This provided a unique opportunity to assess teacher and student financial literacy, teacher training, and other significant factors that affect the attitudes towards college of disadvantaged youth. Our research agenda included studying the change in student behavior as well as the change in knowledge of teachers and students. We were interested in exploring how the Financial Fitness for Life (FFL) program affects the future perspective, identity development, perception of opportunities, and school performance of youth from low-resource communities. Based on the extant literature on youth development, each of these are plausible mediators that explain how the FFL program can help achieve the long-term goal of increasing college attendance for these youth.

REVIEW OF THE LITERATURE

Financial Literacy Education

The effectiveness of the FFL curriculum has been studied recently by only a handful of researchers (Lyons et al., 2006; Harter & Harter, 2007; Swinton, et al., 2007). Lyons, Scherpf, and Roberts (2006) find that the FFL parent's curriculum was valued as an effective vehicle to

improve communication between parents and children on financial matters. Swinton, et al (2007) find that having a teacher who participated in a FFL workshop was statistically significant in explaining expected end of course economics test scores. However, the effect was not large: an increase of 3.4 points or half a percentage point. Harter and Harter (2007) study elementary, middle- and high-school students in grades 5, 8, and 11 from an economically disadvantaged area in Kentucky. They report that the FFL curriculum does increase student scores.

Future Orientation

During adolescence, youth become more oriented to their futures (Erikson, 1968; Nurmi, 1991). Research has documented significant associations between aspects of adolescents' future perspective and motivation (Bandura, 1986; Nurmi, 1991), reductions in delinquency and substance use (Keough, Zimbardo, & Boyd, 1999; Kogan, Luo, Murry, & Brody, 2005), and positive adaptation in adolescence and early adulthood (Clausen, 1991; Masten et al., 2004; Werner & Smith, 1992; Wyman, Cowen, Work, & Kerley, 1993). Although the extant literature suggests that future oriented thinking plays a critical role in adolescent motivation, adaptation, behavior, and preparation for adulthood, we know very little about what individual and contextual factors influence adolescent future perspective. The material in FFL has the potential to give students confidence in their future by providing access to resources and opportunities in the home and community, tools to think about future possibilities and form positive expectations for the future, and strategies to build good habits and practical skills that pay-off in both the short- and long-term.

METHODOLOGY

Trainers were chosen by the superintendents of the participating schools. Trainers were made up of both counselors who would train classroom teachers and the classroom teachers themselves. Thirty-three trainers were trained in five sessions in seven locations. The trainers pretested the students, then taught lessons from FFL and then posttested the students. The teachers were under no obligation to teach all the lessons.

RESULTS

Variable	Definition
Grades	Self reported; 4 = very good student, 3 = good, 2 = not too good, 1 = poor
Teacher#	Dummy equal to 1 for teacher# (1-5); 0 otherwise
Ident	Student identity composite (Questions 29-48)
Plifch	Student perceived life chances (Questions 49-51)
Peropp	Student perception of future opportunities (Questions 65-80)
Totalfp	Student future perspective (Questions 52-61)

Note: Theme#Prescore, Theme#Postscore, and Change# are defined the same as prescore, postscore, and change for themes 1-5, except that theme scores are reported as percentages only.

Variable	Mean Pre	Mean Post	Correlation	Mean Change	T-Statistic
Overall	9.719	11.094	0.2909*** (.0002)	1.375	3.82*** (.0002)
Theme1: The Economic Way of Thinking	49.0%	56.1%	0.2336*** (.0029)	7.1%	2.94*** (.0037)
Theme2: Earning Income	39.7%	40.3%	0.1334* (.0927)	0.6%	0.23 (.8164)
Theme 3: Saving	26.3%	27.6%	-0.1121 (.1583)	1.4%	0.61 (.5409)
Theme 4: Spending and Using Credit	30.3%	41.1%	0.2108*** (.0075)	10.9%	4.27*** ($<.0001$)
Theme 5: Money Management	47.7%	54.2%	.3000*** (.0001)	6.5%	2.78*** (.0062)

Note: P-values in parentheses. *** indicates change is significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level.

We run the following three regressions:

$$\text{Prescore} = \alpha + \beta \cdot \text{student} + \delta \cdot \text{teacher} + \gamma \cdot \text{development} + e$$

$$\text{Postscore} = \alpha + \beta \cdot \text{student} + \delta \cdot \text{teacher} + \gamma \cdot \text{development} + e$$

$$\text{Change} = \alpha + \theta \cdot \text{prescore} + \beta \cdot \text{student} + \delta \cdot \text{teacher} + \gamma \cdot \text{development} + e$$

where *student* is the vector of student characteristics, *teacher* is the vector of teacher dummies, and *developmental* is the vector of developmental characteristics. We include *prescore* in the *change* equation to examine the impact of initial score on improvement. The OLS regression results are given in Table 3. In each table, model 1 includes just student characteristics, model 2 includes student and teacher characteristics and model 3 includes student, teacher, and developmental characteristics.

CONCLUSIONS

While we do find that our students demonstrated a significant improvement in knowledge, we find that the students in our research study scored approximately 5% higher on the pretests than the nationally normed sample without the FFL lessons and scored approximately 8% lower on the posttests than the nationally normed sample. While it is surprising to find that our students would test above the national average on the pretest, it is not surprising to find that they would lose ground on the posttest given that the teachers' economic literacy was well below national averages. We find that most of the gains in knowledge are in Themes 1, 4 and 5.

We also find that Hispanic and Asian students had the lowest performance on the FFL. Given that, the curriculum and assessment measures might need to be revised to address potentially meaningful cultural differences of students participating in the program (e.g., consider issues of language, cultural values, etc.).

We consistently find that teachers make a difference in student scores. Exploring the reasons for this finding is an obvious extension of the work. For example, studying the change on the pretest and posttests, analyzing specific questions teachers improved on the pretest and posttests, and knowing which lessons were taught and in what ways would shed light on the findings of teacher impacts.

Variable	DEPENDENT VARIABLE = PRESORE			DEPENDENT VARIABLE = POSTSCORE			DEPENDENT VARIABLE = CHANGE		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Intercept	5.849*** (1.243)	4.838*** (1.322)	0.414 (2.072)	6.028** (1.716)	6.496*** (1.480)	6.787*** (1.520)	4.487** (1.807)	5.732*** (1.533)	5.556** (2.432)
Female	0.258 (.479)	0.243 (.471)	0.005 (0.460)	0.645 (.661)	0.574 (.528)	0.603 (.533)	0.578 (.652)	0.535 (.525)	0.560 (.540)
Afr-Amer	-0.602 (.711)	-0.782 (.718)	-1.020 (.697)	0.194 (.982)	-0.954 (.803)	-1.143 (.839)	0.353 (.970)	-0.830 (.801)	-0.760 (.824)
Other Race	-2.582** (1.174)	-2.570** (1.157)	-2.214* (1.127)	-1.275 (1.621)	-1.389 (1.295)	-1.622 (1.328)	-.595 (1.621)	-0.983 (1.308)	-0.951 (1.340)
Grades	1.501*** (.325)	1.368*** (.325)	0.842** (.338)	1.598** (.449)	1.107*** (.364)	1.065*** (.368)	1.203** (.471)	0.891** (.382)	0.806** (.405)
Teacher 2		2.178** (.876)	2.083** (.846)		0.724 (.980)	0.629 (.996)		0.379 (.994)	0.219 (1.013)
Teacher 3		1.086 (.822)	1.041 (.811)		0.332 (.920)	0.312 (.944)		0.161 (.919)	0.075 (.957)
Teacher 4		1.938** (.809)	1.868** (.780)		2.246** (.906)	2.202** (.919)		1.939** (.917)	1.912** (.933)
Teacher 5		2.283** (.977)	1.850* (.955)		8.340*** (1.094)	8.269*** (1.109)		7.979*** (1.106)	7.816*** (1.134)
Ident [#]			-0.447 (.360)			0.020 (.028)			-0.117 (.425)
Plifch [#]			-0.256 (.332)						-0.508 (.390)
Peropp [#]			1.891*** (.480)			0.024 (.033)			0.883 (.593)
Totalfp [#]			0.460 (.448)			-0.022 (.041)			0.058 (.527)
PreScore							-0.737*** (.109)	-0.842*** (.090)	-0.884 (.097)
Observations	160	160	160	160	160	160	160	160	
F-value	8.14	5.41	5.70	4.24	14.99	10.90	9.35	17.88	
R-squared	0.174	0.223	0.317	0.099	0.443	0.447	0.233	0.518	
Adj. R-squared	0.152	0.182	0.262	0.075	0.413	0.406	0.208	0.489	

Note: Std errors in parentheses. *** indicates change is significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level.

We consistently find that students who perceive themselves as being good students perform better, on average, than do students who perceive themselves as being poorer students. Developmental variables were found to be explanatory in only one case: with regard to the

pretest results, the students' perception of future opportunities has a positive and significant impact. The developmental variables have no explanatory power in other regressions.

We find no correlation between the change in behavior variables and the change in knowledge. This is primarily due to the fact that the behavior variables do not change much from pre- to posttest. In one case, student future perspective even diminishes at the posttest compared to the pretest. It is possible that if the research design and implementation were improved, the relationship between knowledge and future outlook could be captured and examined. If we find that the middle school FFL is an effective way to give low-income students confidence about their future, we should find more students staying in school longer, even through college. Finding middle school FFL as an effective tool for low-resource students would provide a relatively inexpensive, practical solution to combat, in part, Mississippi's low graduation rate.

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C-SCAPE: ONE BUSINESS SCHOOL'S ANSWER TO THE SOPHOMORE SLUMP

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ABSTRACT

C-scape is one university's unique sophomore year integrated learning experience, designed to help students to plan their careers. It takes students through a comprehensive process of discovering and integrating their personal and professional landscapes, using their personal compass to define their direction, and personally mapping the steps to get there. This program is unique because it builds on Fink's seminal framework on integrated design of significant learning experiences. The aim of C-scape is to actively engage sophomores in the process of taking responsibility for their own learning and their future personal and professional success.

INTRODUCTION

For more than 50 years, those in higher education have recognized the 'sophomore slump' and yet, there is very little research on what and how to effectively overcome it (Lipka, 2006; Tobolosky & Serven, 2007; Toosi, 2004). After a first year filled with novelty and excitement, sophomores often struggle to find their passions and set their goals (Gardner, Pattengale, & Schreiner, 2000; Lemons & Richmond, 1987) which leaves them with a sense of inertia and disorganization (Freedman, 1956). They realize there are discrepancies between their expectations and the realities of college which leads to feelings of uncertainty about their futures (Evenbeck et al. 2000; Gardner, 2000). Consequently, sophomores may become disengaged and may even drop out (Lipka, 2006; Schaller, 2005). Moreover, without the aid of an intentional process to work through this confusion, sophomores are left to choose majors or careers they know little about (Lipka, 2006; Toosi, 2004).

Although the disconnect sophomores experience is well documented (Freedman, 1956), academicians face new challenges when dealing with millennial students (those born between 1980 and 2000) as they try to facilitate connections between students' interests, strengths, and goals to chosen majors and potential career opportunities. Millennial students typically come to college having been shepherded and given much individual attention. They feel very close to their parents (Oblinger, 2003; Sujansky, 2009) who protected them (Debard, 2004, as cited in Reeves & Oh, 2007), guided them and made decisions for them (Sujansky, 2009). Consequently, they need a roadmap to success and expect constant nurturing and feedback (Meister & Willyerd, 2010; Sujansky, 2009). Moreover, colleges have recently put a tremendous focus on freshmen programs while putting relative little effort into sophomore programs. Coupled with the unique

characteristics of millennials, the sophomore slump becomes more pronounced as students move from being the institution's focus the first year to feeling almost neglected in the second.

In addition, this generation of students has not been taught or does not have experience with self-reflection (Prensky, 2001b), rather, they want instant answers (Oblinger, 2003; Skiba & Barton, 2006). Schaller (2005) found that to fully develop, students need to progress from random to focused exploration through active reflection, which should help them to take initiative and responsibility for their decisions, plans, and actions. Given that millennial sophomores have little experience with the longer, more in-depth reflection needed to turn the sophomore 'slump' into a sophomore 'jump', it is apparent that an integrated and comprehensive experience during the sophomore year is required. Schaller's (2005) qualitative study of college sophomores' experiences lends support for the need for an integrated experience that effectively and comprehensively connects the dots for students in such a way that they learn to think and act intentionally and independently about their careers now and in the future. Recognizing that college students should be pushed to plot their own courses (Schreiner, 2000), and that self-authorship through personal reflection is central to adult decision making (Baxter Magolda, 2001), transforming millennials to independent thinkers is perhaps more challenging than in the past. For today's students to become competitive, self-motivated professionals who take responsibility for their own careers, an intentional college experience is needed.

Although it is apparent that today's sophomores need to be nurtured differently (Gardner et al. 2000), of those schools that have sophomore year initiatives, very few have comprehensive programs. Strategies typically are experimental and fragmented and include one or more components such as seminars, retreats, special housing, or extra advising (Lipka, 2006). Some of the notable exceptions are Beloit College and Colgate University that have two of the most recognized sophomore year experiences and stress the importance of seeing the sophomore year as part of a comprehensive first and second year program, yet distinct from the first year.

C-scape, short for Career-scape, is one university's unique sophomore year integrated learning experience, designed to help students to plan their careers. More often than not, sophomore year experiences are fragmented and ad hoc. In contrast, the C-scape program, presented here, is an integrated sophomore year experience. It takes students through a comprehensive process of discovering and integrating their personal and professional landscapes, using their personal compass to define their direction, and personally mapping the steps to get there. In addition to having their integrated personal and career landscape in view, students need a compass, much in the same way explorers do to find direction. C-scape is designed to successfully move students to commitment by developing their personal map or plan for the future. C-scape is a systematic process that internally connects students' decisions to their interests and values.

Strong programs should build on a sound theoretical foundation which facilitates not only program development, but also learning objectives and assessment (NASPA, 2010). Although Bloom's taxonomy of educational objectives (Bloom, 1956) is well-recognized and widely applied we believe that, given the characteristics of the millennials and mounting pressure on academics to engage students in their own learning, we need to go beyond cognitive aspects of learning. While Bloom's taxonomy is an important framework for developing learning objectives, today's students need not only to learn facts and information but also be engaged in reflection and self-discovery process in order to grow and become self-motivated learners in the future.

Consequently, we turned to a new model of significant learning experiences proposed by Fink (2003). In his seminal book, *Creating Significant Learning Experiences*, he developed a new vision of college teaching and learning. This vision builds on a new paradigm of significant learning experiences, deliberately and explicitly designed into the teaching environment and learning activities. The central idea is that learning experiences should result in true changes that transform students' lives. In a learner-centered environment, a teacher's role should be to create value-adding opportunities for students to become actively engaged in and take responsibility for their own learning. Designed and implemented properly, these rich learning experiences should lead to lasting changes in students' lives. Building on the idea of significant learning experiences Fink (2003) developed the integrated course design (ICD) model that emphasizes the integration of learning goals, learning activities and assessment.

In this paper, we outline an application of the ICD model to the design of the sophomore year experience, C-scape, at Millikin University's Tabor School of Business. Given the characteristics of today's students, this model is particularly appropriate because it is designed to actively engage students in the process of taking responsibility for their own learning and their future personal and professional success. Not surprisingly, comprehensive sophomore year programs are most common on small, private college campuses (National Center for the Freshman Year Experience and Students in Transition, 2005) similar to our institution.

To fully understand the underlying rationale for the intentional and systematic design of the C-scape program, a review of Fink's framework of significant learning experiences and the ICD model is necessary and is discussed in the following section. Then, using this framework, the C-scape program is presented, followed by conclusions.

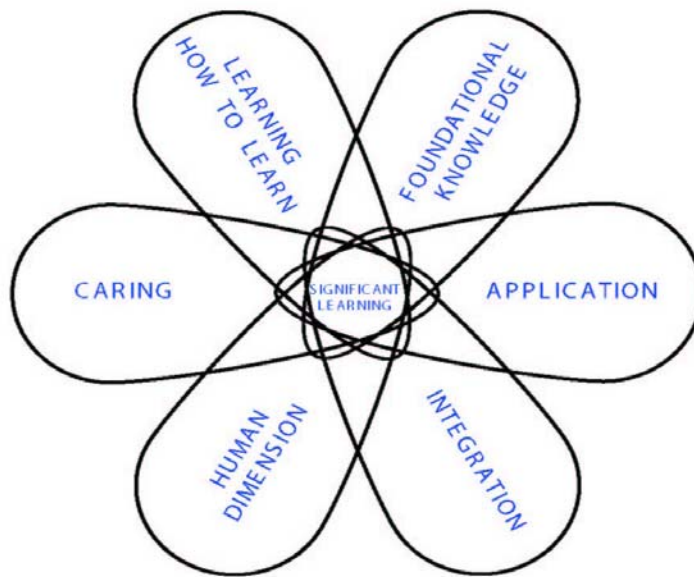
CREATING SIGNIFICANT LEARNING EXPERIENCES: THE FRAMEWORK

In his seminal book, *Creating Significant Learning Experiences*, Fink (2003) developed a taxonomy of significant learning (Exhibit 1) that is now widely used by college professors, both in the United States and abroad (Fink and Fink, 2009). It includes important elements of Bloom's taxonomy of cognitive development (Bloom, 1956) such as foundational knowledge, application, and integration. In addition, it incorporates the social aspect (human dimension), affect (caring), and meta-cognitive self-awareness and self-reflection (learning how to learn). Fink (2003) argues that, while Bloom's cognitive taxonomy is widely used by college educators, it lacks some aspects of significant learning, such as learning how to learn, interpersonal skills, ethics, and the ability to adopt to change. Thus, new kinds of learning are needed that extend beyond the cognitive domain of learning. Fink's taxonomy of significant learning provides a conceptual framework for identifying such experiences.

Fink (2003) emphasizes that all six components of significant learning are interrelated rather than hierarchical. The foundational knowledge provides the necessary basis for other kinds of learning. Application makes other kinds of learning useful. Learning to apply the foundational knowledge to different problems and situations shows students the value of what they learn and makes them care about the subject and motivates further learning. The human dimension adds personal and social significance to the material being learned and improves students' understanding of themselves and others. Integration allows students to understand the connections among different concepts, ideas and people. This, in turn, enables students to see how the material relates to their personal lives and to that of others. The caring dimension adds personal motivation to the learning process: when people care about something, they tend to

learn better and retain knowledge longer. Learning how to learn enables students to acquire skills for life-long learning that extends beyond a particular course or a subject matter. When all six components of significant learning are successfully implemented, students’ learning experiences become truly significant. Moreover, to achieve significant learning outcomes they must be explicitly designed into a course/curriculum.

Exhibit 1: Taxonomy of Significant Learning

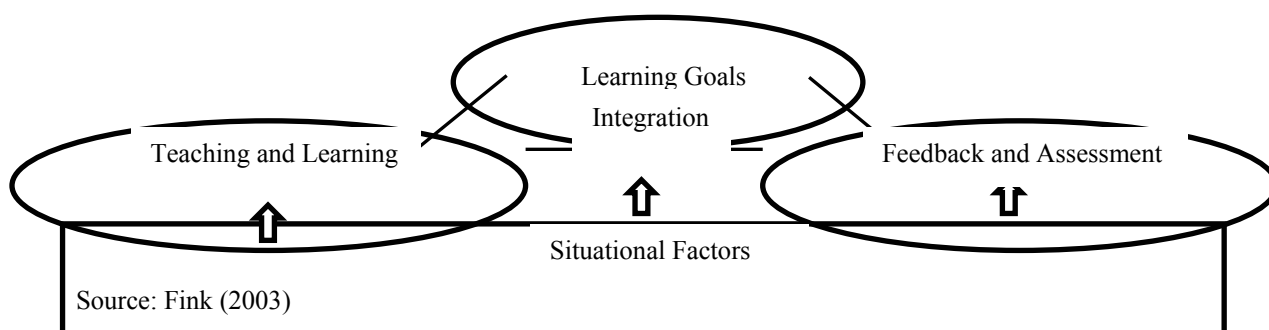


Learning Goals	Specific Kinds of Learning
Foundational Knowledge	Understanding and remembering
Application	Skills development <ul style="list-style-type: none"> • Critical, creative, practical thinking • Managing complex projects
Integration	Connecting ideas, people, realms of life
Human Dimension	Learning about oneself and others
Caring	Developing new feelings, interests, and values
Learning How to Learn	Becoming a better student <ul style="list-style-type: none"> • Inquiring about a subject • Self-directing learners

Source: Fink (2003)

Generally, teaching involves four major components: knowledge of the subject matter, design of instruction, teacher-learner interaction, and course management. Most college instructors hold terminal degrees and have a good command of their subjects. Teacher-learner interaction and course management aspects reflect specific ways the material is delivered and usually depends on the personalities of the faculty, as well as students. The instructional design in higher education, however, is the most significant bottleneck to better teaching and learning (Fink, 2003). More frequent than not, a course design is just a list of topics, assignments, exercises, and tests, arranged in a chronological order. It tends to focus on the subject matter rather than students, the content rather than learners. It emphasizes the organization of the information and supports only learning of the foundational knowledge and does not lead to long-lasting results. Fink (2003) argues that content-oriented teaching model should be replaced by a learning-centered course design. He proposed an integrated course design (ICD) model (Exhibit 2) as a learning-centered alternative to the traditional subject-learning approach. This model has been successfully applied to college courses and programs (Kolar et al., 2009; Fallahi et al., 2009).

Exhibit 2: Integrated Course Design Model



The implementation of the ICD model consists of five steps:

1. An assessment of situational factors about the nature of the subject, students, time structure, expectations, etc.
2. Defining learning goals using the taxonomy of significant learning.
3. Choosing and designing learning activities that will support learning goals.
4. Deciding on the feedback and assessment procedures.
5. Integrating all components.

Careful assessment of the situational factors is a critical step that must be taken prior to the design of the other three major components. It ensures that all components of the model reflect students' characteristics, the nature of the subject, and the institutional goals and expectations. Without this step, it would be impossible to design and implement a well-integrated learning process that meets the demands of both, the students and the instructor.

The next major step is to define the significant learning goals and connect them to the specific learning outcomes, using the taxonomy of significant learning (Exhibit 1). Given the nature of the subject, characteristics of the learner, and institutional expectations, this step should

result in the outcomes that would reflect learning of foundational knowledge, its application and integration in the personal and social contexts, and students' increased ability to become and continue to be self-directed learners. It is important to link the specific outcomes to the significant learning goals because it helps to keep the focus on the learner rather than the content. It also spurs thinking about teaching and learning activities that promote these kinds of learning.

The next step, selecting learning activities, should explicate what exactly students will do to achieve significant learning. Fink (2003) argues that the most effective teachers use active learning principles to design assignments and learning activities. They move away from the traditional "chalk and talk" lecture format toward rich learning experiences and reflection. Rich learning experiences call for students' active participation, such as debates, role-playing, simulations, and the like, and "doing" rather than just passively listening and observing. These types of activities allow students to achieve multiple kinds of significant learning simultaneously. Another important component of active learning is students' reflections on what is being learned. Thus, to promote significant learning, activities should include both the "doing" and the reflection.

The feedback and assessment step should incorporate more than mere grading. Grading is infrequent and backward-looking. In contrast, effective assessment should provide continuous feedback and be forward-looking. It should create a dialog between a student and a teacher. Moreover, it should enable students to monitor and evaluate their own learning. The main idea is to create a continuous cycle of "performance-feedback-revision-new performance" so that students become active participants in the learning and assessment process. These types of assessment and feedback should promote the learning process while providing the teacher and the learner with valuable feedback.

The final step is to insure that all components are integrated. First, all components must be grounded in the situational factors, such as the characteristics of students, the nature of the subject, and the educational goals of the institution. Second, learning goals, specific learning activities, and assessment procedures should support and reinforce each other.

APPLYING THE ICD MODEL TO C-SCAPE

Our Assessment of the Situational Factors

Fink (2003) suggests that instructional design in higher education is the most significant bottleneck to better teaching and learning. To ensure that C-scape is an effective, meaningful, and integrated sophomore year experience, we had to first situational factors specific to our institution and students that would impact the development of the program. What follows is the assessment of those factors and their impact.

The Institution

Tabor School of Business is a part of Millikin University, a small Midwestern comprehensive liberal arts institution. The University was founded in 1902 specifically on the premise that the theoretical and the practical should exist equally in the university's educational philosophy. The Tabor School's curriculum is integrated across the four years between the different business functions and with very intentional use of both theory and practice.

Expectations

University expectations.

From time to time, Millikin University critically investigates and thoroughly debates its educational mission in today's society and specifically how its role should impact our students' education. Consistent with its foundation, Millikin believes that its role is to prepare students for success in a global environment while leading a life of meaning and value.

School/department expectations.

Tabor School of Business embraces an integrated educational foundation designed for its graduates' professional and personal achievement. Consequently, C-scape should carry with it a number of indubitable expectations for the improvement of students' success. Included in these expectations are the following:

- Students who are more clearly aware of the connections between where they want to go and the path they are following now and who are therefore, more intentionally engaged with their majors, courses, and co-curricular activities
- Students who are more "self aware" regarding their values, interests, goals, strengths, skills, etc.
- Students who take greater control and responsibility sooner for identifying and following specific career directions
- Confident students who assertively expand their horizons for success and are more willing to push themselves instead of settling for what is comfortable
- Students who determine during this experience IF business is an environment conducive to their success; and if not, they and their advisor proactively determine a better avenue for their success
- Students who do confirm that Tabor's program is appropriate also develop the information and background necessary to commit to a specific Tabor major through this experience

Professional expectations.

The Tabor School of Business prides itself on being a learning partner valued by the community. Recognizing this, the C-scape program should aim to develop young professionals capable of evaluating their fit with a firm's needs as well as the firm's fit with the young professional's personal set of values, interests, goals, skills, and capacities. If our program is successful, Tabor graduates should have the capability to add more value to a company they work for and to do so sooner, as they will likely have fewer challenges adapting to the work environment.

Characteristics of the learner

Over 40 percent of Millikin students are first generation college students who attend Tabor as a means to become a professional, improve their lifestyle, and insure financial stability. The typical business student who will enroll in C-scape is 19 to 20 years old and is primarily from Illinois or surrounding states. Given our students' age, C-scape had to be designed specifically with the millennials in mind. The program structure, delivery, and experiences should have been developed to capitalize on millennials' unique experiences and skills while

effectively dealing with their challenges. For instance, we needed to leverage millennials' fascination with technology (Oblinger, 2003) and their preference to seek information on-line as opposed to in a textbook (Skiba & Barton, 2006). We needed to show students how to capitalize on their strengths and overcome their weakness regarding their knowledge and ability to seek and discern quality information (Oblinger & Oblinger, 2005). In designing C-scape, we also took into account the fact that millennials prefer bottom-up, the trial and error, approach to the top-down, concept-to-application, methods of problem solving (Oblinger, 2003). We also needed to be sensitive to their belief that doing is more important than knowing (Oblinger, 2003). And, while build into the process tools that help satisfy millennials' need for immediate and constant feedback (Meister & Willyerd, 2010), we also had to design a process that teaches students how to reflect in such a way that they will emerge owning their decisions and their roadmap to success. Finally, in designing C-scape, we recognized millennials' enthusiasm for social networking (Sujansky, 2009) and their preference for constructing knowledge within a social community (Skiba & Barton, 2006).

Time structure

According to Schaller (2005), the longer students stay in focused exploration, the more comprehensive their exploration becomes and the more likely they are to make independent decisions. Consequently, we decided that C-scape needs to be a year-long process that would require students to take a panoramic view as they discover their personal and professional landscapes and how they intersect. Moreover, the program must be fully integrated across two semesters and between a student's self-assessment and career discovery.

Instruction

The two course sequence should be taught by faculty with expertise in personality, values, interests, and career assessments and who are knowledgeable about business careers and occupations. To this end, we should partner with the University Career Center to design and deliver these courses. Students would take a two credit course in the fall and a one credit course in the spring in which they complete a process of discovering self, exploring careers and occupations, and planning for their futures. Course requirements should be enriched and validated through a set of required experiential experiences (addressed later) designed to augment the student's ability to effectively link personal development to professional aspirations.

Advising

At Millikin University's Tabor School of Business, students are assigned a business faculty member as an advisor when they are freshmen. As students make progress through C-scape, they should document their discoveries and achievements in an electronic career portfolio (addressed later). Students' advisors then use this portfolio as a vehicle to discuss and ensure students' progress toward their chosen majors and career paths.

Learning Goals and Objectives

Given the situational factors outlined above, we developed three major learning objectives and matched them with significant learning goals from Fink's ICD model (Exhibit 3). These objectives will later become major parts of students' portfolios. They are outcome-based and measurable, which is imperative for assessment and student feedback.

Exhibit 3: C-scape Learning Objectives

Significant Learning Goals	Program Learning Objectives
Foundational Knowledge Human Dimension Caring	Students will discover their strengths, weaknesses, interests, values, and personality types through self-assessment.
Application Integration	Students will apply the self-assessment results to their career exploration, analysis, and decisions.
Integration Learning How to Learn	Students will develop two-year action plan, which reflects students' personal, educational, and career objectives that fit their chosen career.

Learning Activities

To create significant learning experiences it is no longer possible to rely on a traditional lecture-discussion format. When designing C-scape, a variety of new learning tools were developed within the paradigm of active learning. The most powerful experiences are those that expose students to direct “doing” rather than listening and observing. Active learning is “anything that involves students in doing things and thinking about the things they are doing” (Bonwell and Eison, 1991, p. 2). The extant literature on the application of active learning documents significant advantages of alternative teaching methods over the traditional “chalk and talk” lectures (e.g., Siriopoulos and Pomonis, 2006; Felder and Brent, 2003). Effective implementation of active learning requires selecting learning activities that combines information, experiences and reflection (Fink, 2003).

Exhibit 4 describes C-scape’s learning objectives and examples of the variety of learning activities students will experience. Participation in this wide variety of activities is expected to connect students’ self assessment outcomes with the careers and occupations which provide them the greatest opportunity for personal and profession success. An example of an activity designed to meet the first learning objective is the skills assessment exercise which assists students in identifying their strengths and weaknesses. Other activities related to objective one help students relate their discovery of self in terms that will help them leverage their strengths and compensate for deficits over the remainder of their college careers.

Exhibit 4: Learning Activities

Significant Learning	Learning Objectives	Activities	Examples
Foundational Knowledge Human Dimension Caring	Students will discover their strengths, weaknesses, interests, values, and personality types through self-assessment.	Self-assessment exercises to discover and reflect on personal, professional and social skills	<ul style="list-style-type: none"> • Interest assessment • Personality assessment • Values assessment • Skills assessment • Reflective writing
Application Integration	Students will apply the self-assessment results to their career exploration, analysis, and decisions.	<p>Explore personal, professional and social skills requirements for a particular career and explore career/industry fit.</p> <p>Connect the results of self-assessment to specific occupations that fit career aspirations, personal values and skills set</p>	<ul style="list-style-type: none"> • Personal branding exercises • Positive attributes identification • Exploring business majors • Alumni and career roundtables • Interview skill development • Job/Internship search techniques • Networking skill development • Externships • Resume/Cover Letter development
Integration Learning How to Learn	Students will develop a two-year action plan, which reflects students' personal, educational, and career objectives that fit their chosen career.	Reflect on career portfolio and develop a two-year plan to further expand personal, professional and social skills	<ul style="list-style-type: none"> • Goal setting exercise • Reflective writing on the best fit majors and connection to possible careers

The second objective focuses on developing synergy between self-assessment and career decisions through the process of exploration and analysis. This process is designed to be reflective in nature and is expected to take a full academic year. A number of activities will feature significant alumni involvement. For example, by participating in the year long Alumni Round Table (ART) program, students will network with alumni representing the various business majors and will attend semi-structured discussions with alumni representing specific disciplines and sub-disciplines. For instance, a student interested in marketing might participate in round tables lead by alums involved in market research, sales, integrated marketing communications, advertising, product management, etc. Another activity involves students in an externship where they would spend two to five days working alongside a Millikin alum who is a CEO or senior executive. This experience incorporates significant time for discussions and

debriefing. Students will compete for limited spots in this program. Because of activities such as these, we believe C-scape will have greater impact on the amalgamation of student self-discovery with career discovery than most programs we examined.

To achieve the final objective, students will develop a two year action plan for the remainder of their college experience. Using their previously selected career paths and up to three related occupations, students will develop a detailed two year curricular, co-curricular, and extra-curricular plan for continued self and professional development that affords them the best opportunity to succeed in their selected careers and occupations. This plan identifies avenues that best enhance the student's chances to attain their goals and might include such things as coursework, internships, leadership positions, conferences, and involvement in professional organizations.

Feedback and Assessment: Career Portfolio

The primary tool that should help us track progress and outcomes in C-scape is an electronic career portfolio (e-portfolio). E-portfolios have been recognized as an asset that supports macro level learning goals (Heinrich et al. 2007). Instructors can use it to determine whether the assignments lead students to develop good understanding of how to apply the material in practice. Advisors can use it to decide whether students need more directions in choosing a career and a major. Moreover, this tool helps to check that assignments and activities are in line with the educational objectives (Heinrich et al. 2007; Clark, 2009). Educators find that e-portfolios are particularly well suited as a tool to assign and supervise a variety of tasks that lead to a richer educational experience by including a clear list of the learning goals, or skills the students are expected to develop and linking them to assignments (Heinrich et al. 2007; Clark, 2009). E-portfolios also help shift the students' focus from managing individual assignments to reflecting on their overall development (Heinrich et al. 2007).

If students are to develop life-long skills it is imperative that they both see and understand the process they experience. Students can see the learning goals as they go through the learning process and use feedback from instructors and advisors to better understand what skills or material has been mastered and what needs more attention. As a feedback tool e-portfolios provide students with a resource that takes them through a process of asking a series of open-ended questions that have no right or wrong answer. Students can then develop responses to those questions and, through discovery and reflection, determine if the response is appropriate to them at that stage in their lives. As students' lives and conditions change they can refer to the method of question and reflection again using the e-portfolio as a framework for identifying a question and collecting information and insight to identify a course of action.

Potential employers may also provide useful feedback and external validation that the learning goals address the needs of industry. For example, Heinrich et al. (2007) found that employers are seeking individuals who have demonstrate initiative, interest and commitment. Employers have identified e-portfolios as a means to show a commitment to lifelong learning (Heinrich et al. 2007). The e-portfolio provides students with the means to demonstrate a commitment to their careers by taking the initiative to continue using the e-portfolio after the initial assignments have been made.

Finally, an e-portfolio helps students demonstrate an ability to apply seemingly unrelated information in creative ways, which demonstrate problem-solving skills, innovation, and a capacity to learn (Heinrich et. al, 2007). For most, a career path takes many turns and the

combination of opportunities and setbacks can lead to a seemingly disparate list of experiences and skills (Bolles, 2009). E-portfolios can provide students with the tools and the framework needed to help students better understand what they can bring to the table when participating in the workforce. Equally important, the e-portfolio can provide the same tools and framework that helps students reflect and grow in their understanding of themselves, which ultimately benefits the students for their lifetime.

Integration: C-scape Process

Fink (2003) stresses the importance of integration of all four components – situational factors, learning goals, assessment tools, and learning activities. This step is a necessary check on how all previous components support and reflect each other (Exhibit 4). To ensure this integration, the C-scape experience takes students through a three stage process to accomplish the three learning objectives.

Exhibit 4: C-scape Process

<u>Stage I: Career and Self</u>			
Significant Learning	Learning Objectives	Activities	Assessment and Feedback
Foundational Knowledge Human Dimension Caring	Students will discover their strengths, weaknesses, interests, values, and personality types through self-assessment.	Self-assessment exercises to discover and reflect on personal, professional and social skills	Document personal values, interests and aptitudes in a career e-portfolio.
Foundational Knowledge Human Dimension Caring	Students will apply the self-assessment results to their career exploration, analysis, and decisions.	Explore personal, professional and social skills requirements for a particular career and explore career/industry fit.	Match self-assessment of interests, strengths and opportunities with potential career requirements and document the results in a career e-portfolio.
<u>Stage II: Occupation and Self</u>			
Significant Learning	Learning Objectives	Activities	Assessment and Feedback
Application Integration	Students will apply the self-assessment results to their career exploration, analysis, and decisions.	Connect the results from Stage I to specific occupations that fit career aspirations, personal values and skills set	Complete a career e-portfolio that provides evidence of exploration and integration.
<u>Stage III: Action Plan</u>			
Significant Learning	Learning Objectives	Activities	Assessment and Feedback
Integration Learning How to Learn	Students will develop a two-year action plan, which reflects students' personal, educational, and career objectives that fit their chosen career.	Reflect on career portfolio and develop a two-year plan to further expand personal, professional and social skills	Complete a two-year plan in relation to a chosen career and a major

In Stage I, Career and Self (first semester of the sophomore year), students begin a very thorough investigation of self, focusing on assessment of their personal, professional, and social skills. This goal is accomplished through a series of exercises that also insure an integration of the students' personal values and a delineation of their strengths and weaknesses. This self-evaluation is coupled with a thorough investigation of potential career paths. During this stage we focus on the first two learning objectives: students' exploration and discovery of their skills strengths and weaknesses, with further application of the results to potential career paths. The outcomes are assessed using a career portfolio, where students document personal values, interests, and aptitudes and then match them with the requirements of a particular career.

Stage II, Occupation and Self (second semester), focuses on connecting the results of the first stage to specific occupations that meet students' values, career aspirations, and skill sets. Students examine how well their strengths, weaknesses and values fit with various occupations. Specifically, they identify areas for personal and professional improvement and develop implementation strategies.

Approaching the end of the C-scape experience, students will complete Stage III – Action Plan where they will develop personal two-year action plans that focus on intentional improvement and expansion of their personal and professional skills. Students will be encouraged to change, extend, add and/or modify their major in ways that have the greatest potential and opportunity for success.

CONCLUSION

For more than 50 years, those in higher education have recognized the 'sophomore slump' and yet, there is very little research on what and how to effectively overcome it (Lipka, 2006; Tobolosky & Serven, 2007; Toosi, 2004). C-scape, presented here, is one university's unique sophomore year integrated learning experience, designed to help students to plan their careers. It takes students through a comprehensive process of discovering and integrating their personal and professional landscapes by giving them a compass and helping them to map necessary steps. C-scape is a systematic process that internally connects students' decisions to their interests and values and moves students to commitment by developing their personal plan for the future.

To develop a comprehensive sophomore year program we turned to a new model of significant learning experiences proposed by Fink (2003) that emphasizes the integration of learning goals, learning activities and assessment. Given today's students, this model is particularly appropriate because it is designed to actively engage students in the process of taking responsibility for their own learning and their future personal and professional success. There are many aspects of the ICD model that prompted the authors to adopt it as the underpinnings for the C-scape program. However, nothing in the model fits our institution's culture closer than the model components: the theoretical, the practical, and the integration. At the heart of the C-scape program is the belief that students must develop workable career plans for their remaining two years and, to accomplish this, students must be guided and encouraged to apply the art of discovery to the challenge of determining their potential career paths.

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INTRINSIC & EXTRINSIC MOTIVATORS AND STUDENT PERFORMANCE: AN EMPIRICAL INVESTIGATION

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ABSTRACT

The objective of this study is to investigate the association of extrinsic and intrinsic motivators and student performance. This study performs a critical analysis and presents evidence to demonstrate that intrinsic motivators affect the connection between external motivators and student performance. The empirical tests follow the framework developed by Baron and Kenny (1986) and examine the mediation effects on the data collected from an undergraduate auditing course. The results indicate that there exists a partial mediation effect of voluntary online quizzes (a measure of intrinsic motivator) on the association between mandatory in-class quizzes (a measure of external motivator) and course performance. The findings offer basis for interesting implications, suggesting that mandatory external motivators (in-class quizzes) are of less value with the presence of other viable motivational techniques (online quizzes). Voluntary online quizzes help foster the learners' intrinsic motivation and hence bear more importance with student performance than mandatory in-class quizzes. Educators may consider using techniques that can boost intrinsic motivation in teaching practice.

USING ADAPTION-INNOVATION THEORY TO ENHANCE PROBLEM-BASED LEARNING EXPERIENCES

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ABSTRACT

Students have mixed reactions to problem-based learning (PBL) experiences. We propose that some dissatisfaction with PBL classes comes from concerns rooted in students' cognitive styles (CS). Cognitive style influences how individuals solve problems and how they feel about the problem-solving process. Kirton's Adaption-Innovation theory (A-I) describes each individual's preferred cognitive style as falling somewhere on a continuum anchored by two archetypes: Adaptors, who favor structure and incremental solutions, and innovators, who avoid structure, re-define problems, and prefer radical solutions (Kirton, 1976; 2003).

To improve problem-based teaching outcomes, we propose an expanded version of Peterson's (2004) framework for problem-based learning that will help instructors train students to deal with CS conflicts. We provide illustrations of cognitive style differences, examples of problems that require adaptor and innovator problem-solving approaches, and advice regarding coping with decision biases and process losses due to CS conflicts.

INTRODUCTION

There has been an increasing demand on business schools to provide relevant training and instruction to students in order to meet the real-world demands post-graduation (Bennis & O'Toole, 2005; Pfeffer & Fong, 2002). One approach to providing meaningful training to students is to engage them in problem-based learning (PBL). PBL engages the students in problem solving activities that are pre-cursors to the business world (Coombs & Elden, 2004; self-citation removed). Unfortunately, student reaction to the PBL approach has been mixed. For example, Bigelow (2004) reviewed multiple studies that indicated student feedback ranging from enjoyment to frustration with the problems and negative grades. We, as instructors using PBL, have consistently found that there was one set of students energetically approaching the problem, another set that was neutral and largely silent, and a third set that appeared stressed and frustrated (self-citation removed 2008). These differences also surfaced in team-based problem-solving assignments. Some students would express frustration that they were "wasting too much time figuring it out" and wanted to "just get started and do something." Others expressed concerns such as "what is the real problem here." Students saw time spent resolving conflicts as wasteful because they should be addressing substantive aspects of the problem, not debating how to proceed (self-citation removed, 2008).

In team settings the problem itself may cause some CS conflict and students blame their frustration on the instructor, the problem, and/or their teammates. To compensate, students

reduce their effort level settling for less optimal solutions in order to end the effort of coping. Instructors often incorrectly attribute the students' reactions to whining or laziness.

Next, we describe the characteristics of adaptors and innovators, and pose examples of problems that could induce coping behaviors and related stress in students. We conclude with an expanded model for PBL that incorporates prescriptions from decision-making theory to help students deal with cognitive style conflicts.

COGNITIVE STYLE DIVERSITY

Cognitive style involves "characteristic modes of perceiving, remembering, thinking, problem solving, and decision making, reflective of information-processing regularities that develop... around underlying personality trends" (Messick, 1994). One view of cognitive style that has received extensive theoretical and empirical attention in the psychology and organizational literature is adaption-innovation (A-I) first articulated by Kirton (1976). A-I theory proposes that individuals have differing preferences for how they solve problems. Kirton and others demonstrated empirical support for each individual having a cognitive style on a continuum from adaption to innovation. Those students who are relatively more adaptive prefer more structure in their problem solving. Adaptors make incremental improvements to the existing system, and carefully develop a few original ideas. The relatively more innovative think outside the current paradigm, prefer a looser structure, challenge existing rules and identify many solutions regardless of practicality (Kirton, 2003).

In the A-I model, in spite of having a fixed preferred style for problem solving, each person has the ability to work outside their preferred cognitive style but at a cost described as "coping behaviors." Coping behaviors can be learned and improved with experience and come at a cost of increased stress and effort in many cases (Kirton, 2003). Coping efforts can contribute to student susceptibility to decision-biases, dissatisfaction, and poor decisions if not managed effectively. How much effort coping will take depends in part on the length of time the behavior must be sustained and how much the problem-solving activity is outside the person's preferred style (Kirton, 2003). If there is sufficient motive and reward, the student will continue to cope until no longer necessary but at the cost of extra effort which could limit students' willingness to engage in PBL. Process losses through fatigue, frustration, and dissatisfaction may occur if the motive to cope is insufficient and coping will stop (Kirton, 2003).

Adapting Problem-Based Learning for Cognitive Diversity

Peterson (2004) proposed that there are three critical success factors for PBL instruction: orienting the students, picking the problems and forming the teams. Other cognitive style perspectives on learning recommend the value of structuring classes to help students adapt to problems outside their preferred style (Backhaus & Liff, 2007). Below we offer a modified version of Peterson's PBL framework adapted to address cognitive style concerns. We recommend that PBL instructors engage in:

- 1) Orienting the students to cognitive style preferences.
- 2) Managing CS conflict and problem solving biases by developing students' coping strategies.
- 3) Picking the problem and using problems for both innovators and adaptors.
- 4) Forming the teams by instructors managing the cognitive style composition of each team..

Orienting the students to cognitive style preferences

Peterson (2004) advocates orienting students to PBL by acquainting them with the learning process and answering questions about the material. In Table 1 we show a number of characteristics of innovators and adaptors based in part on Kirton's (2003) discussion of Adaption-Innovation characteristics and on our experiences in running PBL in our classes.

Problem	Adaptor characteristics and behaviors:	Innovator characteristics and behaviors:
Risk	Adaptors appear to take fewer risks.	Innovators take greater risks.
Nature of solution	Adaptors produce consistent small wins. Adaptors are creative at solving problems within existing organizational rules and norms.	Innovators think in terms of creating the "big win". Innovators are less constrained by current organizational norms or conditions.
Solutions fit organization	Adaptors solutions may fit well with the organization's existing capabilities.	Solutions proposed by innovators may require more change in order to implement.
Defining the problem	Adaptors want to be efficient. They focus early and work to clarify the problem.	Innovators will redefine the problem to fit their understanding of the situation.
Problem scope and clarification	Adaptors ask questions to narrow the scope of the problem (e.g. "What do you really mean here?" "Is this how we should think about...?")	Innovators ask little clarification, ignore instructions, and prefer to answer the problem in the way they think it should be answered.

Both the nature of the problem (the instructor's decision) and the cognitive preferences of the students affect the effort required to solve the problems. By being able to cope more effectively, team members will be less tolerant of satisficing (where the teams choose the first reasonable solution) (Simon, 1960) in order to stop the "pain" of dealing with diverse approaches to a problem. Our specific recommendations to instructors to help students recognize cognitive style learning issues are to:

- Present the basic tenants of cognitive style, the adaptor-innovator continuum, coping behaviors and emotional responses to conflicts.
- Use a short class exercise to introduce the concepts described above. Adapt a problem similar to those listed in Appendix 1 and use two versions for adaptors and innovators.

Managing cognitive style (A-I) diversity and problem-solving biases

In a PBL class, students' performance concerns are amplified if the problems used require students to work outside their preferred cognitive styles. Students know that failure has consequences to their grades and can lead to embarrassment. Cognitive style preferences can lead to decision biases. Students satisfy their short-term needs by using their preferred cognitive style and avoid the effort coping behaviors. Thaler (1980) explains that individuals experience conflict in making decisions due to short-term preferences that conflict with long-term goals.

Students, like most people, usually attribute their successes internally, and their failures to external causes (Miller & Ross, 1975). Through experience, students have developed rules of thumb or heuristics that help reduce information processing demands of problem-solving. They are efficient but can be systematically skewed by cognitive style preferences that bias a person's problem-solving process in two ways. First, bias can be introduced by the availability heuristic (Tversky & Kahneman, 1973). If, for example, adaptors experience success with detailed incremental solutions, then adaptors will be able to recall those detailed solutions better than

other solutions when they face their next problem. Second, representativeness bias causes the student to assess the likelihood of events by the similarity of that occurrence to their stereotypes of similar occurrences (Bazerman, 2005). Since they are likely to be biased by their preferred CS then students are likely to simply use problem-solving processes that fit their CS.

Although cognitive style preferences are permanent (Kirton, 2003) the ability to cope and the cost of coping can be varied through training and practice. If we want students to work outside that preferred style, we must give them the evidence and tools needed to de-bias their decision process. To change student behavior, use evidence that supports or disconfirms their self-assessments, then students will become more realistic. (Bazerman, 2005). To help students become less biased, instructors can build in self-assessment exercises that provide feedback so that team-members can see what is/is not successful. For example, when innovators are confronted with a highly structured problem, it takes effort to unfreeze (Lewin, 1947) them from their first inclination to re-define the problem. We recommend training students to follow the process below (adapted from Bazerman, 2005):

- Select a comparison set of past observations with which to compare the current situation.
- Identify the decision-maker's biases and the biases inherent in the problem or situation.
- Identify and adjust for the differences between the current problem and comparisons.

Picking the problem

A third element in our framework is to select or design the problems used in class with CS diversity in mind. Peterson (2004) recommended defining a "good" problem for a PBL environment by assessing the difficulty of the problem, its appeal to students, and its degree of application of theoretical concepts. Table 2 below contains several examples of problems that vary in the cognitive solution requirements and thereby appeal more to adaptors or to innovators.

Table 2: Examples of Business Problems by Subject and A-I Type

Subject	Appeals to more adaptive students	Appeals to more innovative students
Marketing Problems	Statistical analysis of survey or market data	Developing a survey for marketing research
Explanation	The analysis must follow established procedures so the data can be analyzed efficiently and accurately. Ambiguity is minimized.	Creativity and speculation are required to model buyer preferences and determine what will lead respondents to provide the best info.
Accounting Problems	Gathering transaction data and asset information; then creating the balance sheet and income statement for a firm.	Developing a plan or system for detecting fraud or accounting irregularities in an on-going business.
Explanation	The information gathered is usually dictated by operating or legal guidelines. Interpretation must stay within reasonable limits. Requires attention to detail to do efficiently and without error.	To detect or plan for potentially disruptive events requires anticipating what has not been done yet or re-working prior experiences to fit a new context.
Management Problems	Comparing performance of competitors by important industry characteristics.	Analyzing the effects of potential new strategies to be used by competitors.
Explanation	Requires accurate data and use of industry "rules of thumb" or historical ratios for comparison. Attention to detail is important.	Judging the effects of a competitor's strategy requires considering the competitor's actions, the focal firm's potential to counter the strategy and the cost/benefit to both organizations, (tasks that do not have clear protocols).

Students prefer and express higher levels of self-efficacy on assignments that correspond with their preferred CS (Self-citation removed, 2008). In picking the problems, an instructor can incorporate active learning processes by having students assess their reactions to problems. The instructor can assess student willingness to satisfice (Simon, 1960) or to delay solving problems. Satisficing helps students cope because it limits the amount of conflict students face. Delays in making a decision may result if students perceive an increased risk of making an error (hesitation, paralysis by analysis). In Table 2 we provide examples of problems that the instructor could assign students so that they must work outside their preferred cognitive styles and develop action plans for their coping strategies. In summary, when choosing problems we recommend the following:

- Vary problems used so that some are compatible to adaptors and some to innovators.
- Have students assess whether the problem is outside their CS.
- Use a 'buffet' approach and allow students to choose their preferred problems.

Forming the team

Many of the problems our students will encounter in organizations are too complex to be dealt with by an individual. Becoming effective collaborators is an important outcome of PBL. Students will develop their collaboration skills through working on teams with individuals with different cognitive styles. CS differences are problematic in teams because decisions in teams have to be negotiated by its members. Students benefit by working effectively in diverse teams because diversity in problem solving leads to more creative and effective solutions than homogeneous teams (Basadur & Head, 2001).

Conflict in a team may arise for example, during the idea formulation phase of a project if innovators push radical solutions and adaptors push for more details about any solution. Innovators make an attribution error here because they see the adaptors as rejecting the innovators' ideas but the adaptors simply need more clarity and structure. Once team members understand cognitive style preferences these misattributions decline (Kirton, 2000, p. 51).

Instructors can manage the level and form of cognitive diversity in team projects by managing the mix of team-members based on their CS. However, if an instructor wants the students to provide an optimized outcome, then a more diverse team is preferable (Basadur & Head, 2001). We recommend dividing long projects into phases that incorporate different cognitive style needs. To summarize, in team projects instructors should consider the following:

- To hone coping skills have students experience a variety of problem-solving demands.
- Assign students to work in diverse teams to expose them to CS preferences.
- Use homogeneous CS teams for timely solutions; heterogeneous teams for optimal.

CONCLUSION

Problem-based learning has been developed to meet specific needs in a variety of fields. In business education, we use PBL to create a more realistic experience in which our students can learn profession-specific knowledge that will serve them in their careers. In our experience, PBL can be stressful, and many students will become passive learners or avoid classes that they

feel have uncertain outcomes (grades). By addressing A-I preferences explicitly, we can improve students' abilities to cope with the added demands that cognitive style conflicts create. Using the framework and the related techniques we have described above, instructors can help students be well informed and able to manage cognitive diversity in a problem-based learning classroom and beyond into the problem (and opportunity) filled workplace.

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THROUGH AND PAST THE VALUES OF MANAGEMENT: REFLECTIONS ON TEACHING IN BUSINESS SCHOOLS

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ABSTRACT

This paper builds on observations as a student and teacher of business to formulate a critique and proposals for how to assert the primacy of values in business education. Trained primarily in the liberal arts, rural development efforts in Nicaragua and political economy, I came to the study of management in order to learn the “nuts and bolts” of accounting and finance in order to create community-based lending programs. What I found, and what kept me in the field of management, was a discourse of social and economic organization that is both enormously influential and intellectually extremely fragile. I have spent more than a decade being taught and teaching about this discourse. The paper begins by describing key values of management discourse and how they are promoted in business schools. I go on to explain the ways I have found to teach “through and past” these values: using primary texts and calls for critical thinking to help business students see and evaluate the assumptions underlying fundamental constructs such as the moral basis of profit and wage differentials, the meaning of work,, and the logic of markets.

INTRODUCTION

Periodically – and generally in the wake of waves of corporate scandal – business schools affirm the importance of social and moral values in business (i.e. the September 2006 issue of *The Academy of Management Learning and Education Journal*). At the same time, professional ambivalence about addressing values in management education is apparent in a scarcity of papers on the subject in academic journals and in practice in the absence of institutional support for ethics classes and programs (Kelly, 2003). Most basically there is a lack of conviction among many people teaching and researching in schools of management that ethical judgments are a) implicated in what they do and b) within the purview of their expertise. Discussion of the values underlying business practices and norms tends to be limited to classes explicitly devoted to “ethics” but even in these classes values are reduced to relatively incidental issues.

The discipline and the profession are permeated by a powerful unwillingness to allow increased attention to the moral and social dimensions of business to affect what and how knowledge is conveyed. In contrast, I believe that focusing on these dimensions is not only morally necessary but that it is possible and that students of management are hungry for this kind of teaching. Students want to be given reason to think they can participate in business in ways that make ethical sense. In the paper I examine the values typically promoted in management classes and reflect on my experience challenging students to think about business in ways that foster their inherent sensitivity to its wide-ranging social consequences.

VALUES - AND TOOLS

Part of what makes reflection on values such a compelling process is that values are necessarily the product of individual experience of social phenomena. My views of business values and how they are shaped by management education are the result of an idiosyncratic career path. As an undergraduate I wanted to study why people are so often willing to dedicate themselves to helping others. I suspected that being part of a collective commitment was not only morally “good” but also deeply satisfying, a sense confirmed by a year as a VISTA volunteer. Initially I thought this area of study was the purview of political science but soon found it much more fully embraced in the University’s Divinity School. After graduation I went to Nicaragua, inspired by what I had read of the role of community-based Catholic theology in the Sandinista movement. There I found demonstration of my belief in the power of solidarity and the common good. Underlying the general project was an explicit statement of the joy of service and interdependence. These were values I could commit to.

But for social change to work the values had to become more instrumentally effective. Nicaragua’s project needed more and better management tools and I enrolled in a graduate program in economics. I returned to Nicaragua to establish a micro-credit program for small-scale coffee farmers connected to a Fair Trade exporting program. Several years later I returned to the U.S. and did similar work in the Philippines and Zambia. Eventually I enrolled in an MBA program. Perhaps in part because I *wasn’t* skilled at calculations I thought of accounting (and statistics) as value-neutral as, say, a hammer. An idealist, I came to the MBA program expecting tools with a capital “T”, absolute and universal. This excessive faith of the (naïve) outsider was – not surprisingly - quickly challenged.

Early in my first accounting class I was startled to find how deeply embedded particular social values were in those tools and techniques I so wanted to learn. As the professor explained the need to reduce costs, equated labor with all other inputs as a cost to be minimized and treated profit as a product to be maximized always and unequivocally, I came face to face not only with the understanding that the basic accounting equations described and *prescribed* a set of social relationships but also with the realization that there was to be no discussion of the thinking behind that prescription. Variants of these values permeated the majority of my other classes, presented as integral parts of a particular vision of social relations, of a *certain* set of powerful normative judgments. Profit was to be maximized *and* profit was the inalienable right of capital, compensation for risk and entrepreneurial spirit. Labor costs were to be minimized *because* efficiency arguments dictate all costs be minimized and that labor be treated as a cost in the same way any material input. These and other assumptions about the goals and methods of organizations were promoted without discussion. Not only did I reject these value judgments about the purposes and conditions of economic activity and organizational life, but many of them simply didn’t make sense, either in terms of what I knew of other fields (including economics) or what I knew of how organizations and society tends to and can work.

Two insights summarize my experience. First, management education involves teaching, without explicit evaluation or even explanation, a very particular set of values, what Giacalone and Thompson (2006) describe as the educational *weltanschauung*. This world view incorporates a set of norms that designate financial growth, consumption, wealth accumulation and profit-maximization as self-evident moral imperatives. The relative merits of these assumptions are rarely, if ever, discussed. Those of us in the business of teaching business make our values *look like tools* because we aren’t clear with ourselves, our students or the world at

large that we even *have* values. We blur the line between values and tools by making very substantial and usually unarticulated assumptions about the goals and inherent nature of all the key players.

There are three key consequences of making our values look like tools. First, it has the effect of making the people who are skilled at using the tools seem “good at” values as well. Proficiency in management tools can lend an authority in which technical efficacy conveys moral virtue. Secondly, the relevance of our work is limited. Because we don’t recognize our assumed values we can’t see the many ways they are challenged or contradicted by actual events and behavior. Management academics’ theories are perceived as irrelevant by many practitioners who live in a more complex and nuanced world (Badawy, 1976, Pfeffer & Fong, 2002). Irrelevance is clearly an issue in classrooms where students’ eyes often glaze over as our purportedly value-free textbook scenarios and classroom discussions don’t reflect what they have absorbed of business from their own experience or what they are likely to face. Third, we are deprived of managerial imagination. Because we don’t see our values *as* values we don’t see them as products of history and reflections of circumstance and choices. Through the virtual elimination of discussion or even articulation of values, business education perpetuates the assumption that effectiveness requires the use of tools built on a particular set of values. We can’t imagine what alternative organizations or practices would look like and organizational diversity is unnecessarily limited. The generalized race to offer a “competitive” rate of profit keeps managers from looking beyond the most immediate time horizon and discourages consideration of alternative metrics of success.

Why, in an era when the generally accepted goals of business organizations have been seen to create such damaging results, do we in the management education profession do this? Why do we link the tools of management so closely to a very particular set of values without even bothering to explain (to ourselves or our students) why those values are the chosen ones? This set of management values is rooted in several very powerful discourses, especially neoclassical economics (see, for example, Harris, 1984; Hoas & Wilcox, 1995) and the positivist social sciences (see, for example, Morgan & Smircich, 1980, Knights, 1992). Because few management professors have more than a passing understanding of economic history or thought their interpretations are often simplistic. Yet it is exactly simplicity that makes economic principles such as Smith’s Invisible Hand so compellingly complete and neat that makes them so prominent in business school discourse. Clearly the relationship between business and society today bears little resemblance to Smith’s vision of a society in which the state played a critical role in maintaining the rules of the game and individuals were guided by forceful moral imperatives. Nevertheless, the moral sway of the logic of free market exchange prevails; making the values behind such practices as profit maximization appear so undeniably useful that they seem indisputably necessary for any “smart” organization.

As a society do we have to promulgate the managerial *weltanschauung* I’ve referred to above in order to be effective? Are the values of managerial capitalism necessary for making the trains run on time (or raising the quality of education, health care or the environment)? I am quite sure they are not. In fact, I think that a viable economy and society *requires* that they’re not. Minimally, I believe business schools can and should provide what Samuelson of the Aspen Institute calls for: training that “would equip managers with the analytical and conceptual skills to think far outside the gate rather than at the enterprise level, to see new connections between social and environmental challenges on the one hand and firm-level growth and innovation on the other, and to plan far beyond the quarter and into the future” (2006: 356).

My experience as a management teacher reassures me. It leads me to believe business school *can* be places where we foster effectiveness *and* solidarity. In the classes I've taught I've had reasonable success getting people to examine the values of the business world, to make them aware that those values are transmitted in seemingly innocuous "tool-like" ways, and to get them to examine the implications of those values. The next section describes a few aspects of this approach to teaching in a business school that I have pursued over the last eight years.

TEACHING AROUND VALUES

My courses are structured according to four principles. First, I begin each semester with several classes that highlight the differences between absolute and particular truths. Through readings in philosophy and examples from contemporary society I underscore the historical and contingent qualities of what we may understand to be fixed and absolute. Second, I organize the rest of the course into broad topics that emphasize the connections between management tools and the larger social context, such as "Work", "Pay", "Markets", and "Consumption". Third, I address these topics using texts from a variety of disciplines, periods and perspectives (Sartre, the Koran, corporate annual reports, De Tocqueville and Arthur Miller, for example) to underscore the way management goals and tools reflect particularized normative judgments. Media reports of current events and trends provide important references for consideration of how values play out in practice. Fourth, I introduce students to concrete examples of varieties of organizations and ways of managing (the Mondragon and local cooperatives, Cuban socialism, foreign sweatshops and Wall Street hedge funds) so they can see the consequences for organizations and society of different kinds of values embodied in different kinds of management tools. These ways of structuring the class provide a context for looking closely at the way management tools embody apparently sacrosanct values. To suggest the possibilities I will outline a few examples of how management tools can be examined.

In my course, "Ethics and Social Responsibility", we return frequently to the basic accounting equation, "*Revenue minus Costs equals Profit*". This three-line statement provides many opportunities for articulating and examining the values underlying business and management practice. Why does capital get a profit? What are the implications of treating labor as a cost? What apparently positive values (such as efficiency) are attributed to profit maximization? What assumptions are made about the distributive effects of markets? In conjunction with the maxim presented as an absolute fact, that firms must generate a competitive rate of return on capital, we can also ask, what are the effects of using market standards as benchmarks for rates of profit? The significance is twofold: on the one hand there are the substantive insights that can be presented by following these unfamiliar lines of questioning, accompanied by references to the historical record and alternative perspectives. On the other hand, there is valuable potential in the classroom act of affirming that such "truths" are not, in fact, self-evident. While such questioning can be powerful in any discipline, it is particularly so in business schools where the historical and cultural preconditions of normative practices are so rarely articulated or recognized.

Another useful basis for discussion involves the many tools for controlling employee activities that are discussed in virtually all introductory management textbooks. Techniques of electronic supervision or feedback control can all be considered in terms of values: "why do managers get to tell people what to do?" "Why do employees need to be controlled?" The idea that managerial prerogative could be contingent makes a lot of sense to young people who have

worked in service or retail organizations where they often perceive their (frequently underpaid and overworked) managers as relatively unintelligent and lacking in personal authority. Analyzing the basis of managerial authority – and not simply the mechanisms for enforcing it – encourages students to *either* articulate and defend *or* critique the values that form the backdrop of the tools. In both cases, underlying values should, I believe, be stated and justified. Such discussions often work to get students talking about the “why” of management as well as the “how”.

CONCLUSIONS

Schools of management are influential in shaping business expectations and norms. Can they also be forums for strengthening the moral conduct of business? I am tentatively optimistic. Effectiveness cannot – should not pretend to- be divorced from the values that shape our goals. Our tools reflect what we believe. Management educators have unique and powerful opportunities to contribute to efforts to improve the moral basis of business. In the classroom we occupy a platform imbued with (excessive) cultural legitimacy. I believe we have a moral responsibility to use that platform to help students see that management is as much about being thoughtful of the larger society as much as it is about achieving narrower interests.

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AN EXPLORATION OF INFORMATION ENTREPRENEURSHIP

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ABSTRACT

The business of producing and distributing information products has long been established, with its roots in what might be considered quaint beginnings, for instance: classified ads soliciting small sums from mass audiences in exchange for some “valuable” insight—information—typically delivered by U.S. mail (with a SASE, Self-Addressed-Stamped-Envelope, required). Indeed, as the practice of selling information products evolved, the means of delivery—“mail order”—came to be used to identify the business with which one so engaged was affiliated. In recent times the information products industry has undergone a virtual revolution, enabled by two major shifts (due to new technologies): the rise of numerous mediums through which the information products are provided, and distribution. While the use of printed matter is still very much alive, informational goods are now provided in myriad forms such as video, audio, and electronic publications (e.g., eBooks and reports).

INTRODUCTION

Harold F. Weitzen registered a trademark for “Infopreneur” (H. Weitzen, 1984), indicating its first use in commerce was as of January 31, 1984; according to the U.S. Patent and Trade Office (USPTO) Trademark Electronic Search System (TESS) records, the business endeavor with which such usage was attributed was “newsletters dealing with computerized information processing.” A definition given in Wikipedia defines an infopreneur as one who is “generally considered an *entrepreneur* who makes money selling *information* on the Internet” (“Infopreneur,” 2010). However, the authors of this present paper would observe that a broader definition—not restricted to the use of the Internet—might better reflect the entirety of the construct, acknowledging fully its roots, evolution, and a more recent revolution in “infopreneurship” as it has been further enabled by technology developments.

Prior to the rise of the Internet, infopreneurship—though not named as such in those times—was practiced by individuals who used different mediums to carry the information they packaged into products such as printed reports, typically delivered by U.S. mail. The reputation of the business of “mail order” generally, has often been less than sterling. Further, mail order may be seen as a means of delivery; and we would differentiate delivery from the products themselves, which include all manner of goods and services (such as from retail catalog merchants). The National Mail Order Association’s (NMOA) Website offers a museum page, with a link to a sales letter that was originally published in the November, 1941 issue of *Mail Order Journal* in which Paul Muchnick, the organization’s founder observed: “For a long time mail selling has been associated with all kinds of unethical, shady and plainly dishonest practices. Not for unjustified reasons did the expression ‘Oh, that’s some kind of mail order

racket!' originate and flourish as a by-word among mail order buyers of all kinds" (Muchnick, 1941).

In short, prior to the advent of the Internet—which indeed has revolutionized the information products industry—infopreneurs “sold their information in other mediums such as audio tapes, audio CDs, CD-ROMs, videos, talk shows, and conferences” (“Infopreneur,” 2010) and mail order was a primary means of delivery for physical goods distribution.

INFOPRENEURSHIP AS A PUBLISHING PLATFORM

Because infopreneurship is based on creating (or aggregating) a body of content, it also has interesting implications relative to traditional publishing (Gilliam & Benton, 2006; Radosh, 2004). The use of the Internet as a primary means for promoting, transaction processing, and delivery of digital and physical goods has changed the landscape of information entrepreneurship, and the traditional book publishing industry has been seriously impacted by infopreneurs.

The impact of these infopreneurs has also had a disruptive impact on traditional publishers by slicing through the traditional publication industry that involves agents, publishers, distribution channels, and retailers (Agnese, 2010; Brynko, 2005; “The International Conference on Information and Infopreneurship,” 2007).

Entrepreneurial firms like Lulu.com have emerged to serve authors who want to be published. In March 2010, Lulu.com issued a prospectus related to their Initial Public Offering revealing that the number of units sold over the past three years rose 47% to 2.6 million (of which 2.3 million were printed books). The company generates its revenue from charging authors for its fees and services (\$100 to \$16,000 per title), plus it takes a percentage as commission for each title sold. Since its inception, Lulu has had more than one million titles for sale on its site and adds 20,000 titles per month (Milliot, 2010; O'Hara, 2008). Other major online publishers include Cafepress.com, Xlibris.com, Author House and iUniverse.

The changes in the publishing industry are the subject of Tim O'Reilly's Tools of Change Conference held in New York (Paxhia, 2009). The conference features change agents like the president of Lulu and technology companies displaying the latest in print on demand technology. At the most recent conference, Jason Epstein displayed his company's Espresso Book Machine which is capable of operating at 20 pages per minute at a cost of \$.01 per page. Xerox Corporation offers larger publishers its “Book Factory” which combines a high speed copy machine with a bindery to produce perfect bound books (“Xerox Docu-printers,”).

It was not until fairly recently that conventional bookstores started carrying music along with some inventory of movies. However, Amazon.com, the AllRomanceEBooks and their related OmniLit.com and many other purveyors of “knowledge” products routinely offer their customers traditional printed books, videos, and music which may be delivered or downloaded directly to the customer's computer.

OPPORTUNITY AND DISRUPTION DUE TO DIGITAL DELIVERY TECHNOLOGIES

The Internet and the ability to download music have proven to be a major disrupter for the music industry. Some musicians are now creating their own music and posting it on the Internet for sale thereby completely stepping away from the standard music industry of agents, distributors and retailers. (Fox, 2004) Similarly, some authors are creating novels, how-to

instruction eBooks, audio and video productions, as well as other works of non-fiction to sell exclusively through the Internet. Amazon.com accommodates these self-published authors by offering to sell their “books” via their own personalized bookstore on the Web.

The impact of these infopreneurs has also had a disruptive impact by slicing through the traditional publication industry that involves agents, publishers, distribution channels, and retailers. To accommodate these authors, entrepreneurial firms like Lulu.com have emerged to serve authors who want to be published.

However, substantial new businesses have arisen to facilitate the exchange of digital goods. One of the earliest is Clickbank.com. Facilitated by Clickbank’s exchange marketplace, authors provide digital goods, sample sales copy (or a site to which end-user purchases should be directed) using special links provided by Clickbank and set an affiliate commission rate paid to other Clickbank users who might sell their products. When a transaction occurs, Clickbank processes the sale, takes its fee, and divides the author’s portion and the selling affiliate’s portion accordingly. There is even an organization devoted to on line publishers founded in 2001 called the Online Publishers Association (“The Story of Blogger,” 2010).

INFOPRENEURSHIP: A TOOL FOR BOOTSTRAPPING

The business of infopreneurship has a number of appealing benefits. Relative to product development, the use of information products is an extremely inexpensive (Chandler, 2006; H. S. Weitzen & Genda, 1991). Individuals who may possess acquired knowledge (perhaps in pursuit of a serious hobby), expertise on any subject, or possess research skills (Dawes, 2004). “The classification of infopreneur has created a new style of business on the Internet, which allows anybody with a computer and an Internet connection to start a businesses [sic] by publishing information that may appeal to a specific market” (“Infopreneur,” 2010).

Beyond this and relative to distribution, one of the interesting features of the Internet as a distribution platform for information products is its relatively low cost barriers (Lahm, 2006). Domain names are available for less than \$10 a year, Internet connections are available for less than \$30 a month, hosting is less than \$5 a month, and computer systems for a few hundred dollars (not to mention that bloggers have used public computers to create and run Websites).

CONCLUSION

Most compelling to the researchers of this paper, is the fact that information products consist of aggregated information or are developed based upon a creator’s own familiarity with a subject matter, for little or no cost. In effect, much like blogging has democratized mass media by empowering the public at large to serve as news gatherer-reporters, analysts, and critics, revolution in the information products industry is having ripple-effects in the shadow of the mainstream publishing industry.

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STUDENT PERCEPTIONS ON THE EFFECTIVENESS OF COLLABORATIVE LEARNING IN BUSINESS CLASSES

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ABSTRACT

Collaborative learning is a method where students solve problems as a group and are thus responsible for their own as well as their group's learning. There are distinct advantages to collaborative learning over traditional lecture, such as higher self esteem and better resulting critical thinking skills. This analysis revolves around a survey which assesses student satisfaction in Business classes. Students are split into three groups 1) Learning impaired 2) Honors and 3) all others. Differences in preferences among groups were found and there appears to be a negative correlation between GPA and satisfaction with collaborative learning. These findings are analyzed and their implications are discussed.

THE DESIGN ASPECTS OF CONTEXT BASED SEARCHING ALGORITHM FOR LYRIC WRITING IN TELUGU – AN INTELLIGENT APPROACH USING COMPUTATIONAL LINGUISTIC TECHNIQUES

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ABSTRACT

Computational Linguistics is an Interdisciplinary of Linguistics & Computer Science, where we apply computational techniques for language study. In the present work, the design aspects of a context based search engine are explained to a specific field of lyric writing in Telugu literature. Same techniques can be applied to the other forms of poetry in Telugu like “Poems”, “Buura Kadha” “Hari Kadha”, “Dwipada” etc forms of literature, with slight relevant variations. In the present paper the design details and aspects of the algorithm that helps the poet to pick right word apt to the context, based on the rules are discussed. Further the design considerations for the search engine for an efficient design of context based algorithm to pick up right set of words are discussed. The key steps in this algorithm which include – Parsing, building a lexicon, syntactic analysis, with the help of predefined rule base, determine the grammar) of a given song. It also, builds a lexicon of all the words derived from the song. The prediction techniques include leveraging statistical techniques to help the poet in finding an appropriate word, while constructing a new song. An intelligent hashing function is used for faster searching and also the learning process is explained.

INTRODUCTION

Computational Linguistics is an Interdisciplinary of Linguistics and computer science. The very term infer that it is a bridge for Language and Technology. Poetry often uses particular forms and conventions to suggest alternative meanings in the words, or to evoke emotional or sensual responses. Devices such as assonance, alliteration, onomatopoeia, and rhythm are sometimes used to achieve musical or incantatory effects. There are different forms of poetry in English, like *Sonnet, Jintishi, Sestina, Villanelle, Pantoum, Rondeau, Roundel, Tanka, Haiku, Ruba'i, Sijo, Ode, Acrostic, Canzone, and Chinquapin*. Similarly there are so many forms in Telugu literature for writing poetry. The requirements for each form are different and the general rule base to be considered while writing a lyric in any particular forms is distinct. The rule considerations are changing over time. The Telugu poetry, over years has evolved into the following forms:-

1. *Padya Sahityamu* (Poetry)
2. *Pada Sahityamu* (songs)
3. *Champu Sahityamu* (A type of prose and poetry)
4. *Sataka Sahityamu* (Collection of 100 poems)
5. *Burra kadha, Hari kadha*
6. *Dwipada Sahityamu* (Novels)
7. *Desa Bhakti Geethaluand light music.*

8. *Avadhana Sahityamu* (a unique literary fete called – *Avadhanamu*)
9. *Asukavitha* (Poetry told spontaneously)
10. *Gadya Kavithavamu*
11. *Recent trends like Digambara, Viplava etc trends.*

With time, the requirements “Chandasu and Alankara” (Grammar and beautification) both with respect to sound and meaning are changing. As the requirements and rules for each form of poetry are different and vast, we confine our discussion to writing lyric poetry only. The design considerations of the context based search engine, for lyric writing will be discussed here; but same considerations apply for other forms of literature and only the Meta knowledge will be changing, which is primarily the rule base. The main objective of this paper is to highlight the design aspects of search engine and the considerations that should be taken care for the design of Knowledge base, the way search engine uses this Meta knowledge in selecting the right algorithm for search and how it will short list the lexicon and suggest the possible words relevant for the context. Before doing that let us make some definitions and explain in what sense these words are used in the present research work.

Some Definitions of terms used.

Here are some definitions of terms that are frequently used in this document.

SONG:

“Padam”, “Geyam”, “Pata”, “GEETHAM” are synonyms for Telugu songs.

CONTEXT

Context is the current situation. Let us define how the word **context** is used in design of the search engine, as we are talking about **context based search engine**. The meaning of the word Context is defined as follows: -

The part of a text or statement that surrounds a particular word or passage and determines its meaning which:-

1. Knit or woven together; close; firm.
2. The part or parts of something written or printed, as of Scripture, which precede or follow a text or quoted sentence, or are so intimately associated with it as to throw light upon its meaning.
3. To knit or bind together; to unite closely.

In the present situation of “Context based search engine” we define the word context with the following meaning:-

The word or a compound word is said to be in “**context**”, which is relevant to the poet, in the lyric, based on its position where it is going to be used, (like beginning of line, mid of line or end of line), and “MATRA” requirements (timing requirements), and YATI, PRASA, and other grammatical requirements, and meaning requirements. The word which is apt for the situation where it is being used, meeting all these requirements is the right word for the context, and context. The context based search engine will look for a word which meets the context explained above and the context based search engine is the one which picks the right word meaningful to the context. The objective of this paper is to explain what these four requirements are. We

discuss in detail what these are and how this knowledge base is being designed and how it is going to be used, in the current research work.

PREDICTIVE MODEL

Predictive models are used to find potentially valuable patterns in the data, or to predict the outcome of some event. Predictability of the words is achieved with the help of predictive techniques that encompass a variety of statistical techniques to analyze and to pick up the appropriate word to construct the lyric. There are numerous predictive techniques, ranging from simple techniques such as linear regression, to complex powerful ones like artificial neural networks. Here the predictive model determines what are suitable words meeting the requirements and among the possible words. We determine the predictability of words to construct a song with appropriate requirements of context. We use a variety of search techniques, to search appropriate words with appropriate relevance for the context using Meta knowledge. The Meta knowledge drives the search algorithm to be used. From among the words generated from the search, the search engine further uses the Meta knowledge to short list the words among the selected words and presents to the user for consideration for usage. It may take in to considerations previous searches done by the user and searches earlier done using the search engine by others that are very close to the present search. Using the data structure called hash map that uses a hash function to map identifying values, known as keys, (here the patten of words in the context) to their associated values (e.g., their respective grammar). A hash function is any well-defined procedure or mathematical function that converts a large, possibly variable-sized amount of data into a small datum, usually a single integer that may serve as an index to an array. The values returned by a hash function are called hash values, hash codes, hash sums, checksums or simply hashes. The hash function is used to transform the key into the index of an array element in the data base where the corresponding value is to be predicated. Hash functions can also be used to locate table records whose key is similar, but not identical, to a given key; or pairs of records in a large file which have similar keys. For that purpose, one needs a hash function that maps similar keys to hash values that differ by at most m , where m is a small integer (say, 1 or 2). If one builds a table of T of all record numbers, using such a hash function, then similar records will end up in the same bucket, or in nearby buckets. Then one need only check the records in each bucket $T[i]$ against those in buckets $T[i+k]$ where k ranges between $-m$ and m .

LEARNING

Just like a human being, the process of improving its knowledge base on usage, is called learning. The newly learnt knowledge will be used for next usage, of the system.

METHODOLOGY

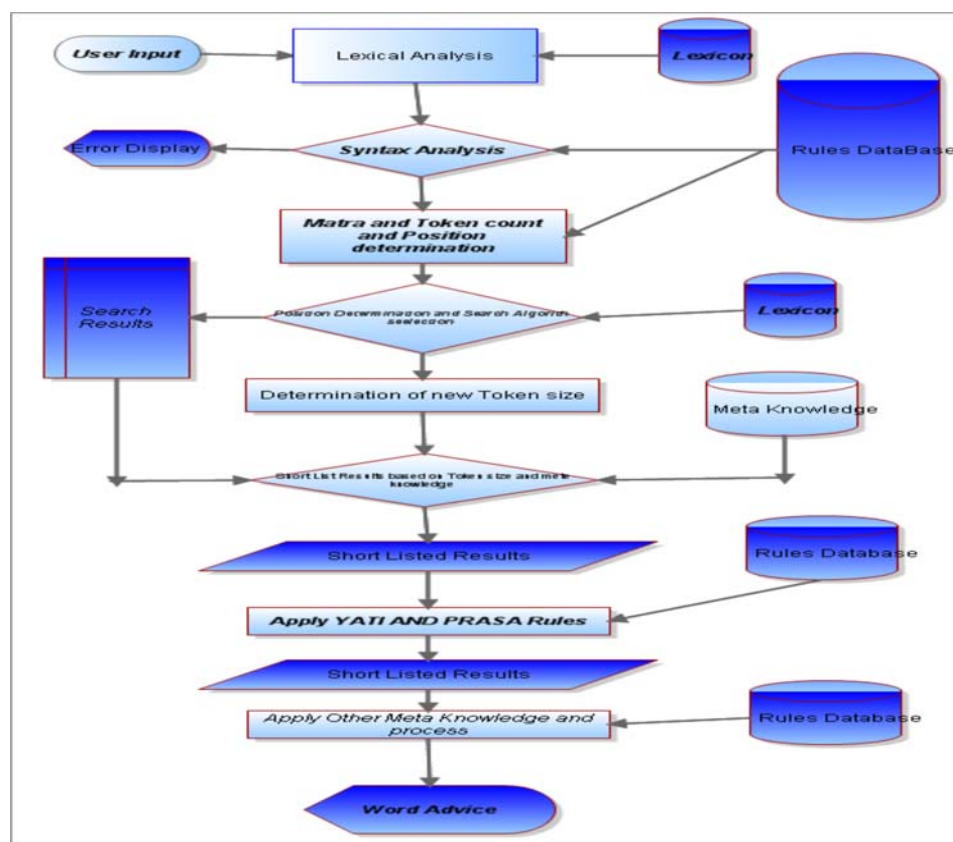
The first phase of search and selection process involves the following steps:-

1. The user creates a context for search by typing in the initial line of the stanza. While typing the first line help can be provided by the search engine, only to create YATI requirements.

But once he types the first line, then the context for the search engine is fully defined, so the lyricist can be provided with all sorts of help.

2. In the initial phase, the search engine parses the given input and determines the number of tokens in the line and the number of MATRAS in the line. The inbound feed is parsed, to calculate the MATRA count of the word and store it in the Lexicon, if it is not already available. Also the position of the new word is determined, based on user input and a suitable algorithm is invoked to find the set of candidate words for the context.
3. Based on the position of the new word to come, the search engine determines a suitable search algorithm and generates a probabilistic word set.
4. The probabilistic MATRA count for the new word is determined based on number of MATRAS of the line, and number of MATRAS consumed in the current line. Based on that list initial obtained after above search is short listed.
5. Now the list is ready to under go the checking for YATI and other considerations. The short listed set of words is applied against the rule base for YATI and PRASA requirements as the case may be. Based on the position of the new word, what kind of rules have to be applied will be determined by the search engine.
6. Applying the rules, the result set is further shortlisted.
7. On this set other considerations and semantic requirements are invoked based on Meta knowledge and the final short list of words is presented to the user for selection.

The following diagram depicts how the search engine is designed and the methodology used.



This system not only helps predicting words for lyric writing, it can be extended to other areas like poem, and other forms of literary forms, and same concepts can be extended to any language, any literary form, by suitably modifying the knowledge base.

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A QUALITATIVE STUDY ON DETERMINING CRITICAL SUCCESS FACTORS FOR SOFTWARE DEVELOPMENT LIFE CYCLE STAGES (SDLC) TO ENSURE SOFTWARE PROJECT SUCCESS

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ABSTRACT

Successful implementation of IT projects is important for organizations to compete and excel in competitive market space. Project failures cause organizations loose competitive advantage, financial losses, and job losses. Project managers measure the success of a project based on compliance to cost, quality, and time, by conducting post-project analysis using information collected during various phases of system development lifecycle of a project. Accordingly, this study was an investigation into determining critical success factors for various phases of software development lifecycle. The research question for the study examined the factors that contribute to project success during individual phases of system development lifecycle. A qualitative study will be used to determine the critical success factors for software development life cycle stages by analyzing data collected during individual stages of SDLC model. The study will benefit all the organizations looking for ways of improving project success.

PROBLEM STATEMENT

The problem addressed in this proposed research is failure of information technology (IT) software projects, factors that contribute to project failures, and ways of mitigating project failures. According to Chaos report published by the Standish Group (2004), only 29% of the IT projects succeeded and 71% of the projects failed in meeting the measures of success (The Standish Group International, 2004). The Standish group conducted a qualitative study using four focus groups to determine the factors that contribute to project success or failure, the impact and magnitude of software project failure and published its first Chaos report (The Standish Group International, 1995). The three measures that are commonly used for measuring the software project success are: quality, time, cost. Organizations are constantly searching for identifying the factors that contribute to project success and increasing software success by adopting the recommendations of scholars and practitioners who have conducted research on IT software project success. Ever since, IT software project success was extensively studied by scholars, research analysts, and project managers over the past 15 years (Korrapati & Rapaka, 2009). Although, many studies focused on finding out the causes of project success and failure, all the studies focused on measuring the success after the project has been delivered. There is not much literature available that studied the success of a project during various stages of system development life cycle of a project (SDLC). Similarly the measure of success may vary from one stage to another stage. Thus there is a need for measuring the success during every stage of the

SDLC. However, no significant research has been undertaken to measure the success during individual phases of SDLC.

The project manager plays an important role in the execution of a project. The project was always analyzed after-the-fact using post-project analysis technique was used to identify the outcome of a project. Post-project analysis is conducted to identify the factors behind the project failure. Project managers could mitigate the risk of project failure if the factors can be identified during each phase of SDLC. The project managers are equipped with the information on progress project during various stages in SDLC. There is a need to analyze these factors during individual stages of SDLC. Thus, a study is needed to analyze the impact of project manager's style on project success. Any project failure was conceived to be quantitative. The modern project management recognized that failures were more behavioral than quantitative (Kerzner, 2004). Since there is no quantitative data available on various factors during individual stages of SDLC, a qualitative study is required to collect the data from project managers and synthesize the information to identify the factors that contribute to overall project success during individual stages of SDLC.

RESEARCH QUESTIONS

How do you determine project success in your team?

How does measuring success in your team differ from, measuring overall project success using budget, time and cost?

METHODOLOGY

A qualitative study will be used to determine managerial styles for software development life cycle stages. A qualitative study is used as a broad explanation for behavior and attitudes by exploring and understanding the meaning individuals attach to a problem (Creswell, 2009). Data is collected in the participant's settings, and data analysis is performed inductively building from particulars to general themes, and making interpretations of the meaning of the data. The research problem is addressed using Delphi method to identify success factors for each phase of SDLC model. The Delphi method is a good model for determining the success factors and managerial styles that can be used in the future to effectively manage IT projects. IT managers that have successfully completed projects can provide the researcher with the factors that can contribute to project success.

Delphi process has three essential components: anonymity, iteration with controlled feedback, and statistical aggregation of group response (Dalkey and Martino 1987). Delphi method of research is used to acquire tacit knowledge about project management, success and failure factors for each stage in SDLC model from a group of experts. Tacit knowledge is more valuable to the research than explicit knowledge or generic best practices, because tacit knowledge is gained through personal experiences of project managers.

SIGNIFICANCE OF STUDY

This study will contribute to existing research required to address this problem by identifying the relationship between leadership styles and IT project outcome. The findings of

the research will help in increasing the success rate of IT projects, thus saving lot of money, time, and especially jobs. Companies can employ the critical success factors found in the research to be contributing to the success and avoid the factors that cause failures. The improved project success lets the companies increase performance and competencies, thus contributing to the shareholder value and better economy.

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STRATEGY FOR EFFECTIVE INFORMATION TECHNOLOGY OFFSHORING: THEORIES, BENEFITS AND RISKS

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ABSTRACT

Today's business environment requires more effective offshoring strategy than ever before. In the constantly changing business environment, the project manager has the central responsibility of keeping people motivated and productive. As a result of these requirements there is a tremendous amount of research that explains the benefits and risks surrounding the offshoring strategy. The purpose of this research paper is to assess critically the theories on outsourcing, review the recent literature about outsourcing, and highlight the benefits and risks involved.

INTRODUCTION

There is mounting recognition among theorists that transaction-cost theory and agent-cost theory focuses on how firms gain cost benefits from IT outsourcing efforts (Fish & Seydel, 2006). It is evident that the power-political theory and social exchange theory focuses how firms develop and use IT outsourcing strategies to meet certain performance goals and objectives aimed at achieving competitive advantage (Fish & Seydel, 2006). The literature review fortifies these findings and supports the connections between outsourcing, project management, benefits, and risks involved. Research that explains client and vendor expectations and constraints, relationship aspects of outsourcing are difficult to find (Olsson, Conchúir, Ågerfalk, & Fitzgerald, 2008).

As stated by Manning (2006), to be effective, certain functions could be managed and provided by a third party vendor. This would allow organizations to review their current project commitments and use the available resources wisely and in a constructive manner. Key resources can thus focus on the organization's core competencies and critical areas. When one analyzes the transaction cost and software outsourcing options, it is clear that there are costs in using a market. These costs include the costs include operational costs such as the search costs and the contractual costs such as costs of writing, monitoring, and enforcing a contract (Wang, 2002). As pointed out by Manning, the key question is whether to "make" or "buy" and hence the transaction cost is central to any outsourcing decision or discussion.

One has to consider effort, time and costs involved in identifying, designing, negotiating, monitoring and enforcing a service contract between the service receiver and provider (Bensghir & Tekneci, 2008). Agency theory can be used to understand manager's outsourcing decisions. The main idea in agency theory is the explanation of goal incongruence between the external vendor (agent) and the client (principal). The client (principal) and vendor (agent) are separate organizations and hence their goals and objectives are likely to vary. The vendor may refrain

from taking project responsibilities that may add to the cost of completing the project. The agent may also engage in exploiting opportunities to derive additional revenue from the client by expanding the work done for a project already outsourced (Tiwana & Bush, 2007). Because of the technological and business complexity involved in IT projects, it is difficult for the principal to choose a suitable agent (Gottschalk & Solli-Saether, 2005). It can also be difficult to monitor the agent's work

The success of an outsourcing project (measure) is predicated on the intended benefits and outcome, which can differ from one outsourcing project to another. As stated by Goo, Huang, and Hart (2008), the outsourcing benefits can be broadly divided into functional, strategic, and technological benefits. Spiraling IT costs, demand for programming greatly outstripping supply, and stringent timeframes are the main driving factors of outsourcing (Hahn, Doh, & Bunyaratavej, 2009). Offshore or outsourced project management should be done with utmost care and caution. The main steps are: (a) Identifying risks, (b) Analyzing risks, and (c) Responding to risks (Baccarini, Salm, & Love, 2004). The main benefits of offshoring are : (a) the organizations can focus on strategic issues, (b) increasing flexibility, (c) improve the quality, to get rid of routine tasks, (d) facilitating access to technology, to risk of obsolescence, (e) saving staff costs, (f) saving technology costs, and (g) following the fashion (Gonzalez, Gasco, & Llopis, 2008).

The political theory and social exchange theory, explains the relationship between the clients and the third party vendors or the service providers. The focus is on Power-structure relationship (Beacroft, 2007). The political theory describes the details about how decisions are made, who takes the decision, whose opinion counts, and what protocol must be followed in the outsourcing model. This theory is not restricted to IT outsourcing alone. Political theory thus explains how resources coordinate their ways of life, aims, needs and desires, and their potential to act together as a collective unit. Successful development and commercialization of a new technology requires political savvy skills. One has to understand the interests and roles of the key players.

The social exchange theory was originally developed to examine interpersonal exchanges that are not economic. Several sociologists contributed to the development of this theory. As explained by this theory, scarcity of resources prompted people to engage one another to obtain valuable inputs, ideas, suggestions, and results. Social exchange is an ongoing reciprocal process in which individuals are contingent on rewarding reactions from others (Das & Teng, as cited by Gottschalk & Solli-Saether, 2005). Knowledge transfer, discussions, and frequent interaction is required for interpreting empirical work and creating strategy recommendations for managers or the leadership team (Cha, Pingry, & Thatcher, 2009). As explained by John (2009), before, during, and after offshoring and outsourcing, one has to examine the politically charged social relations between the client and the vendor.

A major responsibility is to balance projects by type, risk, and resource demand (Aydin & Bakker, 2008). The main reason for offshoring is the need to reduce and control IT implementation costs. Through the examination of the available literature on offshoring, survey instruments, and statistical analysis, this research attempted to highlight the benefits and risks associated with offshoring.

BARRIERS AND ISSUES

One of the major barriers is the lack of available public data because the offshore firms are not willing to share their data or publish the reasons why certain offshore projects fail. Some offshore managers are of the opinion that if they highlight the risks, they may lose future prospective clients. The main barriers and issues identified are as follows:

- It is very challenging and difficult to measure the success of outsourcing.
- How to capture hidden costs, if the contract is not well written.
- How to capture distance, time zone, and culture related factors
- Developers not willing to share the reasons for failure.
- Certain onshore employees not willing to acknowledge the success of an offshore outsourced project.

RESEARCH QUESTIONS

This objective of this research was to document clearly the benefits and risks associated with offshoring. The research questions focused on the benefits and risks of offshoring. By answering the questions, the decision-making team can ascertain whether to do offshoring, nearshoring, or outsourcing within the United States.

CONCLUSIONS

The research showed that outsourcing has benefits and risks. The senior management or the project leadership team has to analyze the pros and cons, legal rules, efficiency, and effectiveness in both locations (countries - - outsourcer and outsourcee) and then make the decision whether to offshore, outsource, or nearshore a project. This decision is usually made on a case-by-case basis --based on the requirements, location or country, cost, degree of difficulty, risks involved, benefits, allocated time, and other related factors.

FURTHER RESEARCH OPPORTUNITIES

Recommendations for future researchers are as follows:

1. To conduct a study about the impact of culture on offshore project success.
2. To conduct a qualitative study about the different options available to circumvent the language barriers.
3. Design a qualitative study of interviews with managers and team members of offshore team to analyze and determine the different options available to retain key and skilled offshore resources.
4. To conduct a mixed method study to identify the best country to offshore IT projects.

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A NATURAL LANGUAGE APPLICATION TO DETERMINE ‘CHANDASSU’ (GRAMMAR) & PREDICT THE RIGHT WORD IN TELUGU POETRY

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ABSTRACT

This paper describes an intelligent predictive modeling algorithm to find grammar ('Chandassu') of a given poem and enables right prediction of words, while building a new poem in Telugu literature. The key steps in this algorithm include – Parsing, building a lexicon, syntactic analysis, with the help of predefined rule base, determine 'chandassu (grammar) of a given poem. It also, builds a lexicon of all the words derived from a poem. The prediction techniques include leveraging statistical techniques to help the poet in finding an appropriate word, while constructing a new poem. An intelligent hashing function is used for faster searching. These techniques and algorithms will help the linguists to analyze ancient texts, poetic patterns, language study, civilization and culture.

INTRODUCTION

The development of Language technology and its growth leads to the need for the detailed study of computational aspect of Language and especially for those who mastered the field of Technology. **Computational Linguistics** is an Interdisciplinary of Linguistics. The very term infer that it is a bridge for Language and Technology while these two fields in the earlier stage were defined as different areas of study. In the present work, a study is made on how the theory of Natural Language Processing and morphological techniques can be applied to a specific field of *Telugu* literature.

Telugu (natively తెలుగు) is a Dravidian language native to the Indian subcontinent. It is the official language of Andhra Pradesh, one of the largest states of India. It is also one of the twenty-two scheduled languages of the Republic of India and was conferred the status of a Classical language by the Government of India. The mother tongue of the majority of people of Andhra Pradesh, it is also spoken in neighboring states like Karnataka, Tamil Nadu, Orissa, Maharashtra and Chattisgarh. *Telugu* is the third most-spoken language in India (74 million native speakers according to the 2001 census) and is 15th in the Ethnologue list of most-spoken languages worldwide. http://en.wikipedia.org/wiki/Telugu_language - cite_note-language-4#cite_note-language-4 There are so many forms of *Telugu* literature (*Telugu Sahityam*), widely divided as prose and poetry. The sub-forms in prose include - novels, short stories, and plays. The poetry is classified into poems, songs, prabhandas (collection of poems), dwipada (poems that follow a typical pattern), Sataka (collection of 100 poems) etc.,

Types of Telugu Literature -

1. *Janapada Sahityamu* (literature corresponds to folk role)
2. *Vachana Sahityamu* (Prose version)
3. *Padya Sahityamu* (Poetry)
4. *Gadya Sahityamu* (Prose)
5. *Champu Sahityamu* (A type of prose and poetry)
6. *Sataka Sahityamu* (Collection of 100 poems)
7. *Navala Sahityamu* (Novels)
8. *Chinna Kadhalu* (small stories)
9. *Avadhana Sahityamu* (Knowledge that is needed to perform a unique literary fete called – *Avadhanamu*)
10. *Asukavitha* (Poetry told spontaneously)

Every branch above mentioned has its own style, format and requirements. We shall concentrate on one of them to explain the problem, say ***Padya Sahityamu***. *Padyamu* means poem. There are so many classes of poems with some variations. These are called *vruthams*. The structure and format of each *vrutham* is clearly defined by the rules of *Chandasu*.

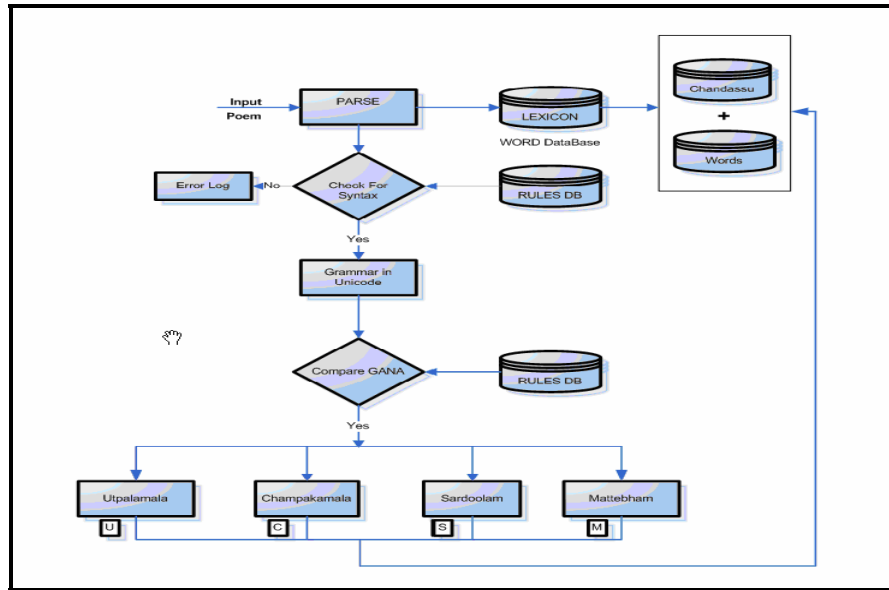
Asukavitha is telling poetry vocally instantaneously on a particular topic, without using any writing instruments like pen or pencil, on a given topic, or occasion. The knowledge of poet, his talent and command over language, literature comes in to play. *Avadhanamu* is one more step ahead, where the poet has to do multiple tasks at the same time, in addition to poetry, such a person who does is called *Avadhani*, if he does 8 tasks at a time he is called *Astavadhani*, and if he does 100 tasks at a time, one after the other in a cycle, he is called *Satavadhani*. The tasks performed may vary in nature.

Every branch above mentioned has its own style, format and requirements, in the present research work we like to concentrate on *Avadhana Sahityamu*. *Avadhana Prakriya* is a form of literary work, where an individual is multi-talented and exhibits his poetic excellence, by telling a piece of poetry, like a poem, meeting some special requirements of persons in the audience, or some skilled persons called *pruchakas*, who are ready to test his poetic skills. Each *pruchaka* will tell him to tell a new poem on a particular topic of his choice, which falls under a class or subclass *Chandasu* like *Champakamala*, *Utpalamala*, *Sardoolam*, *Mattebham*, *Kandamu*, *Seesamu*, to name a few classes of poems. The special requirements of the person performing this literary exercise, called an *Avadhani*, has to meet so many rules, to mention a few as follows:-

1. He should tell the poem on the topic required by the *pruchaka*.
2. He should not use any pen, or pencil, means he should not write down any thing, he should remember every line of the poem he is telling.
3. The poem should fall in the specific class or *vrutham*, as desired by the *pruchaka*.
4. The *pruchaka* may tell what words he should use, or should not use in his poetry.
5. He may give a *samasya puranam*, means the poem should meet such and such context.
6. At a time he should tell only one stanza and return to continue next line after answering several people (often eight or hundred). He should answer all of them before returning to the next line.

The art of *Avadhanam* requires so many talents, like poetic talents, knowledge of literature, richness of words and mastery over dictionary, retention power, entertainment power, grammar etc.

METHODOLOGY



A Natural Language Application to determine Chandassu

In the initial phase, we determine the *Chandassu* for a given input (i.e. given Telugu poem). We'll parse the inbound data feed, calculate the complexity of the word and store it in the Lexicon. A letter code is assigned based on complexity - simple with 'S', medium with 'M', and complex with 'C'. And in parallel, the syntactical analysis will also be done for the same feed based on the predefined set of rules, whereas the syntax for the parsed string can be generated from the rules database. The rules database has been designed by using the following rules. The notation is similar to the one used to generate the grammar (i.e. chandassu) for a given poem in Telugu literature.

The syntax is usually represented in the form of 'GURUVU' and 'LAGHUVU'.

LAGHUVU ----- Represented using the symbol "I"

GURUVU ----- Represented using the symbol "U"

Rules for generating the syntax for the parsed string

✓ Usually '*HRASVALU*' will be *LAGHUVU* ('I')

For example: I I I I
 tha, na, va, ka

- ✓ '**DEERGHAKSHARALU**' will be **GURUVU('U')**
- ✓ The letters in front of 'o' (*Sunna*), ':' (*Visarga*), *Pollu Aksharas* will be **GURUVU('U')**
- ✓ The letters in front of 'Dvitva' and 'Samyuktha aksharas' will be **GURUVU**, if and only if they are in the same word and context.
For Example: U U U U U
 kO, saM, kai, laa, yae

Note: The letters which consist of the '*VATRASUDI*' are not *samyuktha aksharas*.

For Example: kru, sru, Hru

Once the rules database is formed, we need to update the generated syntax into the words database formed using the Lexicon. The next step would be to generate the Unicode for the grammar. Here in this step if an error is occurred in the syntax, then the error will be sent to the error log. Otherwise a Unicode is generated for the same. Now, in the next step, the '*GANAs*' comparison is done by using the rules database for the *GANAs*. The rules database is designed by using some predefined rules. The '*GANAs*' will collectively form '*VRUTTAS*'. Some of the major '*VRUTTAS*' which I've considered here are, *UTPALAMALA*, *CHAMPAKAMALA*, *MATTEBHAM* and *SARDOOLAM*. There are some other *VRUTTAS* namely, *VIDYUNMALA*, *BHADRAKAMU*, *MANI RANGAMU*, *INDRAVRAJA*, *UPENDRA VRAJA*etc. in the Telugu literature.

Every poetic pattern has a specific flow. The flow is represented using the combination of '*GURUVU*' and '*LAGUVU*'. In order to subtly, indicate the flow a combination of '*GURUVU*' and '*LAGUVU*' is used to form '*GANAS*'. Usually, a *GANAs* has three letters in it. Following are the *GANAs* which are fundamentally used to form the *VRUTTAS*.

YA : I U U	RA : U I U	NA : I I I	VA : I U
MA : U U U	JA : I U I	SA : I I U	HA : U I
THA : U U I	BHA : U I I	LA : I	GAM : U

All these *GANAs* are collectively formed into the basic rule

'YA MA THA RA JA BHA NA SA LA GAM'

The following *VRUTTAS* are formed based on this rule.

Rules for generating VRUTTAS

- ✓ **UTPALAMALA** ---- Represented using the GANAS

BHA, RA, NA, BHA, BHA, RA, VA
 UII UIU III UII UII UIU IU

Which means that the “*UTPALAMALA*” *VRUTTA* consists of *GANAS*
 “BHA, RA, NA, BHA, BHA, RA, VA”

- ✓ **CHAMPAKAMALA** ----- Represented using the *GANAS*

NA, JA, BHA, JA, JA, JA, RA
 III IUI UII IUI IUI IUI UIU

Which means that the “*CHAMPAKAMALA*” *VRUTTA* consists of the *GANAS*
 “NA, JA, BHA, JA, JA, JA, RA”

- ✓ **MATTEBHAM** ----- Represented using the GANAS

SA, BHA, RA, NA, MA, YA, VA
 IIU UII UIU III UUU IUU IU

Which means that the *VRUTTA* “*MATTEBHAM*” consists of the *GANAS*
 “SA, BHA, RA, NA, MA, YA, VA”

- ✓ **SARDOOLAM** ----- Represented using the GANAS

MA, SA, JA, SA, THA, THA, GA
 UUU IIU IUI IIU UUI UUI U

Which means that the *VRUTTA* “*SARDOOLAM*” consists of the *GANAS*
 “MA, SA, JA, SA, THA, THA, GA”

Using these rules, we determine the relative *VRUTTA* for the given inbound data feed (i.e. for the given Telugu poem). For convenience, the following representation is used for *VRUTTAS* i.e. *UTPALAMALA* with ‘U’, *CHAMPAKAMALA* with ‘C’, *MATTEBHAM* with ‘M’, and *SARDOOLAM* with ‘S’. We flag the generated output i.e. whether it belongs to U, C, M or S and will be sent to the Lexicon (word/chandassu database) for future reference. Also it will be displayed on the user interface along with the respective Chandassu (i.e. grammar). The following snapshots interpret the various steps of the process involved in this algorithm implementation.

Poem under study (In Native Language)

See your results In Telugu Script.

ఎవ్వనిచే జనించు జగమెవ్వని లోపల నుండు లీనమై
 యెవ్వనియందుడిండుబర మేశ్వరుడెవ్వడుమూలకారణం
 బెవ్వడనాదిమద్యలయు డెవ్వడు సర్వము దాన యైనవా
 డెవ్వడు వాని నాత్మభవు నీశ్వరు నే శరణంబు వేడెదన్

Transliterated form of the Poem

Type your text In English.

evvanichE janiMchu jagamevvani lOpala nuMdu leenamai
 yevvaniyaMdhudiMdubara maeshvarudevvadumoolakaaraNaM
 bevvdanaadhimadhyalayu devvadu sarvamu dhaana yainavaa
 devvadu vaani naathmabhavu neeshvaru nae sharaNaMbu vaededhan

Poetic Pattern of the poem (represented with GANA's)

Equivalent HTML text

I,U,I,U, ,I,I,I, ,I,I,U,I, ,U,I,I, ,I,I,I, ,U,I,U, ,I,U,I,I,I,I,I,I,I,I, ,U,U,I,I,U,I,U,I,I,I, ,I,U,I, ,U,I, ,U,I, ,U,I,U, ,I,U,I, ,U,I, ,U,U,I, ,U,U,
 I, ,U, ,I,I,I,I, ,U,I,I,*

Chandassu and Poetic Analysis

Utpalamala
 bharanabhabharava
 ౪II ౪IU III ౪II ౪IU IU

SUMMARY

This paper describes the algorithm and predictive modeling techniques. An illustrated example along with sample screen shots is presented for reference. The future study includes algorithm analysis in terms of complexity and system performance aspects, applicability to other

forms of Telugu poetry like prose, sonnets etc., and applicability to other languages in the World such as ‘Sanskrit’, to analyze morphological and linguistic aspects.

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COMPUTATIONAL LINGUISTICS: SPECIAL REFERENCE TO APPLICATIONS IN TELUGU LANGUAGE USING INTERDISCIPLINARY META ANALYSIS APPROACH

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ABSTRACT

The Telugu language is rich in literature and has been studied by native and foreign linguists significantly, yet it has not benefited significantly from the recent advances in computational approaches for linguistic or statistical processing of natural language texts. Computational approaches to linguistic analysis of Indian languages such as Telugu language have so far been hindered due non availability of a standardized digital representation and in turn by the non-availability of large amounts of text data. The aim of this research is to close this gap in the literature to group and identify areas of applied linguistics research related to natural language processing of Telugu language.

INTRODUCTION

Computational linguistics is an interdisciplinary body of knowledge that deals with the field of statistics, computer Science, and modeling of natural language from a computational perspective. This modeling is rule-based that is not limited to any particular field of linguistics. Computational linguistics was normally performed by computer scientists who had specialized in the application of computers to the processing of a selected natural language. Because of the interdisciplinary nature of this area, the research is carried out by team of scientists comprises of linguists, language experts, computer Scientists with expertise in artificial intelligence, cognitive psychologists, and statisticians. Origins of Computational Linguistics field is dated back to 1950 and traditionally grouped under Artificial Intelligence area in Computer Science field and primarily used to translate text from foreign languages into English. Soon researchers realized that human language is far more complex than just simple rule based algorithms, a specialized area of research was born to develop intelligent algorithms to process language data.

Researchers observed that one had to understand the grammar of language and syntax in order to translate one language into another. Grammar is how words are combined to form sentence and syntax is the combination of semantics and the lexicon (vocabulary). Thus, Computational Linguistic research continued with defining process for natural languages using computers. Computational linguistics deals with both applied and theoretical areas of research.

Theoretical area deals with formal theories about the linguistic knowledge and cognitive science that a human needs for generating and understanding language. Formal rule based computer models developed using simulating aspects of the human language and implement them as computer programmes. The applications of these computer programmes constitute various iterations and further the evaluation and development of the theories to add to the body of knowledge.

The applied area of Computational Linguistics deals with the practical outcome of modeling human language use with a goal to create computer software products that have knowledge of human language. This area of research gaining popularity with the design, realization and maintenance of computer systems which facilitate everyday work, such as grammar checkers for word processing programs.

Telugu is an Indian language spoken by over 50 million people in the country. It ranks between 13-17 largest spoken language in the world alongside of Korean, Vietnamese, Tamil and Marathi. The distribution of spoken language in India is geographic, and each of the different states of the country usually speak a different language (apart from a large number of Hindi-speaking states). Andhra Pradesh state, where Telugu is spoken, shares borders with 5 different states which speak Tamil, Kannada, Marathi, Hindi and Oriya. Thus, in regions along the borders with these states, the dialect of Telugu is different, although the script and formal (written) language are the same (Ganapathiraju and Levin, 2006).

RESEARCH QUESTIONS:

This study will attempt to answer the following questions:

1. What is the state of Applied Computational Linguistics?
2. What are applications of Computational linguistics in Telugu Language?
3. Identify possible research areas and suggestions for path for applied research in relation to Telugu language, via, modeling and natural language processing.
4. Design and develop framework and models for Telugu Language applications.

LITERATURE REVIEW

In this section, the literature related to Applications of Telugu Language are presented. Source materials included government reports, journal articles, books, and Internet website information. These were obtained from university library databases, and various other Internet search engines such as Google Scholar, etc. The strategy used for searching the literature was to employ key words of the study (e.g., Applied Linguistics, Telugu Language Application, etc.), link them together (e.g. Models, Natural Language Processing, etc), then search the database, asking for full text when possible and most recent dates (dates within a five year period of time extending from 2003 through 2008).

Research indicates that there is a clear need for a morphological generator for Telugu that forms an integral part of applications like machine translation and universal dictionary. Ganapathiraju and Levin (2006) developed a Software tool, called TelMore, that can generate morphological forms of nouns and verbs of Telugu based on established linguistic analyses of Telugu by C.P. Brown and H. Krishnamurthy. TelMore generates morphological forms of the two main lexical classes: noun and verbs of Telugu language. For a full fledged deployment of the tool, other forms, namely the pronouns, adverbs and adjectives are to be supported. Further, compound verbs and other complex forms are to be added into the system.

Sridhar and Hema (2004) attempted a preliminary approach of a data-driven modeling of prosodic phrase boundary prediction for the Indian language Telugu. In an effort to identify meaningful features that affect the prosodic phrasing, a new feature, namely mopheme tag, is

defined. A Classification and Regression Tree (CART) based data-driven phrasing model is developed for the prosodic phrase boundary prediction and the usefulness of the morpheme tag feature is further demonstrated in an evaluation process. The researchers reported that the feature morpheme tag is not linguistically motivated, instead, it is proposed and established purely from engineering viewpoint.

Husain, Sharma, and Reddy (2007) described a promising approach to automatically select from Indian Language the appropriate lexical correspondence of English simple preposition from a Machine Translation (MT) perspective. The researchers use the properties of the head and complement of the preposition to select the appropriate sense in the target language. Pingali, Jagarlamudi, and Varma (2007) studied the effects of adding a cross-language dimension to query focused multi-document summarization for the Telugu-English language pair. They used a cross-lingual relevance based language modeling approach to generate extraction based summary. The evaluation of the system was done using a dataset and metrics to compare with the mono-lingual baseline that uses relevance based language modeling in mono-lingual setting. This research extended the existing monolingual summarization technique using relevance based language modeling to a cross-language one. They identified several opportunities for improvements: To study some of the ideas such as, customizing summary outputs for machine translation systems and to study the effectiveness of translating summaries into the source language (Telugu). Also to study the effect of query-focused summarization when compared to query-independent summarization from a set of relevant documents is also of interest of future study.

Singh and Surana (2007) used three corpus based measures for comparative study of languages and linked results to linguistic and historical knowledge available. The researchers argued that such studies can provide or validate linguistic and computational insights. Other possible applications could be for language reconstruction, classification, dialectology etc from the results of this research.

RamaSree and KusumaKumari (2007) attempted to improve the accuracy of existing Telugu POS taggers by using an voting algorithm. POS taggers are developed by modeling the morpho-syntactic structure of natural language text. The three Telugu Pos taggers viz., (1) Rule-based POS tagger (2) Brill Tagger (3) Maximum Entropy POS taggers are developed with an accuracy of 98.016%, 92.146%, and 87.818 respectively. This tagged output could be used for a variety of NLP (Natural Language Processing) applications, mainly used for word sense disambiguation (WSD) is retrieving Telugu documents. The Telugu annotated text so generated is useful mainly in word sense disambiguation, which is a main task in the process of Information Retrieval.

Avinesh and Karthik (2007) describes a Part of Speech (POS) tagging and Chunking using Conditional Random Fields (CRFs) and Transformation Based Learning (TBL) for Telugu language. They described an improved approach to train CRFs to achieve good performance over any other ML techniques. The CRF and TBL based POS tagger has an accuracy of about 77.37% for Telugu and the chunker performs at 79.15% for Telugu language. The accuracy of the Telugu POS Tagging seemed to be low compared to other Indian languages due to agglutinative nature of the language. POS Tagging plays such as an important role in Natural Language Processing and is a major task. When the machine understands the TEXT then it is ready to do any NLP applications. For that the machine should understand each and every word with its meaning and POS. This goes to Morpho-syntactic level. Particularly in MT when the system understand the

POS of source language Text then only it will translate into target language without any errors (SREEGANESH, 2006).

According to Bashaindia (2008), Microsoft Corporation launched the portal www.bhashaindia.com towards establishing a direct contact and providing a common platform to the larger community of people, including students, linguists, academicians etc. This portal aims at building a community of developers and linguistic academia who will contribute towards the development and use of Indian languages for PC usage.

PROPOSED METHODOLOGY

This study uses meta analysis approach. Meta-analysis is a statistical technique for amalgamating, summarizing, and reviewing previous research findings. By using meta-analysis, a wide variety of questions can be investigated, as long as reasonable bodies of primary research studies exist. Selected parts of the reported results of primary studies are entered into a database, and this "meta-data" is "meta-analyzed", in similar ways to working with other data - descriptively and then inferentially to test certain hypotheses.

Specifically, the study method will consist of **five steps**. These may be stated as follows:

Step 1: A review of the literature will be conducted to identify the current state of Applied Linguistics. The review will also include a directional view of this body of knowledge by geographic areas such as countries. Only research materials considered most relevant to the research will be reviewed in detail. It is important to note that this will be a representative, rather than an exhaustive, search.

Step 2: The new meta-model will be diagramed. A flow chart will be presented that shows the relationship between and among the various areas of Applied Linguistics.

Step 3: The major factors as identified and supported in the literature will be incorporated into a typology – that is, a summary listing of research studies supporting each area of contribution. Information for each study will include author(s), date of publication, method, sample, results.

Step 4: A survey questionnaires will be developed – one that includes to validate the state of Applied Linguistics in relation to Telugu Language and can be used by scholar in various Universities and Colleges in state of Andhra Pradesh.

Step 4: Interviews may also be conducted with a small sample of Applied Linguists (n= 5) to further support factors resulting in future direction of applications of Telugu Language, as incorporated in the survey questionnaire.

Step 5: From the meta-model typology and interviews, research questions will be answered and answers will be summarized. Conclusions will be drawn and recommendations for further study will be made.

The sample population for the meta-model will consist of studies, reports, and documentation that support each factor and variable (or combination of factors) within the meta-model. This information will be summarized into a typology – that is, a listing of research support.

SUMMARY

Applied area deals with methods, techniques, tools and applications and focusses on the practical outcome of modeling of language use by humans. Once modeled, software programs can be created with a goal of knowledge of language use in daily life. Modeling such language behavior on a computer also helps us to discover and formally describe hidden properties of human language and is used in language processing. Once we understand the human language, one can develop powerful intelligent linguistic applications.

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PRINCIPLES AND BEST PRACTICES FOR DIGITAL LIBRARIES HELP SYSTEMS

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ABSTRACT

In this paper we present and discuss a set of principles for the design of help systems for digital libraries. Previously a user study (Xie and Cool, 2009) was performed by two of the authors in order to identify a number of Help Seeking Situations encountered by novice users of digital libraries. In this paper we continue that work as we examine those help-seeking situations and, based on them, propose a set of principles and guidelines for the design of help systems for digital libraries. Some of the design principles discussed here may have been proposed by other researchers or may have been used in previous user-interfaces but the contribution of this paper is that it validates and connects the design principles with specific help-seeking situations encountered by users observed and categorized in our user study. Further user studies of other digital libraries as well as user interfaces that implement the proposed principles may provide evidence that could be used to modify and refine the design principles

The problem addressed by this project is that help-seeking situations are not well understood and at the same time, the design of help functionalities has proceeded without the benefit of such knowledge. The consequence is that the standard help features present on most digital library systems, are often not very effective (Xie, 2006; Xie & Cool, 2009) and particularly not helpful for novices.

The first steps of the project were to identify the types of problems novice digital library users experience for which they require help and to better understand the nature of these help-seeking situations. We conducted a user study (Xie & Cool, 2009) in order to identify the Help Seeking Situations (HSSs) encountered by novice users of digital libraries (see section “The User Study”). In this paper we examine the HSSs identified in the study (op. cit.) and propose a set of principles and guidelines for the design of help systems for a digital library (DL) that are intended to address those specific HSSs. Some of the design principles that we discuss here have been proposed also by other researchers or used in previous user-interfaces. What this paper does is to validate and connect those principles with specific help-seeking situations encountered by users observed and categorized in our user study.

Further user studies of other digital libraries as well as user interfaces that implement the proposed principles may provide evidence that could be used to further refine the proposed design principles.

In order to design a usable help system it is necessary to understand the goals of users. The user study that we conducted (op. cit.) identifies the kinds of situation that cause users to consult an online help system. The same study also illustrates the cases in which users failed to

find the help information they needed. Understanding of users' goals allows the designer to put effort and resources in the areas that will result in the highest pay-off for users.

In our user study we identify 15 Help Seeking Situations (HSSs). The HSSs and the corresponding user interface features are listed below (see Table 1). For each situation in the list of HSS, the design features that would be relevant are listed.

Table 1	
DESIGN FEATURES FOR EACH HELP SEEKING SITUATION	
HSS (Help seeking situation)	Design features
Inability to get started	
HSS1: unclear about the topic, HSS2: unfamiliar with digital libraries	Multiple access methods to the help system, Question answering, Help information content, Context-sensitive help, Integration of help and search system, Query by example
Inability to identify collections	
HSS3: inability to identify relevant collections	Don't make users choose between collections, Context sensitive help, Query by example
Inability to browse	
HSS4: inability to browse information	Browsing tools, Help information content
Inability to create search statements	
HSS5: inability to use appropriate query syntax	Query by example
HSS6: inability to select appropriate query terms	Context-sensitive help, Query by example, Browsing tools, Implicit and explicit feedback
HSS7: inability to limit searches to certain fields	Integration of help and search system, Query by example, Context-sensitive help

Table 1 (cont)	
DESIGN FEATURES FOR EACH HELP SEEKING SITUATION	
HSS (Help seeking situation)	Design features
Inability to refine searches	
HSS8: inability to refine searches for different aspects of the search topic, HSS9: inability to identify other approaches for information, HSS10: inability to refine searches in general	Interactive search agent, Implicit and explicit feedback mechanisms, Identify common problematic situations, Query by example
Inability to monitor search	
HSS11: inability to monitor search	Don't force users to interrupt their task to seek help, Avoid having different states
Inability to evaluate results	
HSS12: inability to identify relevant documents	Better surrogates, Better ranking algorithms
HSS13: inability to identify specific information	Better surrogates, Browser independent navigation and search controls, Open document in most relevant section
HSS14: inability to compare items retrieved	Better surrogates
HSS15: inability to verify authority and accuracy of retrieved documents	Context sensitive help, Better surrogates, Help information content

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USING CLOUD COMPUTING TO SYNC PCS AND MOBILE DEVICES

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ABSTRACT

Using paper-based calendars and listings, educators, students, employees and family members struggle with coordinating contact lists, schedules and appointments. Today, people continue to be frustrated trying to synchronize information residing on multiple computers and mobile devices (e.g., smart phones, pocket and tablet computers). Vendors now offer cloud computing services to synchronize e-mail accounts, calendars, and contact listings. We evaluated Apple's cloud computing offering, MobileMe, which synchronizes information between desktop and laptop computers, iPhones, iPod touches and iPads. Our findings are MobileMe works seamlessly with Apple's computers and mobile devices but not as well with Windows computers, whose users should look to Microsoft, Google and Zoho for cloud computing.

STUDENT ACCEPTANCE OF CLICKERS IN LARGE INTRODUCTORY BUSINESS CLASSES

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ABSTRACT

Today's NetGen students require more multimedia and interactive learning environments and greater participation than previous generations. Personal response devices (PRDs, sometimes called Audience Response Devices or ARDs, better known as clickers) show promise in helping to meet that need. This article explores the literature of PRDs to develop propositions about the impact of PRDs on learning in large introductory business classes (e.g., Principles of Marketing, Introduction to Supply Chain Management, Organizational Behavior, etc.). We report on two exploratory studies utilizing PRDs and discuss recommendations and observations on the use of PRDs.

SATISFACTION AND REPURCHASE INTENTION: B2B BUYER-SELLER RELATIONSHIPS IN MEDIUM-TECHNOLOGY INDUSTRIES

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ABSTRACT

Customer satisfaction and repurchase intentions are examined in B2B markets for medium-technology offerings; overall customer satisfaction and repurchase intention are modeled as functions of three components of overall satisfaction: satisfaction with the interpersonal relationship with the salesperson, satisfaction with vendor performance, and product satisfaction. The Chow test confirms that overall customer satisfaction is different than repurchase intention in medium technology industries. Information theoretic techniques are then applied to variable subset selection to derive optimal linear regression models for overall customer satisfaction and repurchase intention in medium-tech industries. Results explain approximately 64% of the variance of overall satisfaction and 37% of the variance of repurchase intention. The optimal model for overall satisfaction includes terms for all three components of satisfaction while the optimal model for repurchase intention includes terms for only product satisfaction and interpersonal satisfaction.

USER ATTITUDES TOWARD PASSWORD POLICIES: PRELIMINARY ANALYSIS

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ABSTRACT

Preliminary analysis of a survey of user attitudes toward password lengths and durations is reported. In particular, users were asked to rank their preferred lengths and lifetimes for passwords in several situations. The data reveal that users preferences are non homogeneous, but that there are clusters of users who have homogeneous preferences. The most common shapes of the preference function are concave. Users seem to prefer to increase security with longer passwords of longer duration.

INTRODUCTION and BACKGROUND

In earlier work (Pendegrift & Rounds, 2007; Pendegrift, 2008) we simulated the value evolution of an information system under attack. That work assumed that users of the system viewed security as a pure cost. In the 2008 paper, some users (i.e. consumers) were assumed to prefer some security. This paper reports on an empirical study investigating these assumptions. Others have studied user attitudes toward security, but they tend to address behaviors such as selecting passwords. For example, Stanton et.al (2005) found that among naïve benevolent users, password “hygiene” was generally poor.

We examine here two commonly used policy variables: password length and password lifetime. For the purposes of this research, we identify three scenarios in which we hypothesize that users will have different preferences over these policy variables. These scenarios are as follows.

1. Job: in this scenario, users access data which is not about themselves.
2. ATM: users directly accesses data about themselves.
3. Teller: users do not directly access data about themselves, but someone else does.

Thus we have six cases, each of these three scenarios evaluated for password length and for password duration.

HYPOTHESES

For purposes of this analysis, we hypothesize that users within each case will be non-homogeneous. We further hypothesize that users will have dissimilar attitudes toward security among all six cases. This formulation of the null hypotheses facilitates the statistical analysis of the data.

- H0.1 User preferences will not be concordant across all scenarios.*
H0.2 User preferences will not be concordant within each scenario.

METHODOLOGY

A survey instrument was developed and then administered via the web. Students in four large Business College principles courses were asked to respond (approximately 200 people). 84 answered yielding 77 usable responses for a response rate of about 38%.

The data reported here include respondents' preferences for password length and password duration in each of the 6 cases discussed above. The data were subject to two statistical tests. First Kendall's W was calculated for the entire data set and then for each case. Second, each of the cases was subjected to a cluster analysis using k-means, and Kendall's W was calculated for each cluster.

RESULTS

Data from the first analysis are summarized in Table 1

SCENARIO	W
Entire data set / Length	0.306
JOB / Length	0.367
ATM / Length	0.301
TEL / Length	0.293
JOB / Duration	0.252
ATM / Duration	0.263
TEL / Duration	0.136

In all cases, $W > 0$ with a p value on the order of 10^{-10} or less was obtained. While these are clearly sufficient to reject H_01 and H_02 , the values of W are nonetheless small, suggesting a low degree of concordance. This might occur if there were more than one group. We conducted a cluster analysis to address this possibility. Data for the cluster analysis is summarized in Table 2. For each cluster, we show:

N: the number of observations in the cluster

W: Kendall's W for the cluster

P: the calculated p-value for W

Shape: the overall shape of a second order regression curve coded as follows

B: bell shaped

I: increasing

D: decreasing

F: flat or U shaped

The clusters display generally large values of W and very low values of p, suggesting that the clusters are reliably representative of user preferences.

DISCUSSION

The data in bold are clearly significant. Further, in many cases the value of W is high. They suggest that there are groups of users who display concordant preferences within the group, but who differ from the other groups. In particular, a bell shaped preference is very common. This makes sense from the basic economics of security: it suggests a recognition that some security is desirable, but that too much creates a cost. The second largest cluster for length in all cases displays a preference for longer (more secure) passwords. For password lifetime the two top clusters are bell shaped and preference for longer (less secure) lifetimes.

TABLE 2 KENDALL's W for CLUSTERS												
PWD Length (longer is more secure)												
	Cluster 1				Cluster 2				Cluster 3			
CASE	N	W	P	shape	N	W	P	shape	N	W	P	shape
job	31	.757	0	B	28	.678	0	I	18	.059	.386	F
atm	40	.822	0	B	22	.573	0	I	15	.087	.236	F/D
teller	31	.75	0	B	28	.743	0	I	18	.067	.291	F
PWD Duration (longer is less secure)												
	Cluster 1				Cluster 2				Cluster 3			
CASE	N	W	P	shape	N	W	P	shape	N	W	P	shape
job	42	.813	0	I	22	.484	0	B	13	.205	.021	F
atm	37	.64	0	B	26	.809	0	I	14	.165	.042	F
teller	34	.517	0	B	27	.64	0	I	16	.467	0	D

P=0 indicates that the P value was of the order 10^{-9} or less.

It is clear that users are not uniform in their preferences for these aspects of password security. In particular, while a bell shaped function is found in all 6 cases, users express a preference for longer (i.e. more secure) and for longer duration (i.e. less secure) passwords. This suggests that policy makers should be more considerate of user preferences in designing policy.

There are, of course, limitations to the study. First is that the data set is small. We hope to collect further data in the coming year and to expand the audience beyond the business college. Second, the respondents are all college students. It is not clear to what extent they constitute a good model for society at large. Third, further analysis of the data is warranted. In particular, it remains to study the correlations between user attitudes toward password length and lifetime and to estimate the proportion of users with each sort of preference function.

The purpose of this work is to shed light on user preferences toward password security policies. Initial analysis reveals that users are not homogeneous, but that there are meaningful patterns of preferences. Thus, we conclude that policy makers should make a better effort to understand user preferences.

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AN EXAMINATION OF US ACBSP GRADUATE ENTREPRENEURSHIP PROGRAMS

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ABSTRACT

Course offerings in entrepreneurship in US colleges and universities have grown exponentially; however, most programs remain at the undergraduate level. Despite the growth of formalized entrepreneurial education very little research has been conducted in terms of examining the composition of entrepreneurship programs, particularly at the graduate level. Much of the focus has centered upon the number of such programs and entrepreneurship centers. The purpose of this article is to examine the structure of graduate level entrepreneurship programs at ACBSP-accredited institutions. The results offer options for candidates as well schools seeking to develop academic entrepreneurship programs at the graduate level.

INTRODUCTION

As students opt for career alternatives other than traditional employment, colleges and universities, both nationally and internationally, have responded by adding entrepreneurship courses and majors to its degree program offerings. By the late 1980s, Vespers, McMullan, and Ray (1989), reported that at least half of US and Canadian business schools were offering courses in entrepreneurship with only Baylor, Babson, and the University of Southern California offering a graduate major in entrepreneurship by 1983 (Sexton & Bowman, 1984). This shows a marked increase in growth, as prior to 1969 only 8 of 631 business schools (Vespers, 1986) provided such offerings.

Although entrepreneurship as a collegiate discipline is in its adolescence at the undergraduate level, as recent as the late 1990s, McMullan and Gillin (1998) reported that graduate-level degree programs were only 7-years-old. According to Chusimir (1988), most entrepreneurship courses were offered in undergraduate programs with USC being the exception, having been first to launch an MBA concentration in entrepreneurship in 1971 (Kuratko, 2003); thus, most research on the discipline has been conducted at the undergraduate level. The exception was a study conducted by Zeithamal and Rice (1987) who examined five graduate-level entrepreneurship programs as a part of a survey of 100 business schools. The latest focus of inquiry in terms of graduate entrepreneurial programs is the state of doctoral education as commissioned by a Task Force formed by the Entrepreneurship Division of the Academy of Management (Brush, Duhaime, Gartner, Stewart, Katz, Hitt, et al., 2003). This means that in comparison to other graduate-level disciplines, entrepreneurship programs and research are in their infancy.

As a means of gaining a greater perspective of what currently exists in terms of graduate entrepreneurship degree programs, current research is being conducted that examines graduate entrepreneurship studies at 165 US institutions. This research is being conducted in phases, with

this paper representing stage one of data collection and analysis. This study offers a foundation for institutions that are seeking to meet the growing demand for entrepreneurship programs as well as for candidates who are evaluating course and program offerings at the graduate level. The schools selected offer at least two courses in entrepreneurship. Given the small sample and reliance on long-standing studies as a result of narrow research available on graduate level entrepreneurship programs, generalizations should not extend far beyond the limits of this study.

STUDY METHODOLOGY

The Institutions

Unlike previous studies that have limited the sample to institutions accredited by the Association to Advance Collegiate Schools of Business (AACSB) that offer 4-year degree programs in entrepreneurship (Mick, 2003), the sample for this research was expanded to include institutions reported by the Peterson's Guide as offering graduate-level courses in entrepreneurship. This source was selected as a means of sample acquisition because it is commonly referenced by candidates in their initial research for degree programs as well as functions as a means of marketing for institutions.

The results from Peterson's electronic database for graduate-level entrepreneurship programs yielded an initial sample of 305. This was narrowed to 164 institutions by means of deducting those that were listed multiple times, non-US institutions, and an undergraduate entrepreneurship program (Middle Tennessee State University). The University of Memphis was absent from the search results, which was the likely the result of its embryonic state; the master's level program begins Fall of 2010. This program was added to the sample. Thus, 165 US institutions were identified as offering some form of graduate-level entrepreneurship education.

Accreditation Status

Of the 165 institutions under examination, 103 (62%) are AACSB accredited, 16 (10%) are ACBSP accredited or candidates for accreditation, and 46 (28%) institutions' colleges of business do not possess either AACSB or ACBSP accreditation. The study population for phase one of this research consists of ACSBP-accredited institutions that offer a graduate-level education in entrepreneurship. This determination was made by reviewing the list of member institutions provided on the AACSB and ACBSP websites. The institutions' websites were also utilized to ascertain degree requirements, modality of instruction, and course descriptions.

Because the Association of Collegiate Business Schools and Programs (ACBSP) requires that institutions be regionally accredited prior to their colleges of business acquiring ACBSP accredited status, their graduate-level programs can be assumed to have been meticulously reviewed for quality of teaching and to offer solid examples of how entrepreneurship is presently being taught in the US. See Table 1 for institutions included in phase one of this study.

Cameron University	OK	Lindenwood University	MO
*Carlos Albizu University, Miami Campus	FL	Oral Roberts University	OK
Dallas Baptist University	TX	*Park University	MO
Dominican University	IL	*South University	GA
Hardin-Simmons University	TX	Southern New Hampshire University	NH
Lenoir Ryne University	NC	University of Dallas	TX
*LIM College	NY	Westminster College	UT
Lincoln University	MO	Wilkes University	PA

Note. * Represents institutions who are currently candidates for ACBSP accreditation.

Areas of Investigation

For this portion of the study the 16 programs were investigated eight different ways. Areas of investigation included: the type of degree offered, focus of the program, which academic unit of the college houses the degree, core courses, the amount of credits strictly dedicated to entrepreneurship, system of program delivery, whether the cohort model of instruction is utilized, and the number of required credit hours needed for degree completion. Additional analysis of the ACBSP graduate-level entrepreneurship programs was conducted by examining the content available on the institutions' websites.

Degree Offered

All of the ACBSP institutions examined offer the MBA degree with a concentration in entrepreneurship. Two (14%) also offer Master of Science degree programs in which students can specialize in entrepreneurial studies. Cameron University's degree program is a Master of Science in Organizational Leadership with a concentration in entrepreneurship. At Lindenwood University the MS degree is available with a specialization in entrepreneurial studies. The MS degree is differentiated from the MBA in that the MS has a greater focus on research.

Focus of the Program

The focal point of entrepreneurship studies is often divided among general, technology, family-owned business, small business, social entrepreneurship, and global entrepreneurship. Fifteen (94%) of the ACBSP-accredited institutions offer a general track of studies, while two (14%) provide more specialized programs. Cameron University offers general, technology, and global entrepreneurial studies. LIM College focuses on fashion with an array of entrepreneurship courses dedicated to the apparel industry.

Which College Houses the Entrepreneurship Program

With the exception of Carlos Albizu University and LIM College (14%), all entrepreneurship courses and programs are housed within the college of business. However, Lindenwood University goes one step further by placing its business related programs within the School of Business & Entrepreneurship. Because of LIM College's focus on the study of the

fashion industry, it does not possess a separate college of business. Carlos Albizu University also lacked a separate school of business.

Core Courses

A few of the courses offered in the 16 ACBSP-accredited graduate entrepreneurship programs were similar. Some were commonly found across programs, and there was a range of distinctive offerings. A part of the focus of this study was to determine the number and type of core courses as well as those specifically dedicated to entrepreneurship. Similar to Mick's (2003) findings in his examination of undergraduate entrepreneurship programs, frequently institutions advertise a concentration in entrepreneurship; however, the majority of the program courses are from the general business curriculum.

Over half of the institutions offered the following core courses: accounting (ACC), economics (ECON), finance (FIN), international/global studies (I/GL), management (including human resources) (MGT), marketing (MKT), organizational behavior (including leadership) (OB), statistics/quantitative analysis (S/Q), and strategic management (STR) (See Table 2). Because these general business courses accounts for such a significant portion of the degree program (upwards of 75%) and represent required courses, they were assessed in this research. This is contrary to the work of Mick (2003) who did not investigate them in his study, but instead purely focused on dedicated entrepreneurship courses.

Core Courses	ACC	ECON	FIN	I/GL	MGT	MKT	OB	S/Q	STR
Number of Schools	12	12	15	10	11	15	9	11	9
Percentage (%)	75%	75%	94%	63%	69%	94%	56%	69%	56%

Course titles and descriptions obtained from institutions' websites, brochures, and catalogs and were used to determine courses' subject matter. Accounting, economics, management, marketing, organizational behavior, statistics/quantitative analysis, and strategic management courses were fairly characteristic general graduate business courses. With the exception of Carlos Albizu University and LIM College who offered venture finance as part of its core, finance represented within the foundation courses are differentiated from those offered as a part of the entrepreneurship concentration and, rather than focus on business or venture funding, center upon such skills as financial decision-making. International/global studies encompasses courses in international business, global policy, and global management. Other general core courses offered include law (44%), operations management (44%), management information systems (38%), ethics, (31%), research (19%), and communications (6%).

Dedicated Entrepreneurship Courses

Courses were classified as entrepreneurial if their titles and descriptions reflected an entrepreneurship focus. Only 6 of the 16 ACBSP-accredited institutions actually utilize the entrepreneurship (ENT or ENTR) prefix in their course descriptions for a total of 31 ENT or ENTR courses examined. The median institutions employing this prefix is 1.9. They include

LIM College (8), Lincoln University (7), Cameron University and Park University (5), Dallas Baptist University (4), and Oral Roberts University (2). The vast majority of courses utilize the prefixes that denote general business (BUS, BSAD, GEBB, or MBA) and management (MAN, MANA, or MGMT), but incorporated a version of entrepreneur in the course name resulting in a median of 2.5 and a mean of 3.5 courses having this term in the title. Some subjects were embedded within courses, and in those instances it was noted that the concept was addressed.

Table 3 lists those concepts and courses that were offered in more than 25% of the ACBSP-accredited entrepreneurship programs. They include: entrepreneurial accounting and finance (ACCT), business planning (BPL), experiential (EXP), corporate entrepreneurship/intrapreneurship (INTR), international/global business (I/GB), management (MGT), marketing (MKT), strategy (STR), venture financing (VCF), and venture development (VDEV). Experiential courses include those encompassing an active learning activity for students such as consulting assignments, interactions with entrepreneurs, or listening to guest speakers. Other courses dedicated to entrepreneurship offered by 25% or fewer of the institutions include: creativity (19%), ethics (6%), law (19%), mergers and acquisitions (13%), project management (19%), research (6%), social entrepreneurship (6%), and technology (19%).

MOST FREQUENT COURSES & CONCEPTS ADDRESSED IN ACBSP-ACCREDITED GRADUATE ENTREPRENEURSHIP PROGRAMS										
Courses	ACCT	BPL	EXP	INTR	I/GL	MGT	MKT	STR	VCF	VDEV
Schools w/Formal Courses	3	4	5	5	4	3	6	2	6	7
Schools w/Concepts Only	2	6	3	0	0	3	5	2	7	4
Schools Addressing Concepts	5	10	8	5	4	6	11	4	13	11
Percentage (%)	31%	63%	50%	31%	25%	38%	69%	25%	81%	69%

System of Delivery

The method of instructional delivery is evenly split between those offering online and hybrid courses (8) and those only offering courses via face-to-face. Additionally, some of the ACBSP institutions a quarter (25%) embraced the cohort model for graduate-level entrepreneurship programs. Of those institutions utilizing this system of instructional delivery, 50% offers a hybrid technique and the other 50% employs the face-to-face method. Studies suggest that the cohort approach supports improved student learning by means of deeper discussions and is a channel of establishing a foundation for professional networks that could lead to future business contacts (Teitel, 1997). Despite these benefits some have cited the drawback of the closed nature inherent in the cohort model (Sathe, 2009).

Credit Hours Needed to for Degree Completion

The institutions were just as diverse in their degree completion requirements as they were in their courses offerings and the amount of entrepreneurial concepts addressed. For an entrepreneurship graduate-level concentration, the number of classes addressing entrepreneurial concepts ranges from 3 to 8. LIM College has the greatest number of entrepreneurship credits comprising its degree program (20 credits of 51, or 39%), followed by South University with 16 out of 48 credits, or 33%. Wilkes University and the University of Dallas, with just 2 courses

specifically dedicated to entrepreneurship, offered the least amount of credits (6) comprising its degree program. It must be noted that at the end of summer 2010 the University of Dallas is phasing out the two entrepreneurial courses that it currently offers.

The median is 37.5 credits needed to complete the ACBSP-accredited programs and the mean is 40 credits, with a median of 10.5 and a mean of 11 dedicated entrepreneurship credits. Thus, approximately 27% of degree requirements are dedicated to specified entrepreneurship credit hours. This percentage is substantially above that found by Mick (2003) in his examination of undergraduate AACSB-accredited programs where only 7.3% and 8.5% respectively of the course work in the BS and BSBA curriculums was dedicated to entrepreneurship.

CONCLUSION

Similar to Mick's (2003) findings, this investigation yielded that only a minority of the ACBSP-accredited institutions examined offer an academically significant number of dedicated entrepreneurship classes, and seldom do all of the credits required for the major include only entrepreneurship courses. The heavy reliance on courses from general business or the MBA program was anticipated; however, according to Vespers, McMullan, and Ray (1989), entrepreneurship education should extend beyond management education. Yet, this appears to be the primary structure of most of the graduate-level ACBSP entrepreneurship programs examined in this phase of the study. This raises the question of how will doctoral programs differ, as the research on this topic is emerging. As anticipated, none of the institutions examined in this phase of the research offer doctoral programs in entrepreneurship.

The next phases of this study will examine AACSB-accredited and non-accredited graduate-level programs followed by a comparative analysis. The main question that will be addressed is how these programs differ from one another. Because this preliminary investigation indicates that frequency of entrepreneurship course offerings may have an impact on the quality of programs and the number of candidates electing this concentration, this subject will also be addressed. Additionally, as a result of the proliferation of business ventures started by women and career changers who are returning to school and have shown a preference for experienced tutelage (Bell, 2009), other areas of investigation will include the composition of the entrepreneurship faculty in terms of gender and the percentage who are experienced entrepreneurs.

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FORGIVE US OUR DEBTS: THE GREAT RECESSION OF 2008-09

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ABSTRACT

This research analyzes bankruptcies, mortgages past due and foreclosures from 1999 – 2009 and finds that bankruptcy filings, mortgages past due, and foreclosures are all positively related to the unemployment rate and negatively related to the change in housing values. Results show that borrowers seek bankruptcy protection at greater rates in states with stronger lender garnishment laws and that states with shorter foreclosure timelines see higher rates of bankruptcy filings. Evidence also suggests that some borrowers engage in strategic default.

FEDERAL EDUCATIONAL RIGHTS AND PRIVACY ACT: A HISTORICAL PERSPECTIVE

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ABSTRACT

On August 21, 1974, in Washington, DC, President Gerald Ford signed the law which would become known as FERPA. The Federal Educational Rights and Privacy Act actually went into effect 90 days later in November 1974. It was part of the General Education Provisions Act (GEPA), which was called the “Protection of the Rights and Privacy of Parents and Student”. FERPA is also known casually as the “Buckley Amendment”, named after the sponsor of the primary amendment, Senator James Buckley from New York (“Legislative History,” 2009). The actual codification for the act is 20 U.S.C. 1232g, 34 CFR 99 (“FERPA Summation,” 2009).

FERPA was not an amendment that was the subject of consideration by a Committee; on the contrary, it was only presented on the Senate floor. This fact makes unavailable much of the legislative history that would be part of another amendment (“Legislative History,” 2009). However, it is known that FERPA originated as a means of protecting an individual’s basic civil rights. The logic behind the law was to prevent false record keeping by colleges and universities that could intentionally be used in a harmful way or given to others without consent or knowledge of the student. For example, because of the poor record keeping of the 1960s and 1970s, all an administrator had to do to permanently damage a person’s future would be to insinuate that they were a member of an unpopular political society. This information could be totally false or even if true, harmful consequences could occur if passed on to a potential employer (Lake, 2009). Consequently, the law was enacted to prevent certain educational information from being passed on to third parties who may use the information inappropriately. The purpose of this paper is to give a historical perspective and an in-depth view of this act which has had such a significant impact within the educational arena.

INTRODUCTION

Major amendments to FERPA occurred only four months after the initial enactment of the law. In fact, there have been nine times that the law has been reviewed and amended. That first amendment occurred in December 31, 1974, when Senators Buckley and Pell sponsored adjustments. The purpose of the initial amendment was to correct ambiguities and address concerns by parents, students, and institutions. The first legislative history of the law occurred at this time which is referred to as “Joint Statement in Explanation of Buckley/Pell Amendment” or “Joint Statement” for short. It is located in Volume 120 of the Congressional Records, found on pages 39862-39866 (“Legislative History,” 2009).

Covered Institutions

The original wording of the coverage of institutions under FERPA was that an institution was defined as “any State or local educational agency, any institution of higher education, any community college, any school, agency offering a preschool program, or any other educational institution.” The 1974 amendment changed the scope of the institutions covered. The present wording referring to institution is that they are “any public or private agency or institution which is the recipient of funds under any applicable program” (“Legislative History,” 2009). Therefore, FERPA currently applies to any agency or institution receiving federal funds. These agencies would include public elementary schools, secondary schools, colleges, and universities (“Privacy, Confidentiality, Education Records,” 2009).

Covered Records

Originally, there was a lengthy list of what constituted the records to which parents, and later the 18 year old students were entitled to view. As of 1974, the amendment defined “education records” as “those records, files, documents, and other materials, which contain information directly related to a student and are maintained by an educational agency or institution or by a person acting for such agency or institution.” (“Legislative History,” 2009).

Rights of Parents and Students

Parent of students under 18 have the right to review their children’s records. Once the children become 18 or are attending a postsecondary institution, this right passes from the parent to the student (“Legislative History,” 2009). However, this stipulation applies only if the child is not deemed to be a dependent for the parent. This situation obviously occurs in a high school setting but must be proven in a postsecondary situation (Hunt, 2009).

In regard to records or information that may simultaneously apply to two or more children, the amendment of 1974 stipulated that parents “have the right to inspect and review only such part of such material or document as related to such student or to be informed of the specific information contained in such part of such material” (“Legislative History,” 2009).

Misuse of FERPA

Postsecondary students are excluded from having access to 1) parent’s financial records, 2) any letters of recommendation that may be confidential that were placed in the records prior to January 1, 1975, or 3) any records to which the students have signed a waiver, provided that waiver was not required for admission to the university, employment, or as a condition for receiving an award (“Legislative History,” 2009).

The original intent of FERPA was actually twofold in scope. While the law was intended to protect both parent’s and student’s rights by not allowing third parties to have access to the student’s education information without parental consent, it was also enacted to ensure access to parents of their children’s educational records (“Privacy, Confidentiality, Education Records,” 2009).

Unfortunately, FERPA has been misused in instances whereby parents were not allowed access to student’s records. Again, the law is that parent’s are not allowed access to student

records once the child reaches 18, provided the child is not a dependent (Hunt, 2009). According to Clemson University (2009), they “may give parents access to a student’s records if the student is a dependent and is claimed on the parent’s most recent tax return” (“FERPA Summation,” 2009).

A child is still regarded as a dependent if they meet five criteria. They must be “a member of your household, be a US citizen or resident, not be married and filing a joint return, have income less than \$3,050, and you must provide more than half of their support” (“Claiming Dependents,” 2009).

According to the website of this university where the author is employed, information that can be shared with parents without prior written consent is basic directory information, such as name, address, phone number, etc. Parents also can have access to knowledge pertaining to the awards and scholarships their child has received, current class level, schedule, attendance dates, degrees, full/part-time status, honors, major field of study, most recent school attended, and admission status pertaining to the date of admission. Additionally, should the student be a veteran, this status is appropriate to share with parents. Information that cannot be given to a parent is personal ID, public safety reports, race/ethnicity, student ID number, academic status such as probation and suspension, admission status as to acceptance or rejection, grades or hours earned, test scores pertaining to SAT, ACT, drop out status, or special events attended for class credit referred to as FALS events (“Privacy and Security,” 2009).

According to the Family Educational Rights and Privacy Act Law Summary, FERPA will allow schools to disclose information without prior consent to the following:

- 1) School officials with legitimate educational interest;
 - 2) Other schools to which a student is transferring;
 - 3) Specified officials for audit or evaluation purposes;
 - 4) Appropriate parties in connection with financial aid to student;
 - 5) Organizations conducting certain studies for or on behalf of the school;
 - 6) Accrediting organizations;
 - 7) To comply with a judicial order or lawfully issued subpoena;
 - 8) Appropriate officials in cases of health and safety emergencies;
 - 9) State and local authorities with in a juvenile justice system, pursuant to specific State law.
- (“Family Educational Rights,” 2009)

Recent changes to FERPA

When the law was originally enacted, parents of postsecondary students were not allowed to be informed about health or safety concerns that school faculty or administration had regarding their children. However, that stipulation changed on January 8, 2009, when new rules went into effect regarding FERPA and the sharing of emergency information. The source of the amendment occurred when in April 2007, a student named Seung Hui Cho massacred 33 people, followed by his suicide at Virginia Polytechnic Institute and State University. His professors had initial concern over his mental state; however, because of FERPA, they were precluded from divulging that information to a third party (Klein, 2009). Consequently, the ultimate result of the lack of communication of this health information resulted in a fatal incident occurring. The revision to the law allows divulgence of emergency information if it is “necessary to protect the health or safety of students or other persons” (“Privacy and Security,” 2009).

Additional Topics of Interest

Two additional topics regarding FERPA are of interest to the author. The first is the question of whether it is appropriate for teachers to share information among themselves regarding student records. The second item of interest is whether it is appropriate for students to exchange papers to be graded by peers?

Attorney Lee R. Hunt addressed the first issue regarding teacher interaction after he had spoken at a *National Educator's Association Conference* and advised that one of the best ways to ensure job retention among educators was to communicate with other faculty any undesirable incidents that had occurred concerning students. This communication will give the educator "backup" and support from their colleagues in case of lawsuits filed by the student against an educator. After his talk, a teacher approached him saying the administration of her school informed them they were not allowed to discuss student information with colleagues because of the Family Education Rights and Privacy Act. Hunt defends his position that this type of communication is acceptable by citing that FERPA only covers educational records, not information that may pertain to a teacher's thoughts or what a teacher has learned that is not in a student's records. It also does not include records that are the possession of only that educator. Therefore, a teacher's individual records are their possession, not covered by FERPA, and therefore do not have to be disclosed to parents but may be disclosed to colleagues if the instructor chooses to do so. Additionally, Hunt addressed the definition of a third party. He elaborated by stating that an exception to FERPA is that educational records can be disclosed to "other school officials, including teachers within the educational institution or local educational agency, who have been determined by such agency or institution to have legitimate educational interest, including the educational interest of the child for whom consent would otherwise be required" (Hunt, 2009). Therefore, if there is an educational interest in the child, communication among colleagues would be allowed. This exception would definitely allow communication of "problem issues" regarding the student among colleagues (Hunt, 2009).

The second issue of peer grading of papers was upheld by the U.S. Supreme Court when they reversed a decision by the U.S. Court of Appeals for the Tenth Circuit in *Owasso Independent School District No. I-011 v. Falvo*, 122 S. Ct. 934, 534 U.S. 426 ("Privacy, Confidentiality, Education Records," 2009). This case involved a student who sued a teacher after other students had graded their papers. Prior to this case, exchanging papers had been a fairly common practice, but the case challenged this practice indicating that it revealed grades to a third party in violation of FERPA. The U.S. Supreme court unanimously agreed that the papers were not "educational records" as defined by FERPA; therefore, the grading of them did not violate the act (Hunt, 2009).

CONCLUDING IDEAS

The original intent of FERPA was very "noble", attempting to protect students from administrators who may try to "sabotage" their future by revealing erroneous information regarding the student's records. However, the law became a myriad of ambiguities, despite the enacting of numerous amendments. Universities merely posting the coverage on their website without proof that faculty and administration actually know and understand the law may be erroneously alienating concerned parents from obtaining information to which they are legally entitled. Just the fact that parents are allowed access to information if their child is a dependent

on their current tax return was not known by a majority of the faculty at the university where the author works. It appears that parents merely need to bring a copy of their most recent tax return to school to obtain access to the information they request concerning their child. However, according to the National Academic Advising Association (2009), strict guidelines exist for disclosure of the educational records of dependents. Policies regarding this type of disclosure must be published in a format that is easily assessable to the parties involved (parents/students). It is also recommended that both parents and students sign a written agreement stating 1) understanding by students regarding allowing parental access to records, and 2) acknowledgement that both parents and students have obtained copies from the school of the written guidelines regarding disclosure of dependent information (Van Dusen, 2009). Consequently, the actual ability of parents to obtain information on their dependent child is more difficult and bureaucratic than showing proof of student dependency.

Then, there is the question of handling violations of the law. Hunt (2009) reveals that violations must be a continued “policy or practice”, and that single incidences of disclosure would not constitute a violation of FERPA. Yet, if there appears to be a continued practice of violating FERPA, Federal funds may be withheld from that institution.

Additionally, what of the right to sue by a child if they believe their rights have been violated by FERPA? The Supreme Court disallowed individual lawsuits by students in *Gonzaga University v. Doe*, 536 U.S. 273 (2002) stating that the law will not allow private individuals to sue teachers, schools, or school districts (Hunt, 2009). This restriction definitely puts the “ball” back into the hands of the administration. Again, confusion arises as to how students are to obtain justice if they are not allowed to file suit.

Hunt (2009) goes on to advise that educators should “heed” the original purpose of FERPA, and that it should not be used either by parents or administrators to “scare” educators into believing they are not allowed to communicate with colleagues. Quite simply, he advises that when in doubt about any particular disclosure and how it applies to FERPA, ask if the person seeking the information is a third party not protected by the act. If there are still doubts, speak with the administration of the school to clear up any ambiguities, of which there still appear to be many (Hunt 2009).

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INVESTIGATING THE PRESENCE OF TRANSFER PRICING AND ITS IMPACT IN U.S. AIRLINE MERGERS

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ABSTRACT

While transfer pricing issues are typically highly proprietary due to the potential value addition or leakage they may present for an organization, this paper attempts to examine the issue of transfer pricing within the scope of U.S. airline mergers. Specifically, the paper examines the most recent U.S. airline merger between Delta Air Lines, Inc. and the former Northwest Airlines Corporation (now a wholly owned subsidiary of Delta Air Lines, Inc.) and attempts to identify the potential transfer pricing issues that may have arisen between the two air carriers, a particularly challenging task due to the domestic nature of current airline mergers. Further analysis provides a look into the future of airline industry mergers, issues that may arise within the scope of transfer pricing, and how U.S. airlines should proceed if international mergers become a possibility under the Open Skies treaty. Additionally, it should be noted that airline mergers would be primarily suspect for transfer pricing violations when the merged companies continue to operate as two separate organizations under a single ownership.

ACTIVE ADULT COMMUNITIES: A STUDY OF CONSUMER ATTITUDES AND PREFERENCES

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ABSTRACT

This paper presents an empirical study designed to investigate current attitudes and preferences of mature adult consumers regarding age-qualified active adult communities. The study was conducted among 400 heads of household, 52 years of age or older; residing in the potential draw area for a concept Active Adult Community. The areas of inquiry include: 1) Target buyer characteristics and information sources, 2) Community design preferences/amenities, 3) Location preferences, 4) Specific product/housing layout(s) and features desired, and 5) Impact of economic conditions on respondents' purchase intentions.

CONSUMER PURCHASE BEHAVIOR AND HELPING: AN EXPLORATION OF THIS APPROACH TO MARKETING STRATEGY

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ABSTRACT

Increasingly, a combination of a heightened sense of empathy or awareness among consumers, coupled with the increasing significance of world-wide social causes or movements has resulted in consumers who are more interested in the "consequences" of their purchase behaviors. As a result, marketers have moved towards the use and implementation of strategies sometimes referred to as Cause-Related Marketing (CRM), Purchase-Donations (PD), Passion Branding (PB), or what this author will (broadly) be referring to as Cause-Related Consumption/Marketing (CDC/M). The article will compare and contrast these various forms of consumption-related helping behaviors, and will examine their inherent advantages and disadvantages. Future research questions/issues are also raised.

INTRODUCTION

Increasingly, a combination of a heightened sense of empathy or awareness among consumers, coupled with the increasing significance of world-wide social causes or movements has resulted in consumers who are more interested in the "consequences" of their purchase behaviors, and has also resulted in marketers who are vastly more sensitive to these types of consumer motives. As a result, marketers have moved towards the use and implementation of strategies sometimes referred to as Cause-Related Marketing (CRM), Purchase-Donations (PD), Passion Branding (PB), or what this author will (broadly) be referring to as Cause-Driven Consumption/Marketing (CDC/M). These sorts of activities, both on the part of marketers and consumers are currently widespread, and are increasing in their frequency. Examples of these phenomenon are numerous, and include the following:

-American Express sponsored a phenomenally successful campaign that opened the flood gates of PD advertising in 1983 when they donated one cent to the renovation of the Statue of Liberty every time a cardmember used their card for purchases. This strategy raised over \$1.7 million and increased the use of American Express cards by 30% during that time period.

-More recently, a new product has entered the market with the name of a charitable organization found prominently on the product. The product in question is an arthritis pain reliever that is manufactured by Johnson & Johnson, but bears the name of the Arthritis Foundation. In return for the use of their name, the foundation is guaranteed \$1 million annually, which is claims will be used towards arthritis research.

-Companies like The Body Shop, and Hanna Andersson have positioned themselves in the marketplace by providing unique, socially-conscious product offerings. In the case of the Body Shop their products are made from natural ingredients, use products that are produced in developing nations (in order to encourage economic growth in certain regions of the world), and furthermore the products are not tested on animals. Hanna Andersson, a direct-marketer specializing in simple yet tasteful family clothing, offers to buy back used articles of their clothing (from customers), and in turn donates this used clothing to the needy.

These examples are representative of a growing trend among consumers, and within the discipline of marketing, whereby both consumers and marketers are increasingly concerned with the symbolism and/or consequences of products. The purpose of this article is to (a.) further explore the variation and evolution of these forms of consumption (and conversely, the associated marketing strategies and tactics), and (b.) discuss and explore the quality-of-life issues associated with this type of consumption behavior.

THE EVOLUTION AND GROWTH OF CAUSE-DRIVEN CONSUMPTION/MARKETING

Historically, both marketers and consumers have moved more towards marketing activities which incorporate some sort of "social externality" or helping behavior/altruism with the purchase act. Theoretically, the "helping literature" has been well-developed in disciplines such as social psychology and psychology, and include such schools of thought as the bystander intervention school (Freedman, Wallington and Bless 1967), Normative School (Berkowitz and Daniel, 1963; Harvey and Engle, 1981), Negative-State Relief Model/School (Cialdini and Kenrick, 1976), and Empathy-Altruism School (Batson, Duncan, Ackerman, Buckley and Birch, 1981). Despite this multiplicity of theoretical perspectives, however, each of these schools examines helping behavior in a context which is void of other consumption behavior, such as has developed in marketing over the past several decades.

Increasingly, marketers are linking helping behavior with the purchase of a firm's products. One of the earliest forms of this type of activity is referred to as Cause-Related Marketing, or CRM, where companies would engage in broad, philanthropic activities, such as sponsoring charitable events, or donating a portion of the firm's annual advertising budget to a charitable organization. Forms of CRM have been used by marketers for an extended period of time, and are commonly linked to public relations efforts. In using a CRM-type approach, the linkage between the firm and its products, and the social cause or issue is tenuous, at best.

An evolved form of CRM emerged sometime in the 1980's, when companies moved towards associating specific social/charitable causes with specific branded products; this is referred to as the Purchase-Donation (PD). The use of the PD, as a marketing strategy, is widespread, and can be found largely in the area of consumer non-durables, and also in the services marketing area. Implicitly, the PD tactic strives to make a direct connection between the product and a specific social or charitable organization, and this connection is intended to motivate the consumer.

Taking the PD even a step further, some companies, such as Avon, have identified particularly emotional charitable organizations/social issues, and associated their products with these organizations/issues. This tactic, called Passion Branding (PB), serves to further connect the customer to the brand through the identification and support of highly important and relevant issues and concerns. Avon, for instance, has identified breast cancer, violence against women in Malaysia,

child nourishment in China, and AIDS in Thailand as key issues, and has linked a number of their products with these issues. In a sense, Passion Branding is an extreme form of Purchase-Donation behavior, in that the nature of the issue is particularly salient to the firm's customers, but in the case of PB, the product is still first and foremost in the mind of the consumer (and marketer).

Increasingly, however, the lines between the "helping" component of the brand, and other relevant brand attributes (such as price, product features, etc.) have been blurred, and the resulting phenomenon is being called Cause-Driven Consumption / Marketing (CDC/M). These are situations where consumers are particularly driven by the altruistic component associated with a product, perhaps even more so than other typical product attributes. Some recent examples of CDC/M might include the entire product line of The Body Shop, Ryka, Hanna Andersson, and a recent product launched by Johnson & Johnson, called Arthritis Foundation pain reliever. In the case of CDC/M, both consumers and marketers are driven largely by the helping or altruistic component of the product, in that the socially-related attributes associated with the product would be the most important attributes in the mind of the consumer.

Although there are still a large number of examples of Cause-Related Marketing programs, as well as Purchase-Donations, there appears to be the beginnings of a shift to the more recent approaches, including Passion Branding and CDC/M. These appear to be signalling a higher need/desire for involvement in the purchase act, where a commensurately higher level of significance or symbolism is associated with the product. Additionally, marketers appear to be increasingly willing to develop a causal link between their products and social/charitable causes and issues. In the next section, the implications of this evolution will be further explored.

IMPACT OF CAUSE-DRIVEN CONSUMPTION/MARKETING ON QUALITY OF LIFE

If the current trend continues, we can expect to find increasing number of consumers and marketers engaging in CDC/M; a key overriding question related to this is "Why is this happening". From the consumer/societal viewpoint, it seems clear that a large number of consumers derive some level of satisfaction through CDC, and that marketers are attempting to uniquely position their companies and products in the marketplace using CDM strategies. From both the consumer/societal viewpoint, it is clear that the continuum of consumption-related forms of helping behavior provide an opportunity to indeed engage in helping behavior, and in part to serve as a form of self-expression for the individual. Additionally, such activities, both on the part of consumers and marketers, help create a higher level of awareness of certain social causes and/or phenomenon, and hopefully make for a "better" society for all, by enhancing QOL in a variety of ways.

On the downside, however, is the issue of accountability; what guarantee does the consumer/society have that any (or any significant) monies will be generated by a PD, Passion-Branding, or CDC/M program? In several high-profile examples, to date, little-to-no funding has been generated, despite significant efforts on the part of marketers and consumers. Other disadvantages, again from the consumer/societal viewpoint would include a general softening of other helping behavior (i.e., CRC, PB, and PD might result in lower levels of donational behavior on the part of consumers). Additionally, not all charitable organizations/social causes will be likely candidates for these types of CRC-related programs, thus resulting in some level of discrimination in the marketplace; for example, AIDS-related causes have been in/out of vogue recently, as well as domestic violence, and as such marketers have responded accordingly, while others might be overshadowed by the "marketability" of other (competitive) social causes/charitable organizations.

From the firm/marketer's viewpoint, consumption-related forms of helping behavior are an excellent way to enhance brand equity, and to uniquely position a brand in the marketplace. Additionally benefits (to the marketer) would also relate to an anticipated positive influence on purchase intention and attitudes towards the brand/company. Some direct tax benefits might also be obtained through these use of these tactics, as well as a level of goodwill which is developed towards the company while it is helping improve QOL for society.

Potential disadvantages from the marketers viewpoint would include the lack of "fit" between the social cause/charitable organization and the marketer (and their products). In some cases, the level of fit has been questioned (i.e., Sears, Phil Collins, and the Homeless in the U.S.?) (Smith and Stodghill II, 1994). Additionally, linkages between non-profit entities and for-profit products would seem to need to be time durable, such that any rapid change in the marketplace will not damage either the marketer or the non-profit organization (Maremont 1995).

NET EFFECT ON QOL, AND FUTURE RESEARCH QUESTIONS

In sum, whether or not CDC/M, and other forms of consumption-related helping behavior, have a net benefit, or a net cost for society, is not entirely clear at this point in time. Despite the growing popularity of these sorts or products/marketing strategies, little research has been conducted in this area. A number of key questions still remain to be answered in order to exact a more reliable answer to the issue of net benefit/cost; these questions also include the following:

- Where did CDC/M come from; is it a market-driven phenomenon, and what does it represent from a behavioral viewpoint ? Why have we seen this evolution over time ?
- What are the true motives of marketers who use CDC/M-related tactics ? How does this strategy effect brand equity ?
- How does the use of CDC/M tactics influence buyer behavior, in general, and specifically, other forms of helping or donational behavior ? Is the influence positive, or negative ?
- Do consumers truly believe that the quality of life for others will be enhanced by engaging in CDC/M ? Does quality of life actually increase; do these programs really make a significant difference in QOL ?

Given the growth in consumption-related forms of helping behavior/altruism, such as CDC/M, it is quite clear that "A product is not just a product anymore". Rather, in the case of CDC/M, products represent a complex series of interrelationships between the company, the product, and the social cause/charitable foundation which is associated with the product. Clearly QOL is centrally linked with CDC/M, but needs to be further explored and investigated in order to understand the net impact on societal/consumer benefits and costs.

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COUNTRY OF ORIGIN OF SERVICES: ARE ALL SERVICES CREATED EQUAL?

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ABSTRACT

Despite the increasing value of the trade of services over that of goods in the world economy, research on the marketing of foreign products has remained focused on goods. One specific area of research on foreign products has been the country-of-origin image, i.e. the evaluation of a product by a consumer based on the country to which it is connected. Tangible products-based research studies have been successful in investigating the conditions when products cross borders and consumers face multiple choices between domestic and foreign products in their purchase decision. A multitude of studies have shown that the image a country has in a consumer's mind – whether positive or negative -- will affect his/her purchase of a product from that particular country (Al-Sulaiti & Baker, 1998; Bilkey & Nes, 1982; Brodowsky, Tan, & Meilich, 2004; Papadoulos & Heslop, 2003; Pappu, Quester, & Cooksey, 2006; Peterson & Jolibert, 1995; Verlegh & Steenkamp, 2005). The “made in” label is thought to serve as a cue from which consumers make inferences about products and product attributes. Generally, the country of origin cue triggers an evaluation of quality, performance, or specific product/service attributes. Consumers infer attributes to the product based on country stereotype and experiences with products from a particular country (Bruning, 1997).

Several approaches have been used to investigate country of origin effects. First, country of origin cues may be used as additional selection variables for product evaluation. Second, the country label may have a halo effect and thus impact other product attributes. Finally, it may contribute to country stereotyping or country image (Bruning, 1997). Upon considering a purchase, a consumer will generate an overall image of a country, which will in turn affect his/her evaluation of products from that particular country (Moon & Jain, 2001). This can be extended to the idea of the image of a certain country's products. For example, Japanese products tend to have a strong image in American consumers mind. Several studies have established that stereotyping is a multi-national phenomenon, i.e., that consumers across borders tend to have pre-determined images of countries and their products, whether they have experienced them or not.

In an attempt to expend the depth of foreign product research, Javalgi et al investigated decades of research to inquire whether the country of origin concept applied to services (Javalgi, Cutler, & Winans, 2001). Their thorough review led them to a positive conclusion; country of origin is a concept that is relevant for services. An earlier review article by Knight (1999) on the state of service research concurred with their findings and called for more investigation of the country of origin concept in a service setting. This study strives to answer such calls by taking into consideration existing service classification schemes. Research has proven that consumers may not have the same type of decision making based on multiple factors, including type of product (Hawkins, Mothersbaugh & Best, 2010). Multiple studies have researched possible

approaches to differentiate between services (Dotchin & Oakland, 1994; Hill & Motes, 1995; Clemes, Mollenkopf & Burn, 2000; Thakor and Kumar, 2000). One common dimension in developed classification schemes is degree of professionalism. Specifically, researchers make a distinction between generic and professional services.

Dotchin and Oakland (1994), in the first part of a series of discussion on total quality management in services, detailed a classification based on an earlier work by Schmenner (1986) and Maister (1983). This classification categorizes services into five possible groups: personal services, service shop, professional services, mass services, and service factory (Dotchin & Oakland, 1994; Maister, 1983; Schmenner, 1986). Each group can be defined by a general profile according to six dimensions: labor intensity, contact, interaction, customization, nature of act, and recipient of act.

In their study on pre-purchase information search, Hill and Motes (1995) distinguished between generic and professional services. Professional services, such as law and medicine can be differentiated from generic services, such as dry cleaning and auto repair, mainly because of the training required of the service provider. A provider of a professional service will need more academic training than a provider of a generic service. Additionally, providers of professional services will have a recognized group identity, with a history of self-regulation and a lack of sales-orientation, as is the case for instance with accounting and financial services firms.

In a scheme similar to that of Dotchin and Oakland (1994), Clemes et al (2000) report that services can be professional, service shops, or mass services. Their research characterizes service types using the following six dimensions: (1) people versus equipment; (2) level of customization; (3) extent of employee/customer contact; (4) level of employee discretion; (5) value added in back office versus front office; and (6) product versus process focus. To understand how each of the three service categories is positioned versus the other two, Clemes et al explain that, as the number of customers processed by a typical unit per day increases, the focus moves from a people to an equipment orientation, the length of contact time moves from high to low, the degree of customization moves from high to low, the level of employee discretion moves from high to low, the value added moves from the front office to the back office, and the focus moves from a process to a product orientation.

Thakor and Kumar (2000) approach the issue of service classification in a different manner. Rather than categorize between professional and non-professional services, they emphasize the idea that services can have different degrees of professionalism (Thakor & Kumar, 2000). The end results, however, are the same: professional services consist of medical, financial, legal, and consulting services. They also tested the existence of a relationship between professionalism and credence, expertise, heterogeneity, need for recommendations, perceived criticality, the buyer's own need assessment, perceived value of advertising, and integrity.

Credence refers to the idea that service quality can only be evaluated by an expert observer. Thakor and Kumar (2000) found that highly professional services tend to have more credence qualities than other, less professional, services. Supporting Hill and Motes' concept (1995) that professional services usually have more of a group identity, they also showed that the more professional a service, the more expertise will be required. Additionally, professionalism correlated with criticality of a service, i.e., if a service is viewed as professional, it is most likely viewed as being critical. Finally, professional service buyers will tend to rely more on referrals. Neither positive attitude toward advertising, nor perceived integrity of the service provider, nor heterogeneity across service providers, changed with degree of professionalism.

Following the discussed classification/differentiation schemes, an abundance of service marketing studies have been on professional services. This choice by scholars of studying professional services over more generic services may be explained by the fact that professional services require more expertise from their providers, as well as more time spent with the customer and more customization. Findings have shown that there are differences between types of services and that consumer decisions may be impacted.

Consequently, country of origin cues may also be expected to have varied influence in a purchase decision, based on the type of service being purchased. Three hypotheses were postulated and tested in this study. Hypothesis 1 reflects the expected relationship between country of origin and purchase decision previously demonstrated in goods-based studies and posits that country of origin cues are significant in service purchase decisions. However, since we can expect diverse influence, hypothesis 2 states that country of origin influence will not be consistent across all services. Hypothesis 3, based on the findings from the service classification research, postulates that country of origin cues will be most important in situations when professional services are purchased.

To test the hypotheses, primary data was collected from a non-probability sample of Indian consumers in two metropolitan cities. This is consistent with previous research using consumer perceptions. Regression analyses were performed to analyze the data. All three hypotheses were supported. Country of origin does indeed apply to the field of services but the effect is not homogeneous. Country of origin cues influence varies and is particularly more significant in professional services settings.

These findings add to the scarce literature on foreign services and supplement the country of origin research stream. It is crucial to incorporate country of origin in consumer decision making model when foreign services are purchased. Nevertheless, methodologies must also address the variability demonstrated across types of services purchased. As evidenced, country of origin cues are more significant for professional services decisions.

This finding is of great significance to marketers of foreign services as well. Unlike their counterparts—who provide generic or mass services—providers of professional services, must be aware that their potential consumers will take into consideration the country connected to the service they offer. If the country image is positive, there is great potential in service promotion and service design. On the other hand, if the country image is negative, emphasis must be given to adapting to the local market and disguising the foreignness of the service. Finally, the marketing of foreign services is key to developed countries in their pursuit of markets in developing and emerging markets, where market potentials are huge, especially in countries like India and China. This study's adds to the research on Indian consumers and illustrates the potential for foreign services providers in the world's second most populous nation.

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MEASURING THE VALUE OF INGREDIENT BRAND EQUITY AT MULTIPLE STAGES IN THE SUPPLY CHAIN: A COMPONENT SUPPLIER'S PERSPECTIVE

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INTRODUCTION

In today's fast-changing markets, Ingredient Branding is becoming a major marketing strategy as demonstrated by the increasing number of products sold with embedded branded components (Washburn, Till, and Priluck 2004). Despite its success in generating positive effects on participants in the value chain (for examples see Kotler and Pfoertsch 2006), the effects of Ingredient Branding in business markets has been generally overlooked in terms of brand equity (Havenstein 2004; Pfoertsch and Mueller 2006; Kotler and Pfoertsch 2006). This work aims to shed light on understanding Ingredient Branding strategies, and suggests valuation tools for assessing brand equity from the component supplier's perspective.

In this study, we build on the notion that component suppliers are typically Business-to-Business (B2B) companies with an OEM as a consumer brand extension. We assert that Ingredient Branding is a much more complex strategy than the strategy that most would think a B2B branding should be. This complexity requires component suppliers, as well as other firms in the value chain, to gather in-depth information from the various participants of the value chain as well as from the final customer for managing and responding to this strategy appropriately. To address these managerial needs, we extend existing marketing theory by demonstrating the need for a more complex measurement tool that accounts for brand equity as it affects interactions across multiple stages in a value chain.

INGREDIENT BRANDING

Ingredient Branding is a particular type of alliance between two products, based on both firms' cooperation in designing and delivering the product, with particular emphasis on consumer recognition and identification of components in the final product (Pfoertsch and Mueller 2006). In other words, Ingredient Branding can be conceptualized as a B2B branding strategy between a manufacturer and a supplier in which the end product of the supplier becomes one of the aspects of the manufacturer's strategic concept. Ingredient Branding occurs when a branded elementary product or service is embedded within an end product that is promoted to the final user.

The motivation behind Ingredient Branding revolves around the ingredient, or component, forming an alliance with a product manufacturer in an effort to create brand awareness for the Ingredient Brand to generate pull effects with the final consumer through the value chain (Pfoertsch and Mueller 2006; Havenstein 2004). The push and pull concept is crucial to understanding Ingredient Branding and the motivations behind it. The push strategy involves directing the marketing strategy toward the original equipment manufacturers. A pull strategy

involves appealing directly to the consumer. One implication of this view is that the marketing mix for an Ingredient Branding strategy involves both push and pulls effects: Consumer behavior creates pull and manufacturer behavior creates push. To demonstrate, consider push and pull effects as effects of marketing mix decisions. Supporting pull with push increases the probability of coordination. The combination of the push and pull creates synergy for the complete marketing mix. The supplier offers a component or service to his customer, the OEM. Thus, the supplier has a B2B relationship with the producers of such products as automobiles and electronic products. The OEM produces a product that is to be used by their customer, the final user. The final user buys the product or service in a pure B2C relationship with the OEM. According to this principle, there are two separate stages of customer relationships: supplier with OEM, OEM with final user (see Fig. 1). In Ingredient Branding, the two stages are related in the following way: Step (2) follows step (1), and step (3) occurs when the supplier informs the final user that a particular ingredient is part of the final product offering and the final user chooses this product over competitive offerings. In step (4), the final customer “pulls” the product because the particular ingredient component is desired. This is a continuous process of push and pull with a high success rate if done appropriately (Luczak et al. 2007).

(Here fig. 1)

The notion of Ingredient Branding (Pfoertsch and Mueller 2006) is one of many brand strategies articulated in marketing (for a summary, see Bengtsson 2002; Kotler and Pfoertsch 2006). In recent years however, its prominence and importance have increased dramatically. Examples of Ingredient Branding campaigns include “Makrolon, the High-Tech Polycarbonate” or “100% Cotton”, which are campaigns to create brand awareness about ingredients – in this case computer chips or materials – that are contained within final consumer products. Ultimately, ingredient popularity among consumers drives demand for products and/or services that contain the branded ingredient. It has been argued that this demand then influences firms in the middle of the value chain to use these ingredients in their products or services. As a result, Ingredient Brands have been known to change the way that firms interact in the value chain (Luczak et al. 2007).

All these advantages capture the brand value of Ingredient Branding (Aaker 1991). Among other things, this brand value can be expressed in monetary value. Existing brand literature offers various measurements of brand equity, as discussed in the following section.

MEASURING INGREDIENT BRAND EQUITY: AN OVERVIEW

Ingredient Branding is said to have started in the chemical industry (e.g. DOW Chemical with Styron, BASF with Luran). It is possible that the first application may have occurred in the early 60’s when target products were plastics and synthetic fibers. Marketing slogans such as “Made of Owens-Corning Fiberglas” or carpets with Stainmaster’s “Always stylish, always beautiful” originated in this period.

At this time, branding strategy was defined either as an “exception” from an attribute-oriented branding strategy or as an “exception” from a reaction-oriented branding strategy. Most works about Ingredient Branding are theoretical-descriptive, and empirical-quantitative studies are scarce (Havenstein 2004). A short characterization of research on Ingredient Branding research can be summarized with the following four attributes:

- Concentration only on select and specific questions (industry-specific)
- Out of touch with reality and factious brand and product offerings
- Limited validity due to the use of primarily university students as participants
- Research primarily concentrated on consumptive commodities (e.g. food)

Of the existing studies, however, most overlook an explicit differentiation between B2C oriented vs. B2B oriented ingredient branding strategies.

RELEVANT STAGES FOR MEASURING THE VALUE OF INGREDIENT BRANDS

As seen in Fig. 1, the component supplier offers a product to the OEM (B2B). The OEM uses the component to produce the end product and sells the end product to the end user (B2C). At the same time, the component supplier communicates advantages of the component for an end product to the end user (B2B2C). It is critical that Ingredient Brand valuation captures the pull effect, resulting from the end user preference in this scenario. Most studies often focus solely on the OEM/end user stage and, as a result, success from the perspective of the component supplier at the B2B stage is overlooked. To appropriately allocate value to an Ingredient Branding strategy, it is necessary to include the network of all up-stream markets, beginning with the component supplier and culminating with the end customers (Pförtsch and Linder 2008). By taking this approach, it becomes necessary to broaden the analysis of exchange beyond dyads and include those exchanges that occur within larger networks of firms. In marketing, these sets of firms have been referred to as distribution channels, value chains, embedded markets, network markets, or, simply, networks (Coughlan et al. 2001). The key to this perspective is that the firms are interrelated because they are all involved in bundling ingredients into final products or services for consumption by an end consumer (Coughlan et al. 2001), and exchange in one dyad is affected by exchange in another dyad. This notion of interrelatedness has been the center of many studies (Wathne and Heide 2004).

MEASURING THE INGREDIENT BRAND EFFECT ON THE BUSINESS-TO-CONSUMER STAGE

Measurement at the B2C stage is based on Aaker's (1991) brand valuation model. The categories described above are used to illustrate the end consumer's brand understanding. The result is a qualitative brand profile that is as unique as each brand. Each category is operationalized for measuring the brand value from the consumer's perspective. The relativity of a concept such as "trust" is quite evident when considering its meaning across categories such as automotive, durable, or perishable products; explication of the meaning of "trust" should involve methodology that allows for such variations.

In order to further clarify this approach, let us consider "recognized quality". As demonstrated in previous studies, recognized quality is an important aspect to consider particularly in Ingredient Branding because it is often assumed that brands associated with high quality components have positive effects on the whole end product (Havenstein 2004; McCarthy and Norris 1999). With this approach the OEM can determine whether an Ingredient Brand improves the whole recognized quality of an end product. If such positive effects exist, it is worthwhile to position an end product competitively by displaying the Ingredient Brand logo on

the end product. This approach enables managers to utilize qualitative studies effectively, and for scholars of Ingredient Branding to generate a richer understanding of the phenomenon.

To demonstrate, a series of interviews were conducted that asked for opinions of child toys with and without antibacterial protection. The end products were identical, but one of them conveyed the logo of a prominent antibacterial protection plastic. The goal was to determine the effect of an Ingredient Brand on the end product (i.e., child toy). Questions were formulated that centered on notions of child security and play toys. This was done for similar end products that either contained the Ingredient Brand or did not contain the Ingredient Brand. Respondents were instructed to respond on a 7-point scale (0 being respondent associates the end product with security and 7 being respondent does not associate the end product with security). And, responses were collected for both end products. By collecting data that measures perception of the end products WITHOUT the ingredient brand, as well as perception of end products WITH the ingredient brand, it is possible to generate two sets of data. A brand profile, as an example, is shown in fig. 2.

(Here fig. 2)

First, the black bar represents responses for end products WITHOUT the ingredient brand, while the gray bar represents responses for end products WITH the ingredient brand (Aaker 1991). Looking at these two bars in combination thereby demonstrates the contribution that an Ingredient Brand makes to the end product. The red bar demonstrates a third type of insight about the Ingredient Brand that is relevant for an OEM when deciding whether to initiate this strategy for an end product. More specifically, the red bar is the difference between the black and the gray bar, and it represents which aspects are improved by utilizing the ingredient brand and conveying its use in marketing efforts. It is necessary to keep in mind that this profile is particularly useful for situations with established Ingredient Brands.

INGREDIENT BRANDING AND THE B2B2C CHAIN

In the B2B2C chain, both the component supplier and the end user are involved, and they each represent endpoints of the chain. An important assumption of Ingredient Branding in the B2B2C chain is that the component supplier undertakes the effort to communicate the benefits of a branded ingredient to the end user using instruments of the marketing mix (Kotler and Pfoertsch 2006; Luczak et al. 2007).

To determine the success of B2B2C marketing activities, Havenstein (2004) recommends using the willingness to pay price premiums. However, most component suppliers implement an Ingredient Branding strategy expecting many advantages, including reducing the anonymity of a component, differentiating components from other competitors, and generating pull effects through the value chain by generating end user preference for the branded ingredient (Pfoertsch and Mueller 2006). Measuring success on all these dimensions is difficult.

For this reason, it is recommended that “end user willingness to pay a price premium for an end product with the branded ingredient” is useful as a single index of success for the following reasons. First, it demonstrates that end users are aware of the component brand because they would not otherwise be willing to pay the price premium. Second, it demonstrates that end users are able to differentiate among competing component suppliers. More important, it demonstrates end users’ ability to recall positive associations with the Ingredient Brand and use

this recall to the benefit of the whole end product. Third, it demonstrates the positive accrual of a pull effect (From this point of view, a sales premium can also be seen as a price premium, instead of a higher sales, price can be increased.). Extending the analysis to a broader realm of the B2B2C chain sheds light on otherwise “invisible” mechanisms in Ingredient Branding strategies. For example, analysis of the OEM-end user stage as extracted from the B2B2C chain makes it difficult to isolate determinants of why the OEM embedded the branded component in its end product offering to the end user. However, investigating the end user’s willingness to pay a price premium, along with the other mechanisms in the B2B2C chain does not constrain analysis to the OEM’s procurement decisions. Instead, the analysis focuses on the motivations of the OEM to use the branded ingredient in an end product.

There are a wide range of instruments to measure willingness to pay for an end product embedded with an Ingredient Brand. The most prominent and well-established method is conjoint analysis because it can be used to discover and compare varying attributes and sub-benefits. One of these sub-benefits may be the Ingredient Brand (Havenstein 2004). As demonstrated above, it is a strong, attainable, and rigorous determinant of Ingredient Branding success.

CONCLUSION AND PERSPECTIVES FOR FURTHER DEVELOPMENT

This paper demonstrates the complex structure of an Ingredient Branding strategy by explicating how a branded component affects the multiple stages of exchange that exist among a component supplier, OEM, and end user. Giving attention to this network from the perspective of the component supplier allows an exploration of value that can be harnessed from the supplier’s point of view. Building on existing marketing theory, this paper demonstrates that many questions remain unanswered and also demonstrates that the mechanisms of Ingredient Branding operate differently at each stage of the network. And, as a result, it highlights that assessing Ingredient Branding effects at multiple stages of the B2B2C chain requires varying types of measurement tools, data collection methods, and analysis techniques. These requirements demonstrate, on one hand, that each stage of Ingredient Branding requires various – perhaps contrasting – approaches to building brand equity at each stage (B2B vs. B2C and B2B2C branding). On the other hand, these requirements demonstrate that the component supplier’s position and perspective relative to brand strategies are important in driving relevant, useful, and competitive brand and marketing theories.

(Here Fig. 3)

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Figures

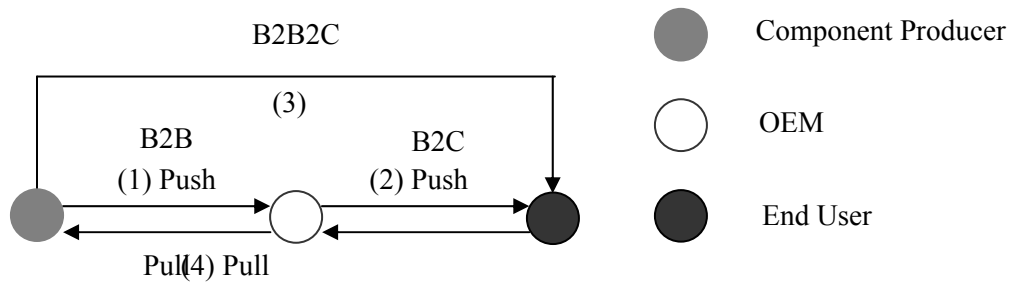


Fig. 1: The Ingredient Brand Framework

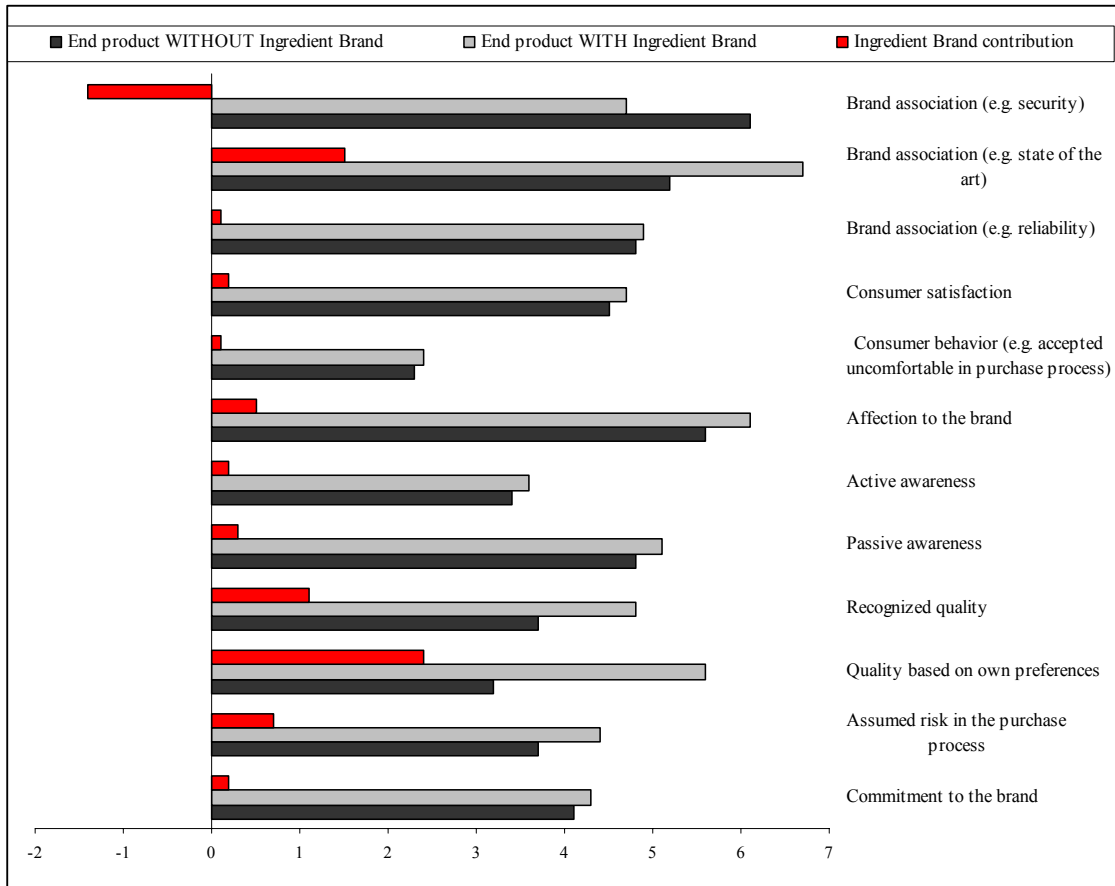


Fig. 2: Quantitative brand value profile with and without the Ingredient Brand

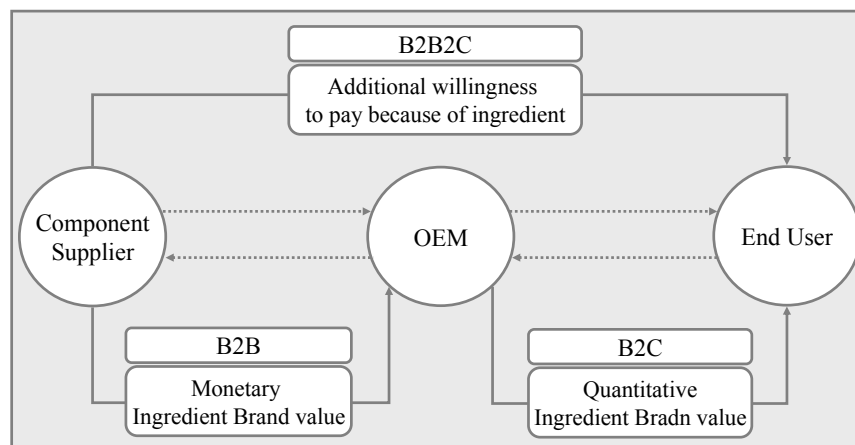


Fig.3: Measurement methods on the characteristic stages of Ingredient Branding

SUCCESSFUL CRM PARTNERING AS A MEANS TO ALIGNING CORPORATE AND PHILANTHROPIC GOALS: AN EMPIRICAL STUDY

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ABSTRACT

Corporate social responsibility has received considerable attention within both the academic and business communities. Cause-Related Marketing (CRM) has evolved as an area of social responsibility that allows firms to link their philanthropic activities with the strategic marketing goals of the firm. Specifically, CRM occurs when a firm makes an offer to contribute a portion of the proceeds of a consumer purchase of the firm's products or services to a charitable cause.

Academic research into CRM has covered a broad landscape. Studies include: potential benefits to the brand; consumer behavior surrounding CRM offers; brand/cause alliances, and; potential benefits to the cause. Additionally, numerous theories have been used to explain various CRM activities. However, each theory that has been presented has been aimed towards explaining specific phenomena, and an all-encompassing theory to explain the antecedents and consequences of successful CRM partnerships has been elusive.

The purpose of this study is to use associative learning theory as a framework for understanding the antecedents and consequences of successful CRM partnerships for both brand and firm. Associative learning theory develops principles such as, belongingness and reputation that set the foundation for incorporating partnership compatibility and long-term brand/cause relationships as antecedents that should link the relationship to benefits for both brand and firm. These benefits, increased word-of-mouth, improved image for the firm, consumer attitudes towards the brand, and greater purchase likelihood, thus form the desired consequences completing the framework.

The significance of this research is that it introduces one theory to explain what attributes of a CRM partnership lead to the best outcomes. Additionally, this study introduces word-of-mouth promotion as a desired outcome of CRM.

This study was conducted by asking respondents to read one of 4 scenarios (2x2 factorial design) and then answer a series of questions. Data was collected by an online firm to ensure greater generalizability, and was subjected to AMOS 6 for analysis. Hypotheses were then tested using the Kruskal-Wallis non-parametric test.

The results indicate that the overall model of antecedents and consequences of CRM relationships has excellent fit, and both antecedents, relationship compatibility and longevity of relationship, are indicators of the strength of the brand/cause relationship. Additionally, increased positive Word-of-mouth and improved brand image are fully supported as consequences of a strong brand/cause relationship. Finally, improved firm image and increased purchase likelihood are partially supported as consequences.

DOES EVERYBODY SELF-GIFT? A FRAMEWORK FOR EXAMINING THE ROLE OF CULTURE IN INDIVIDUALS LIKELIHOOD TO ENGAGE IN SELF-GIFT BEHAVIOR

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Maneesh Thakkar, Radford University**

ABSTRACT

The purpose of this research is to propose a framework to be used for investigating whether self-gifting is a universal phenomenon, or one confined to Western societies. Does everybody self-gift? What are the influences on self-gift behavior? In an attempt to establish who is most likely to self-gift, we have employed the Theory of Reasoned Action and incorporated self-construal to make predictions regarding individual's attitude to self-gifting in general and self-gift advertisements specifically. We also hypothesize that individuals who possess a dominant independent self-construal will have more favorable attitudes towards self-gifting and be more likely to self-gift, whereas individuals with dominant interdependent self-construals will tend to have more negative attitudes towards self-gifting and a strong motivation to comply with references groups negative feelings about self-gifting, and consequently be less likely to self gift, and suggest ways for marketers to appeal to the interdependent self.

CORPORATE REPUTATION MANAGEMENT: CITIBANK'S USE OF IMAGE RESTORATION STRATEGIES DURING THE U.S. BANKING CRISIS

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ABSTRACT

Image management is essential to corporations, particularly during crisis situations. The ongoing financial crisis in the United States has led to the failure of several banking firms. Because systemic economic problems may result from the loss of confidence in the banking system, effective use of crisis management and image restoration strategies by the banking industry is particularly important. This paper discusses the importance of corporate reputation management, illustrates the use of communication theory to analyze corporate responses to crisis, and analyzes Citibank's responses to the company's recent financial crisis using two crisis response frameworks, Coombs' Situational Crisis Communication Theory (2007) and Benoit's Image Restoration Typology (1995). Findings indicate that in general, Citigroup responded to negative events in an effective manner (Coombs, 2007 and Benoit, 1995) and in such a way to reduce the damaging effects of the crisis. In many instances, Citi used corrective action strategies, in which management indicated ways to solve problems and to prevent the crisis from happening again.

AN ANALYSIS OF ENERGY CONSERVATION AMONG US AGE COHORTS

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ABSTRACT

Over many years, the increase usage of electricity and natural gas has caused the U.S. carbon footprint to expand in size. While many of the greenhouse gas effects can be attributed to the industrial, transportation, and commercial sectors, the residential sector of our economy does not lag behind. The authors of this paper seek to investigate the importance of age cohorts in the reduction of the residential sector energy consumption within the United States. The authors utilized 2007 National American Housing Survey within a multivariate regressions analysis to derive the results. The findings suggest that U.S. households' energy consumption habits vary based upon age, which may be attributed to individual's relationship to the time period to which they grew up. The findings are helpful for policy makers to understand the importance of instilling conservation knowledge to children and young adults.

CONVERGENCE OF E-TAILING AND SOCIAL NETWORKING

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ABSTRACT

Social networks are fundamentally changing business models and shaping markets as they empower internet retailers or e-tailers, potential and current consumers and consumer groups. E-tailing is growing, allowing small and medium e-tailers (SMETs) to offer varied products to the market. Being a SMET once posed structural and functional limitations, but incorporating the capabilities of the web and the presence of social networks allows these firms to create mechanisms and strategies for marketing, communication and distribution that level the playing field. Two cases are examined to extract internet retailing strategies used by SMETs that particularly make use of social networks in their communication strategies. Key issues for customers and e-tailers are discussed. Critical success factors are identified and strategies are suggested for SMETs.

Key Words: Social networking, e-tailing, internet retailing, internet marketing strategy

Social networks and social networking sites (SNS) are fast becoming important value-adding, cost-reducing e-tailing tools [9], particularly in enabling small and medium e-tailers (SMETs) offering touch and feel products to more effectively compete in the global online market [5]. This study therefore develops a framework for analyzing the dynamics in the convergence of social networking, e-tailing, and its users, as it underscores the importance of customer to customer value creation for SMETs, and looks into the cases of two particular SMETs by using the study framework. From here, the critical success factors and recommended e-tailing strategies are discussed from the convergence.

Social networks are virtual communities where members with a common purpose or interest share an unlimited and unrestricted amount of information [12] in different forms and mediums, such as microblogging, subscriptions, status, mobile text alerts, blogs, instant messaging, and forums, among others. In particular, the three most popular social networking sites (SNS), based on number of visits [7], and their corresponding networking features that are helpful to SMETs are: Facebook, with its Facebook Connect and Facebook Advertising [4]; MySpace, with its Basic Functionality and MySpace My Ads [11]; and Twitter, with its Basic Tool and Customer Direct Interaction [15].

Internet retailing or e-tailing is the newest store format in retailing [5] which has the online advantages of easier communication between the company and customer [1], less infrastructure requirements[3][6], greater reach allowing for greater sales [3][5], and easier access to information and purchasing privacy for the customer [5]. The newest addition to e-tailing is where e-tailers tie up with SNS (or vice-versa) to provide a platform for spreading

greater product information through social networking and thereby increase marketing demographics.

Given the dynamics of the convergence of social networking, e-tailing and users, three theories are used to develop the conceptual framework for this study. The first theory is the updated communications model, which explains how technological and social developments, whether in the message format of e-tailing, m-commerce, or blogging, are shaping customer communications [14]. The second theory relates to the value of e-commerce to the customer, in terms of the net value of benefits and costs of both the product and the process of purchasing it [8]. The third theory is word of mouth (WOM), the informal oral communication between individuals, companies, etc., particularly online WOM which creates buzz, a customer-driven interaction that amplifies the original marketing message [13] and is particularly relevant for SMETs.

Given the theories underlying this convergence framework, two SMET business cases, both involved in baked goods that of Mommy Puff Bakeshop and Hot Blondies, are evaluated through their e-tailing websites and use of SNS links.

Mommy Puff's website provides brochure level about the firm, complete with a guest book that allows for visitor comments. It utilizes two SNS networking features, namely, Multiply.com, which basically extends their web page, and Facebook. Similarly, Hot Blondies also provides brochure level information in its website, but uses only Facebook for its SNS strategy.

Using the convergence framework, particularly in the evaluation of the buzz factor as source of information from e-tailers, the two SMETs are analyzed with regards to product, customer cost, convenience, risk and social experience. Product-wise, both companies were not limited in offering their products online as they fully utilized the capabilities of the Web and developed appropriate strategies like delivery points and schedules, minimum orders, and pre-ordering. Buzz through customer cost was also addressed through technology by both bakeshops through either use of website and SNS link or both. In particular, shipping and handling costs were not too much of an issue either because of Mommy Puff's delivery schedules and pick up points and Hot Blondies' shopping cart facility and zone pricing. Convenience, on the other hand, is dependent on the customer's choice of waiting for the product delivery or picking it up from a delivery point, for both cases. Customer service, for an e-tailer, poses limitations in terms of product returns and exchanges and monetary refunds. This issue was partially covered by Hot Blondies through its identification of selected retailers that carry their products. As for risk, network security is not a concern for Mommy Puff since no financial transactions occur on their website, while Hot Blondies may need to provide greater visual assurance of security to its customers despite its site being professionally maintained by an expert consultant. Finally, the social experience of personal indecision that customers receive from both sites, in terms of the aforementioned buzz factors, is confirmed and verified through SNS.

As demonstrated through these two cases, seven critical success factors have therefore been identified that would allow a virtual community, when incorporated into a business strategy, to enhance the business of an e-tailer.

The first factor is customer access to relevant synchronized information, on product, cost, order and delivery terms, privacy, and safety in online transactions. Synchronicity and relevance is critical for virtual customer interaction. The second success factor comes from personalization of communications, since a personalized transaction process, particularly in terms of immediate or real time feedback, would give customers the assurance of being given due importance and

attention. The third factor for e-tailing success is trust-building, by encouraging user participation even in non-marketing related postings and activities, fosters genuine relationships with the customers [2]. Fourthly, is lengthened reach, since virtual communities can reach larger numbers of customers through the functionalities of the convergence that creates the buzz, which is characterized by being covert, grassroots, authentic, and credible [14]. The fifth critical success factor is connected to the virtual communities' provision of an additional marketing and communication channel, in which both business cases made use of to complement their websites in communicating to their customers. Similarly, as the sixth factor, social networks can also act as feedback channels since they give users a venue for user-generated content, collaboration, interactivity, and information sharing [16]. Finally, the seventh critical success factor is based on a virtual community's ability to act as a multi-purpose method for motivation fulfillment, where the integration of the internet industry exposes social networkers/customers to varied situations that enable them to fulfill several motivation for visiting sites, whether it be product information and purchase, or simply greater social involvement [10].

Based on the learnings from the explored cases, eight social network strategies are therefore identified and recommended through which SMETs can make full use of virtual communities. These strategies are as follows:

1. Promote relationships and build trust [10]. SMETs can use SNS in conjunction with their brands/companies to create relationships through constant communication and/or interaction via the online community.
2. Increase brand awareness and commitment [10].
3. Add value through the confirmation and validation from peers to other customers [10].
4. Integrate the e-tailer into a clicks and bricks company [5]. As seen in both cases, e-tailers can open a physical front end with the customer base they created.
5. Pursue niche strategies. Both cases utilize this strategy in specifically identifying target customers who love cream puffs and brownies.
6. Better position their products and brands as current Internet technology does not effectively allow retailers to convey the status differentiation of their stores [5].

Through the use of the two case studies, the dynamics in the convergence of social networking, e-tailing and users have been more fully identified. In addition, six strategies were identified in the hope of aiding SMETs better evaluate their online businesses and provide them with a powerful, value-adding tool to allow them to operate more competitively in the global environment.

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REFLECTIONS ON EXECUTIVE COMPENSATION

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ABSTRACT

Few issues evoke as much controversy in Human Resource Management as executive compensation. This paper will examine the origins of executive compensation, the various components, theories used to determine compensation, and implications for managers. Because of the current economic condition and the publicity of executive compensation abuses, executive compensation has become a much-discussed subject. Recent legislative changes coupled with the government's initiative to strengthen the economy have once again brought executive compensation under the microscope.

OVERVIEW OF EXECUTIVE COMPENSATION

Executive compensation typically consists of total base salary, annual incentive plans, long-term incentives for equity, supplemental benefits (that may include anticipated value of long-term projects), and an employment change-of-control agreement, also known as a “golden parachute” (Tonn, 2008). The base salary is generally a fixed cost that is usually decided by the going rate in the particular industry, but can also be established by performance. Just what exactly is the economic significance of executive compensation? Lucian Bebchuck, an executive compensation expert at Harvard University, reported that during the period of 2000-2003 the total compensation of the five highest paid executives of publicly held companies accounted for 10% of corporate earnings (Nocera, 2006).

In a recent article in the *Journal of Business Ethics*, Harris (2009) examines five common criticisms of executive pay rates. These include the following: (1) CEO pay is wrong strictly because it is too large to be morally justified, (2) The disparity between executive pay levels and the pay received by the average worker is just too large; (3) CEO pay is not governed by principles of justice and fairness, and (4) CEO compensation does not solve the agency problem and incentive pay does not work. Harris defends the last two criticisms as most meaningful. In the case of principles of justice, Harris finds that “CEO selection and pay determination are far from open, arm’s length processes (p. 150).” In terms of the effectiveness criticism, Harris reminds us that according to agency theory, the CEO (agent) should be protecting the interests of the shareholders (owners), but that common executive incentives often put personal interest and shareholder interest at odds. To put a discussion of executive compensation in context, agency theory and at least two other theoretical lenses can be used.

The dominant theoretical lens applied to executive pay is agency theory. (Daily, Dalton, & Cannella, 2003). Simply put, agency theory sees the CEO as an “agent” of the owners of the company, i. e., the shareholders. The challenge is that the personal goals of the agent are not always in sync with the personal goals of the owners. While agency theory suggests that independent boards of directors can exert pressure on firm management to increase organizational performance, studies have often shown inconsistent results at best. (McDonald &

Westphal, 2010) There is even a school of thought that suggests that increased monitoring of executives leads to them demanding more compensation in order to make up for the stress of the monitoring. (Hoskisson, Castleton, & Withers, 2009).

Another theory often cited in discussing executive compensation is tournament theory which assumes that the executives are paid more because they play in the largest tournament. This tournament is a single elimination event with the winner receiving the largest paycheck. Tournament theory explains the large differences in salaries between the CEO and those executives on the next level below. (O'Reilly, 1988). The large differentials between top level pay and the next level of senior management are thought to be tournament-like rewards that assure CEO motivation. (Henderson & Fredrickson, 2001). Another aspect of the tournament theory is that elevating the top prize in effect lengthens the career ladder for the other senior executives.

Third is social comparison theory. The essence of the social comparison theory is that the executive's salary is set by the compensation committee, which is composed of board members who are not members of the management of the company, but are outside directors, or possibly even CEO's of other organizations. The theory suggests that these board members may choose a standard of comparison that is similar to their own. It follows then that in evaluating compensation, these board members will depend on their own experiences and comparisons of their individual compensation in formulating the executive's package (O'Reilly, 1988).

Regardless of the theoretical lens used, the compensation committee is crucial to setting executive pay. The compensation committee is a separate committee of a board of directors that is charged with determining the compensation level of senior management. The committee's fiduciary responsibilities include the shaping and communicating of the organization's compensation philosophy, approving compensation plans, devising a methodology to review and evaluate the performance of senior executives, auditing and approving incentive compensation actions, and preparing reports for proxy statements (Bean, 2004). The need to be independent is vital to the success of the committee and is mandated by new stock exchange listing requirements (Dennis, 2004). Research shows that compensation committees have become more independent over time. (Conyon, 2006). The compensation committee may require the services of outside consultants to help develop a compensation philosophy and organize pay packages. Using outside consultants has, in itself, led to controversy, and a recent study showed that in keeping with popular belief, use of an outside consultant in the U.S. and the U.K. did positively correlate with higher CEO pay. (Conyon, Peck, & Sadler, 2009). To better understand the evolution of executive compensation, we need to review its history.

HISTORY OF EXECUTIVE COMPENSATION

The distinct link between the equities market and executive compensation can be traced back to the opening of the New York Stock Exchange in 1792 which allowed for the trading and selling of public companies which in turn would later require a manager (executive) to handle the day-to-day operations of the firm. The setting was on a corner outside a bar where President George Washington liked to drink; he, by the way, was paid \$25,000 per year, about 1,000 times that of the average worker of the time. By comparison, our Presidential salary of \$400,000 today is much less. (Ellig, 2006) Initially executives were compensated by base salary only, but this would change in the 1890's with the introduction of stock options as a form of incentive compensation. Soon after the initial introduction of stock options, DuPont introduced stock

awards (1903), stock purchase plans (1904), and freestanding dividend equivalents (1906) (Ellig, 2006). Compensation would continue to be offered in different variations due to the lack of oversight, prosperity of the economy, and low tax rates. This would soon change with the crash of the stock market in 1929.

The period between 1913 and the crash of the stock market in 1929 saw several changes in executive compensation. First of all, the public was becoming aware of what seemed to be exorbitant executive salaries. Prior to this time, executive compensation was very secretive, but when railroads came under government management, the high salaries of railroad executives became known. Soon, the compensation of railroad and banking executives was published in the popular press and public interest intensified. (Frydman, 2009)

During the same time period that public interest was starting to grow, executive compensation was also growing. General Motors introduced an annual cash bonus plan (1918), economic value bonus plan (1924), and Bethlehem Steel paved the way for the first \$1 million annual salary (1929) (Ellig, 2006). Prior to the crash of 1929, executives enjoyed a period of great growth as salaries increased, stock options flourished, and personal income taxes (top margin of 24%) were low. The crash of the market would not only change some of the processes for paying executives, it would end the lack of regulation oversight in the equity market.

One of the dynamics cited for the crash of the market was inadequate data available to investors (transparency). The ensuing legislation passed by Congress, the 1933 Securities Act and the 1934 Securities and Exchange Act, established disclosure requirements for stock sales to the public, created the Securities and Exchange Commission to handle oversight, and established insider trading rules. Post crash changes in executive compensation, resulting from a stagnant stock market, included stock payouts based on organizational performance and dividends based on underwater stock options (Ellig, 2006). Underwater options have an exercise price that is higher than the current stock price. World War II and the post war years were not friendly to executives because of various laws that were passed that limited “fringes” (which would be later referred to as perks), top margin income tax rates reached 94% (1944), stock option legislation that placed control on prices, addressed capital gains taxes, and placed time limits on grants (ten years), and a myriad of SEC and IRS provisions that made executive compensation more transparent and therefore open to public scrutiny. It was not until 1983 that the movement toward increased transparency and regulation slowed down. During the tenure of President Ronald Regan, government backed off regulations in general and the SEC actually started to back pedal on transparency in 1983.

TODAY’S PERCEPTION OF EXCESSES

Executive salaries kept rising at an unprecedented rate due to several factors including; the lowering of the marginal tax to 33% by 1987, a bull market that began in late 1982 and lasted 18 years, and a shortage of senior management talent. During this period of time, as long as executives optimized shareholder worth, executive salaries were approved with very few controls (Kaiser, 2004). Yes, the public continued wondering whether senior executives were paid too much. Kandel (2009) suggests that the answer to this question is based on at least four benchmarks that relate to pay level. First is one that resonates with the public, i.e., how the chief executive’s salary compares to the average worker’s pay. Second is the size of the company which seems to correlate with the complexity of the job. Third is how much other CEOs in the same industry are paid and fourth is the relationship to the total value that the CEO generates for

the owners over time. Of course, the latter is problematic in determining initial compensation since you are hiring in a CEO based on his or her track record at other companies,

Nor is this relationship between CEO pay and company value always a positive one. During the late 1990's, as the end of the bull market neared and prior to the dot com bust, shareholder values began to shrink while executive compensation remained static or grew and created tremendous personal wealth for executives (Kaiser, 2004). Three significant cases changed the environment of executive compensation forever, though each in a different way, but together created a perfect storm for executives. These were the Enron case in 2001, the retirement package received by Jack Welch in 2002 and Trace International Holdings v. Cogan in 2003.

These three cases each had a profound effect on the needs for executive compensation to become transparent and for boards to accept fiduciary responsibility in negotiating compensation and severance packages. The results of these excesses led to the passage of Sarbanes-Oxley, perhaps the most influential legislation ever passed in respect to executive compensation. The purpose of this act, named for the two legislators who sponsored it, Paul Sarbanes and Michael Oxley, was to restore public confidence in publicly held companies, reassure the securities markets, strengthen corporate accounting controls, and eliminate conflicts of interest for auditing firms that also provide consulting services (Giroux, 2008). While SOX did not mandate changes in compensation methods, it did place restrictions on personal loans to executives (widely practiced). It also placed a strong focus on corporate governance issues and has become a catalyst for organizations to review their procedures in regards to executive compensation (Dennis, 2004).

Further government restrictions were legislated through the Trouble Asset Relief Program (TARP). The Emergency Economic Stabilization Act established a fund known as TARP and was created to purchase troubled assets from financial institutions to provide some means of stability to the financial sector (Barlas, 2008). Along with the TARP funds came significant restrictions concerning executive compensation.

The restriction that received by far the most attention, however, was the Obama administration's decision to limit TARP-receiving CEOs to a salary of \$500,000 a year calling the decision "basic common sense." (Jeppson, Smith, & Stone, 2009, p. 82.) Opponents predicted that CEOs would abandon ship rather than give up their lucrative compensation packages. Instead, a 2010 article in the *International Herald Tribune* found that few financial executives actually left, although the restrictions affected just a "handful of the most troubled companies." (Dash, 2010, 14.)

Future Implications

The biggest implication for managers can be summed up in one phrase: retention without massive compensation (Scappatura, 2009). Organizations are trending towards greater use of restricted stock to encourage executives to remain with the firm for a defined period of time in order to reap the incentive (Dennis, 2004). Another strategy in using restricted stock is to link vestment with performance. Compensation committees will be focusing on aligning the key components of compensation (cash and stock incentives) with organizational performance. Shareholders are also demanding more say in executive compensation and severance packages. Rep. Barney Frank of Massachusetts pioneered legislation that would allow shareholders to vote on "change of control" in respect to compensation packages (Nocera, 2006, p. C.1). As a result, HR 4173, the Wall Street Reform and Consumer Protection Act passed the House in December of 2010. Among other things, it requires a "say on pay" vote at annual meetings for all public

companies. Similarly the Dodd bill is working its way through the Senate. It is easy to conclude that there will be some widespread “say on pay” legislation in the very near future. Private firms may benefit from these reforms by luring top talent away because of their continued focus on long-term incentives and flexibility in adjusting compensation packages that are not possible with public organizations (Raab, 2009).

In a report on executive compensation released last December (Annual and Long-Term Incentive Survey: Decision 2009), 42% of organizations responding reported planning to implement or are considering changes in executive performance measures. Another 29% were planning or considering more absolute performance measures (Raab, 2009). The message is clear, organizations need to be responsible to their shareholders and be transparent in all their transactions when developing executive compensation and severance proposals.

Conclusion

The disconnect between the level of compensation for executives and society’s expectation of what is rational is widening (Nocera, 2006). The ratios indicated in the very beginning cannot be justified in an economy that has a stagnant stock market and an unemployment rate approaching ten percent. Recent actions by the federal government, the SEC, and the Treasury Department indicate a frustration with companies in the design of their compensation and severance packages. The Treasury Department is in the process of creating broad guidelines that will encourage financial institutions not to build compensation packages that embolden risk taking through short-term compensation payments (Story, 2009). It is thought that these guidelines will apply to private firms too.

Organizations are moving towards performance-based compensation because of two significant factors; companywide protection and increased morale at every level (Tonn, 2008). Compensation committees will be under heavy pressure by the government and shareholders to be independent, create compensation policies that create long-term focus, be vigilant in their fiduciary responsibilities, and above all, be transparent. The difference between disclosure and transparency, however, must be emphasized since disclosure in obtuse reports does not help the public assess the CEO pay and performance relationship.(Bebchuk & Fried, 2006).

The 2009 TV coverage of the Big Three auto CEOs testifying before Congress after arriving in their individual private jets is fresh in the minds of the American public as is the 2010 image of the BP CEO testifying about the still-flowing oil in the Gulf of Mexico one day and attending a yacht race in Europe the next day. Public opinion is a fickle phenomenon and once awakened, that public opinion can be a powerful force for change. At the very least, we can expect a continued call for transparency and disclosure in the near future.

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RELATIONSHIPS BETWEEN TECHNOLOGICAL AND SOCIETAL CHANGE

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ABSTRACT

The author of this paper discusses how the implementation of technology has affected societal change. The author examines how technologies that are implemented by businesses have a far reaching effect beyond the business organization. A brief history of technology and social change is presented. This historical discussion includes events that drove the growth of technology as well as those that have limited its growth. An example of unintended consequences from the introduction of technology is also examined. The author examines trends in information technology and social change. Telecommunications, enterprise business software, and internet technologies are presented and discussed in terms of how they create borderless business environments and require less personal interaction.

The author concludes with an organizational change perspective on how societal factors should be included in the implementation of technologies as these technologies become more widely available to small businesses as well as large ones. The author calls for more research on the subject of how effective organizational change methods are on technology implementation initiatives.

INTRODUCTION

A major issue in the implementation of new technologies at corporations is how the changes to organizations are identified and executed. Over the past few years, corporations have implemented new enterprise-wide software systems to improve business efficiencies and give themselves competitive advantages over their competitors. The growing popularity of the internet and its business potential has fueled this rush for businesses to increase their ability to do electronic commerce.

As computers perform more tasks in an organization, the need to change the structure of the organization grows. Some departments expand while others are eliminated. Human resources may be eliminated or reassigned. People may be required to change their home environment as the workplace moves to a more virtual model. Changes in business processes often require additional education to allow people to gain new skill sets.

Technology implementers recognize the need to manage these organizational changes. They also recognize that the changes extend beyond the workplace affecting other areas of society. Failure to effectively manage these changes often results in a less-than-expected return on the technology investment. In the worst cases, the implementation of technology can have a detrimental effect on the business. Hank Bromley (1997) says "Understanding the role of technology requires a nuanced, flexible study, one that does several different things at once, and balances them in ways that cannot be specified in advance" (Brightman & W., 1999, P. 65).

Many technology consultants now include organizational change components to their implementation plans. Specialists are brought into the projects at the beginning to help identify

the change effort required and lead that part of the implementation project. These specialists work with the members of the organization to explain the changes and why they are necessary. They help the company and its people work through the cultural barriers to change and deal with the adverse effects to it (Goodwin, 2001).

Max Weber studied how societies and businesses changed with the growth of capitalism. In his theme of rationalization, he described how economic values brought forth a form of calculation in human activity that was more precise than traditional methods of social measurement. This rationalization led to the development of calculable law and the development of that part of the legal system that pertains to commercial activity. The gain spirit that evolved from these developments changed the way economic and religious aspects of society related to each other. These changes in that relationship shaped the way societies evolved. This evolution continues as technological advances bring commerce and the workplace into people's homes. It continues in business organizations as corporate cultures are called into question just as religious traditions were during the industrial revolution (Weber, 1922/1961).

A Historical Review of Technology And Social Change

Technology has always been a part of human civilization and has had a role in its evolution. The wheel, spear, cooking, and every other advancement that has allowed humans to improve their condition are all examples of technology. Each advancement has allowed the society in which it was developed to achieve things that it was not able to achieve before (Temporary National Economic Committee (TNEC), 1999). A report by the Temporary National Economic Committee states:

Technology refers to the use of physical things to attain results which human hands and bodies unaided are incapable of achieving. In this sense, technology reaches back to the beginnings of human culture, has always played a highly significant role in social evolution and will remain a mainstay of civilization (TNEC, 1999, p. 138).

To this point, technological advances are part of the natural development of humans and their societies. Advances in knowledge and technical understanding lead to the production and application of new technology which then causes changes in society (Norman, 1981). Collin Norman describes it this way:

Technology development, according to this view, is an evolutionary process, not unlike biological evolution. We even speak of new generations of computers, automobiles, and other high-technology goods as if they were biological descendents of earlier models, and key technical developments are often regarded as the progenitors of a whole range of subsequent innovations (Norman, 1981, p. 20)

Historically, many social changes have been determined by technology. The introduction of technology changes the way society functions. "This concept lies unstated behind such terms as the Bronze Age, the Machine Age, and the Computer Age" (Norman, 1981, p. 20).

Looking at the evolution of technology and the idea that social change follows technological advancements, one can draw correlations between the development of agricultural technology and the rise of the cities in Sumeria as the land was able to support more people. The

development of steam power made the machines of the industrial revolution possible (Norman, 1981).

Like biological evolution, technical evolution is either nurtured or defeated by the forces surrounding it. The ancient Greeks actually invented steam power (Norman, 1981). Norman observes that:

Technical evolution, like biological evolution, responds to a variety of forces. Biological evolution is driven by environmental pressures that favor the survivability of some species over others-insects resistant to an insecticide will swiftly predominate in a sprayed area, for example-and the key to the development of living things can be found only by looking at them in relation to their environment. Similarly, the key to technological development lies in the environment in which technological change takes place-in this case, the social, economic, political, and physical environment (Norman, 1981, p. 21).

Corporations dominate the development of technology in the western industrialized countries and in Japan. This commercial thrust guides much of the pace and direction of technological development (Norman, 1981). One can distinguish between capitalism and technology, but the two have been closely associated during the time of their shared history. Capitalists funded the development and deployment of technology to enhance income and profit (TNEC, 1999). The Temporary National Economic Committee noted that:

There was a conflict of interest between the two at times, but since the capitalist was the partner with the controlling resources, his will in the long run had the right-of-way (TNEC, 1999, p. 138).

Social change, as the result of technological advancements, is not always in the best interest of everyone affected. In the above-mentioned example, the capitalist steers the advancement in the most profitable direction. To examine another, more macro environment, the British established new towns to deal with population migration in areas where intervention by others was limited (Hill, 1997). Michael Hill makes this observation about British societal development:

The new towns are examples of successful British innovations of this kind. What is interesting about them is that, while the development corporations acquired powers that gave them a great deal of autonomy within their own territories, there is today a variety of questions to be raised about the extent to which their success was secured at the expense of other policies to which they ought to have related. While the new towns often built up relatively successful, prosperous new communities, they did little to relieve the problems of the least privileged old communities from which they drew; hence, while they have helped to solve some inner-city problems, by providing for 'overspill', they have exacerbated others (Hill, 1997, p. 92).

As with any change agent, the affect of the introduction of technology on a society is more dependent on that society's current environment and its willingness to nurture the change brought on by the technology. The technology itself is primarily dependent on the social and economic forces that control it. The Temporary National Economic Committee wrote the following about technological neutrality:

Technology is relatively neutral; the more dynamic forces lie within the economic system that controls it. If this system is socially wholesome, its employment of technology will be socially advantageous; if it is less than this, its influence will be uneven-rendering benefits here,

disadvantages there, as the prevailing cluster of conflicting economic forces may decide (TNEC, 1999, p. 139).

The capitalistic thrust behind the development of technology and the profit-maximizing agenda contained therein often meets with resistance from the labor force in which the technology is being implemented. Labor feels threatened by the implementation of technology that enhances efficiency. Norman observed the following correlation between technology and labor:

In other words, production technologies not only combine energy and raw materials in the manufacture of goods, but they also provide the means by which labor forces are rationalized and controlled (Norman, 1981, p. 23).

The Temporary National Economic Committee seemed to echo this when it wrote:

Americans struggled in the depression years to understand the painful mystery of widespread unemployment. Many blamed technology for displacing workers (TNEC, 1999, p. 137).

U.S. census information shows, however, that eighteen new industries created since 1879 absorbed almost one-seventh of all labor employed in manufacturing in 1929. These industries included such new technologies as electrical machinery, motor vehicles, gasoline, manufactured ice, refrigerators, phonographs and fountain pens (Committee, 1999). These new jobs did, however require new worker skills than the ones they replaced.

To examine the effect of technology on societies, a study of nine countries was done to examine technological growth between 1900 and 1964. The study found that:

The technical status of the world as a whole advances at a roughly constant exponential rate, doubling every twenty years, or in effect, every generation (Gordon & Shef, 1999, p. 279).

Countries are divided between those that are technologically advanced and those that are underdeveloped. Although there is a wide variance between the technical levels of these two groups, their growth rates are consistent (Gordon & Shef, 1999).

The study's authors also examined what factors might limit technological growth. In terms of the current state of technology, growth would be limited when:

1. When societies know how to do all things.
2. When societies lose interest in the reinvestment process.
3. When societies become non-technological, like the porpoise: intelligent but without machines (Gordon & Shef, 1999).

The authors also examined other limiting factors that could arise in the future.

1. Combined technological and social advancement of a society brings social ills that sometimes require even more technology for their cure.
2. When the technological growth curve progresses to the point that all further technological advancement is devoted to the maintenance of the status quo (Gordon & Shef, 1999).

Catastrophic events such as war could halt or cause technological regression by destroying the minds and media that hold information. An example of this is how the burning of the library of Alexandria destroyed much of the written history of early civilization (Gordon & Shef, 1999).

Sometimes the introduction of technology does not yield the expected results. Given the capitalistic force behind many technological implementations, the ultimate goal of the project is to improve productivity and/or reduce cost. Stakeholders analyze facts to predict outcomes and set expectations. Even though predictive analysis is done prior to implementation, external factors can cause unpredictable results or adverse side effects in other areas. One example involves the introduction of tractors to farmers in Pakistan.

In the late sixties, the government of Pakistan secured a loan for \$43 million from the World Bank to import 18,000 large tractors. Large landowners were given the opportunity to purchase these tractors on very attractive credit terms. The farmers who purchased these tractors were able to increase their production as well as their incomes. A study in the early seventies revealed some unexpected results (Norman, 1981).

The powerful tractors allowed the farmers to cultivate larger areas than the oxen they had used before. This allowed the average farmer to double the size of their farm. This forced many small farmers off their land, and reduced the amount of labor hired by the large farmers. It was found that each tractor resulted in the loss of five jobs. The tractors were introduced to increase agricultural production, but in actuality the tractors were found to have no effect on crop yields or on the number of crops grown. It was found that the distribution of the benefits from this program had been biased in a way that was actually socially regressive due to the loss of jobs, the loss of land by small farmers, and the lack of increased crop production (Norman, 1981).

Because of the ties that technology advancements have to industrialization, scholars often attack the problem of social change in underdeveloped countries in terms of the idea of technological development. Industrialization and technical development are not the same thing. Many technical developments, such as the wheel, the canoe, and the building of ponds are not directly related to industrialization. Many scholars regard industrialization as one form of technical development. It is important to address technology and industrialization separately when looking at social change. The introduction of an industrial system may involve new equipment and methods as technical innovations, but industrialization may introduce new practices to society that are not technical (Blumer, Maines, & Morrione, 1990). Herbert Blumer describes it in this way:

Industrialization may bring a rich variety of practices that in careful use of terms would not be regarded as technological, such as the use of female labor, the over employment of workers, the recruitment of an alien managerial class, a given system of factory discipline, minimum wage legislation, the organization of workers, a sales force, and the development of loan associations (Blumer, et al., 1990, p. 19).

The concept of industrialization as technical development is useful in tracing the history of how manufacturing has developed, since the manufacturing sector is constantly looking to improve efficiencies. It does not, however, help in the study of how the development of manufacturing systems affects group life (Blumer, et al., 1990).

Trends in Information Technology And Social Change

J.C.R. Licklider commissioned research for the U.S. Defense Department that led to the internet. In his 1968 report, he described an environment of telecommunications that would allow people to work at computer terminals and share information. His prediction said:

When people do their informational work at the console and through the network, telecommunication will be as natural an extension of individual work as face-to-face communication is now. The impact of that fact, and of the marked facilitation of the communication process, will be very great - both on the individual and on society (Licklider, 1999, p. 277).

Today, computers touch most aspects of people's work lives. Personal computers at desktops are networked with each other and departmental computers. These departmental computers are networked with large corporate computers. These chains of corporate computing power are linked to the internet where they are networked with computers from other companies and those in the homes of individuals. Business transactions, electronic mail, and personal entertainment all flow through the world-wide web of the internet. This change has happened quickly over the past ten or so years. Technology is one of the major drivers of change in the ways that people work, seek information, communicate and entertain themselves (Drake, 2000).

The work place has been greatly affected by this technical change. This change has caused a ripple effect into the home life of employees. More people are working away from their offices. Many work at home. A 1995 survey showed that 18 percent of Americans worked at home one day per week (Lipset & Ray, 1996). A 2009 study showed that telecommuting had increased to 77 percent of Americans in 2006 but dropped to 72 percent in 2008 (WorldatWork, 2009).

This change in the workplace and the global systems access has led to organizational restructuring. One fallout of this IT-based reengineering has allowed companies to restructure and focus on core business functions with small essential staffs and activities. Companies are adopting processes which emphasize international coordination. Technology has changed the context of workplace relationships and made them more virtual with less physical contact (Kouzmin, Korac-Kakabadse, & Korac-Kakabadse, 1999). Online capabilities greatly expand computer usage into actual interpersonal interaction (Lundberg, 2000). However, in some cases this lack of personal interaction has distorted human perceptions and produced a transparency of individual contributions to the organization (Kouzmin, et al., 1999).

This ability to work from home is dependent on employers implementing computer systems and business processes that facilitate it. One of the ways that companies accomplish this change is by implementing an Enterprise Resource Planning (ERP) system.

ERP systems allow companies to integrate various pieces of departmental information within their business computer systems. This information can then be made available through telecommunications to virtually anywhere in the world. Home access is actually a byproduct of this electronic integration. The promise of ERP implementations is the efficiencies derived from this integration (Gupta, 2000).

Almost all computer application systems are data acquisition, storage, manipulation and display tools. In older systems, the tools used by the various functional areas of a company were not integrated. An ERP system does the same thing as these traditional systems except that the tables containing the many data elements are linked together. Business transactions that use

cross-departmental data are able to access that data through the use of these linked tables. As a result, the information is not confined by functional or departmental boundaries. The same data elements can be used by different people for different functions regardless of their physical location or discipline (Gupta, 2000).

Early forms of ERP software were only available to large companies. Advancements in information technology and the drastic reduction in computer prices have made ERP systems a possibility for even small companies (Gupta, 2000).

CONCLUSION

Companies introduce new technologies to give themselves a competitive advantage. Technology often represents more efficient and accurate ways of performing business tasks, especially in the industrial sector. This explains the capitalistic force behind much of the new technology that is developed.

The introduction of technology is often plagued by problems. Unexpected social changes can sometimes have a negative effect on the societies in which technology is introduced. Changes in the workplace spill over into home and community life. The intrusion of the workplace into the home, the displacement of workers by new tools and methods, and the tradeoffs between the comfort of the status quo and the turmoil associated with technology implementations all take a toll on the people and societies in which they occur.

The implementation of information technology can improve operational efficiencies in a company and give it a competitive advantage. The move to such technologies has proven to be disruptive to the business in terms of financial performance and the organization of its people. Both of these disruptions introduce a level of business risk. To minimize this risk, the organizational change aspects of these implementations are beginning to be addressed as part of technology implementation projects.

ERP systems represent a large segment of the new technologies being introduced in large and small corporations. The implementations of these software packages often require major changes in business processes and organizational structures. In some cases these technologies become the driving force behind business process reengineering.

Some studies dispute the idea of changing business processes to implement technology. Those who subscribe to this school of thought believe that software should be adapted to current business processes and that flexibility should be required more of the technology than the organization.

Organizational change efforts add cost to a technology implementation. In some cases, not doing organizational change has been very costly, also. Additional research should be done to address the question of the effectiveness of organizational change efforts in a technology implementation project.

With the number of ERP implementations that have occurred over the past few years, there should be enough examples of varying levels of organizational change efforts from company to company. A study of the level of organizational change effort and the attainment of expected outcomes of technology implementations could be done. Measurements of financial performance, before and after the implementations, and the organizational change budgets along with departmental headcount changes would be one way of assessing the relationship between project performance and organizational change.

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ECONOMIC DIPLOMACY IN THE LIGHT OF THE WORLD FINANCIAL AND ECONOMIC CRISIS

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ABSTRACT

The world financial and economic crisis, triggered by the US subprime mortgage crisis, has revealed many deficiencies and weaknesses of regulation and supervision of financial, economic and other systems worldwide, among others, also in Slovenia, where, due to growing difficulties, the crisis has become increasingly similar to the general crisis at the beginning of transition. Slovenia, like many other countries in the world, began responding to them by changing the regulation and supervision of individual systems, first the financial, then the economic and many others (pension, health etc.), where the hard work is actually just beginning. Exit out of the crisis, whether early or late, certainly will not be easy, among other reasons, because, in the past, too little attention had been paid to international trade and its diversity. A better economic diplomacy (on national and local level) is therefore more than necessary.

EMPIRICAL STUDY ON AFRICAN ENERGY RESOURCES AND CHINA'S OUTFLOW FOREIGN DIRECT INVESTMENT

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ABSTRACT

Despite much research regarding Chinese involvement in African energy resources, there has been a lack of empirical evidence to support the claim. This paper conducts an empirical study to investigate the key determinants of China's outward foreign direct investment (OFDI): OFDI flow and OFDI stock to Sub-Saharan African countries in aspects of types of energy resources. The paper tests hypotheses and builds models using official data collected from U.S. Government Energy Information Administration (EIA) and the Chinese Ministry of Foreign Commerce (MOFCOM). The findings suggest that China's OFDI flow to Africa is strongly driven by oil resources in recipient countries. In the linear multiple regression model, oil supply is identified as the primary determinant of China's OFDI flow to African countries among all the other types of energy resources. Furthermore, oil supply of African recipient countries is identified as a more important determinant of China's OFDI flow than China's OFDI stock. The paper concludes that China's OFDI to Africa are significantly and positively correlated with a range of factors of energy resources, especially oil supply. The implication of research results is also discussed.

INTRODUCTION

The recent research indicates that China's OFDI is rapidly becoming an important source of OFDI to Sub-Saharan Africa. Starting from virtually no OFDI in 1979, China has accumulated over US\$ 90 billion of OFDI in 2007 (UNECA, 2007). The cumulative value of China's OFDI to Africa was estimated to be US\$847 million between 1991-2003, 19.5% of total outward OFDI flows (Goldstein 2006), with much of the OFDI is in the energy resource sector (Broadman and Isik, 2007). The cumulative value of foreign direct investment (FDI) to Africa was estimated to be US\$ 28 Billion (\$28,780,900,000) between 2003 -2007. China's OFDI flow and stock now stand as the 4th and 6th largest, respectively, among developing countries.

The increasingly significant role of China's outward foreign direct investment (OFDI) to African countries has created much research interest among scholars. The literature indicates that China's OFDI flow and stock to Africa are driven by energy resources and the economy of the African recipient countries. But most recent research revealed that one of the main motives for Chinese enterprises to invest in Africa is resource-seeking (OECD Report, 2008). China's OFDI to Africa are significantly and positively correlated with a range of factors of energy resources, but not GDP growth (Asiedu 2002, 2004, 2005; Dupasquier and Osakwe, 2006; Kandiero and Chitiga, 2006; Lydon and Williams, 2005; UNECA, 2006).

This paper conducts an empirical study to investigate the key determinants of China's OFDI flow and OFDI stock to Sub-Saharan African countries in aspects of types of energy

resources from 2002 to 2007. The paper is organized as follows. Section 1 presents the background of the study. Section 2 presents the research methodology, data collection and research design. The models and hypotheses are developed to investigate the key determinants of China's OFDI flow and OFDI stock to Sub-Saharan African countries in aspects of types of energy resources. Model 1 hypothesizes whether Chinese OFDI flow to Africa is determined by types of energy resources of the African recipient countries. Model 2 hypothesizes whether Chinese OFDI stock to Africa is determined by types of energy resources of the African receipt countries. Section 3 details the data analysis and findings of the hypotheses and multiple regression models. The last section concludes the research findings and the implications of results.

BACKGROUND

Outward foreign direct investment (OFDI) is investment made in the business interests of the investor in a company, in a different nation distinct from the investor's country of origin. Foreign direct investment reflects the objective of obtaining a lasting interest by a resident entity in one economy ("direct investor") in an entity resident in an economy other than that of the investor ("direct investment enterprise"). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise. Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated.

There are different ways to measure OFDI: either net OFDI flow or OFDI stocks. In the studies focusing on OFDI, scholars used different measurements and obtained varying statistical results. The earliest debate about OFDI measurement is Firebaugh (1992)'s argument against Bornschier and Chase-Dunn's methodology to put flow of OFDI and OFDI stock in a same equation. He showed that different methodologies could lead to completely different results. The difference between OFDI flow and OFDI stock is that OFDI flow is generally volatile and measures the short-term, while OFDI stocks is generally more reliable and measures the long term (Sun 2008).

FDI flows consist of the net sales of shares and loans including non-cash acquisitions made against equipment, manufacturing rights, etc. to the investment enterprise in another economy attributable to a parent enterprise resident in the economy. OFDI stock is the value of the share of capital and reserves (including retained profits) attributable to the investment enterprise in another economy attributable to a parent enterprise resident in the economy. This paper investigates the key determinants of China's OFDI flow and stock to Sub-Saharan African countries separately based on the definition of measurements.

HYPOTHESES

Based on the results of the literature review, eight hypotheses were developed to test two research models. Two research models were specified with the predictions based upon the literature review.

Research design

It is generally predicted that China's OFDI flow is affected by energy resources of the African recipient countries. Thus, Hypothesis I, Hypothesis II, Hypothesis III and Model 1 are proposed:

Hypothesis I: *As the amount of Oil production of an African recipient country increases, the China's OFDI flow will increase.*

Hypothesis II: *As the amount of natural gas of an African recipient country increases, the China's OFDI flow will increase.*

Hypothesis III: *As the amount of coal of an African recipient country increases, the China's OFDI flow will increase.*

Model 1

$$\text{China's OFDI Flow} = \beta_0 + \beta_1(\text{Oil}) + \beta_2(\text{Natural Gas}) + \beta_3(\text{Coal})$$

Model 1 indicates that the amount of oil, natural gas and coal production of African recipient countries determines the amount of China's OFDI. The population partial regression coefficients are indicated with the Greek letter β .

It is also generally predicted that China's OFDI stock is affected by energy resources and economic growth of the African recipient countries. Thus, Hypothesis IV Hypothesis V, Hypothesis VI, and Model 2 are proposed:

Hypothesis IV: *As the amount of Oil production of an African recipient country increases, the China's OFDI stock will increase.*

Hypothesis V: *As the amount of natural gas of an African recipient country increases, the China's OFDI stock will increase.*

Hypothesis VI: *As the amount of coal of an African recipient country increases, the China's OFDI stock will increase.*

Model 2

$$\text{China's OFDI stock} = \beta_0 + \beta_1(\text{Oil}) + \beta_2(\text{Natural Gas}) + \beta_3(\text{Coal})$$

Model 2 indicates that the amount of oil, natural gas and coal production of African recipient countries determines the amount of China's OFDI stock.

RESEARCH METHODOLOGY

Statistical linear multiple regression method is utilized to test the hypotheses and present the models. Correlation analysis is utilized to investigate the relationships between China's OFDI and energy resources of African countries.

Data Collection

Data of African energy resources were collected from U.S. Government Energy Information Administration (EIA). China's OFDI data were collected from the official statistical bulletin released from the Chinese Ministry of Foreign Commerce (MOFCOM).

Dependent Variables

- China's OFDI flow to Africa is defined as a dependent variable means that China's OFDI flow increases when the value of independent variable increases.
- China's OFDI stock to Africa is defined as a dependent variable means that China's OFDI stock increases when the value of independent variable increases.

Independent Variables

- Data on oil supply was used as independent variable. Oil supply data was taken from the U.S. Government Energy Information Administration official statistics. Oil supply is measured in thousands of barrels.
- Data on natural gas supply was used as independent variable. Natural gas data was taken from the U.S. Government Energy Information Administration official statistics. Natural gas is measured in billions of cubic feet.
- Data on coal supply was used as independent variable. Primary coal data was taken from the U.S. Government Energy Information Administration official statistics. Coal supply is measured in thousands of short tons.

DATA ANALYSIS AND RESULTS

This section presents data analysis and discusses the findings of the research models. Hypothesis I, Hypothesis II, Hypothesis III and Hypothesis generated from Model 1 were tested using a multiple regression statistical method reflecting the increasing Chinese OFDI flow to Africa. Hypothesis IV, Hypothesis V and Hypothesis VI generated from Model 2 were tested using a multiple regression statistical method reflecting the increasing Chinese OFDI stock to Africa. Pearson correlation analysis was used to investigation the relationship between Chinese OFDI and dependent variables. Descriptive statistics was utilized to generate graphs to visually demonstrate the research results.

Data Analysis

For Model 1, the regression model fits well ($R=1$). R is the correlation co-efficient between the observed value of the dependent variable and the predicted value based on the regression model. $R = .999$ indicates the dependent variable can be almost perfectly predicted from the independent variables. The analysis-of-variance indicates there is a linear relationship between in the population between dependent variable and independent variables since the observed significance level is less than $p < 0.0001$. Thus, the Null hypothesis that there is no linear relationship between China's OFDI flow and the four dependent variables is rejected. The estimated regression equation Model 1 is built as follows.

Hypothesis 1 was kept since the significant level at $P < 0.0001$. Figure 1 shows the very strong positive relationship between the China's OFDI Flow amount and the amount of Oil production of an African recipient country indicating that China's OFDI to Africa are significantly and positively correlated with countries with rich oil supply such Nigeria, Algeria, Libya, Angola, Sudan, Equatorial Guinea and Gabon.

Hypothesis II was rejected since the coefficient is not significant $p > 0.001$, though the amount of China's OFDI is associated with natural gas production of an African recipient country (Pearson correlation = .725),

Hypothesis III was rejected since the coefficient is not significant $p > 0.001$, though the amount of China's OFDI is associated with coal production of an African recipient country (Pearson correlation = .499). Table 1 shows the relationships between China's OFDI flow and African natural resource factors: oil, natural gas and coal.

Table 1 Correlation between China's OFDI flow and African natural resource factors

	Oil	Gas	Coal
Pearson Correlation	1.000	.725	.499
Sig. (1-tailed)	.000	.000	.000

For Model 2, the regression model fits ($R = .581$) moderately. The analysis-of-variance is used to test whether there is a linear relationship in the population between dependent variable and independent variables. Null hypothesis that there is no linear relationship between China's OFDI stock and the four dependent variables is rejected since the observed significance level is less than $p < 0.00$. Thus, the estimated regression equation Model 2 is built as follows.

China's OFDI Stock = $27 + .046(\text{Oil}) + .009(\text{Natural Gas}) + .001(\text{Coal})$

Hypothesis IV, Hypothesis V and Hypothesis VI were all rejected since t statistic significant level $> .005$. The coefficient for oil supply indicates that predicted China's OFDI flow increases .046 for a change of 1 in the value of the oil variable. Oil is a relative larger predictor for China's OFDI Stock comparing to Gas and Coal in Model 2, but not a major one. Table 2 shows the correlation between China's OFDI stock and African natural resource factors: oil, natural gas and coal.

Table 2 correlation between China's OFDI stock and African natural resource factors

	Oil	Gas	Coal
Pearson Correlation (r)	.435	.363	.376
Sig. (1-tailed)	.001	.006	.004

CONCLUSION

The results of the study provides empirical evidence to support the previous research that China's OFDI to Africa are significantly and positively correlated with a range of factors such as natural resources. Oil supply has been identified as the primary determinant of China's OFDI Flow to African countries. The finding indicates there is the strong positive relationship between the China's OFDI flow amount and the amount of oil supply of African recipient countries with rich oil supply such as Nigeria, Algeria, Libya, Angola, Sudan, Equatorial Guinea and Gabon as

shown in Figure 2. The expanding demand for oil and other natural resources are essential to sustain China's economic growth. Nearly a third of China's oil imports come from Africa. Nigeria, Algeria, Libya, Angola, Sudan, Equatorial Guinea, and Gabon are the top African oil exporters to China. These African countries with strong oil trade links with China are also recipients of China's OFDI projects, infrastructure projects carried out by Chinese constructors.

Neither oil supply, nor natural gas, nor coal can be identified as major determinants of China's OFDI stock in the study though they are the factors that affect the amount of China's OFDI stock to certain extent. There is a moderate positive relationship between the amount of Oil production of African recipient countries and the China's OFDI stock amount. Further study need to be done to identify the key determinants of China's OFDI stock.

SOCIAL MARKETING AND ROCK'N ROLL: THE POWER OF THE U2 BRAND

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ABSTRACT

U2, the band who sang “With or without you”, “I still haven’t found what I’m looking for”, “Pride (In the Name of Love)” or “Beautiful Day” has withstood several decades of change in the music industry in an ever evolving global marketplace. At the same time, U2 has also managed to take a humanistic stance on many global issues by using their brand name as tool to defend the less privileged and the environment. This case study illustrates what has led this band claiming such social responsibility into creating a community of devoted and international fans through effective targeting strategies in their tours and a well developed social marketing approach. While other bands from the same era have come and gone—to name just a few, how successful are The Cure, Depeche Mode, The Talking Heads, or Simple Minds today?—and artists have not been able to break national barriers, “U2 is known for being super smart...Their rise was meteoric, but together they’ve carefully planned every step of the band’s evolution, keeping all elements (stage show, videos, promo, packaging and PR—as well as the actual music) relevant.” (Sampson, 2008)

This case was written to demonstrate the power of social marketing in adding to the success of the band U2. The case first reviews the history of the Irish band up to their 2010 360° tour and their rise to fame. Keys to their success have been their focus on the US market, their touring choices and their close relation to fans. From their early beginning, the band also chose to support various social causes, from fighting AIDS devastation, malaria and famines in poor developing Africa to the defense of human rights in Burma, to the protection of the environment. The case explains how U2 communicated about the causes they support via their web site and how they integrated them in their product delivery. Finally, choices of sponsors, whether global or local are discussed.

Keywords: global marketing strategy, branding, social marketing, brand image, brand equity, social media, internet strategy

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LEXICOGRAPHIC GOAL PROGRAMMING APPROACHES TO THE THREE-GROUP CLASSIFICATION PROBLEM

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ABSTRACT

In the three-group statistical classification problem, when mixed-integer programming models are used for the minimization of the number of misclassifications in the training sample, alternative optimal solutions may affect the classificatory performance of the model in the holdout sample. In this paper, we propose lexicographic goal programming models that assign preemptive priority to the minimization of the number of misclassifications. The classificatory performance of the proposed models is compared against that of the classical statistical classification procedures (Fisher's linear discriminant function and Smith's quadratic discriminant function) using the data from a diabetic study.

INTRODUCTION

Over the last thirty years there has been considerable research interest in mathematical programming approaches to the statistical classification problem. Various simulation studies (Lee, Gallagher & Patterson, 2003; Doumpos, Chatzi & Zopounidis, 2006; Sueyoshi, 2006) have demonstrated that such mathematical programming approaches can outperform the classical statistical procedures for classification, i.e. the linear discriminant function (Fisher, 1936) and the quadratic discriminant function (Smith, 1947), when the conditions for optimality of these parametric methods are violated. These conditions for optimality include multivariate normality and assumptions about the covariance structures.

Mixed-integer programming models for the three-group classification problem (Gehrlein, 1986; Gochet, Stam, Srinivasan & Chen, 1997; Loucopoulos & Pavur, 1997) directly minimize the number of misclassifications in the training sample. It has been shown that mathematical programming models for the three-group classification problem outperform the standard parametric classification procedures (Fisher's linear discriminant function and Smith's quadratic discriminant function) for a variety of data configurations (Loucopoulos & Pavur, 1997b; Bal & Orkcü, 2010). It should be noted that depending on group separation and the number of observations, a mixed-integer programming model may have alternate solutions in the training sample. The choice of the alternate solution used for generating the discriminant function can have a significant effect on the holdout sample classificatory performance of the model. In this paper, various secondary goals are investigated for the three-group classification problem, with the goal of minimizing the number of misclassifications in the training sample being assigned preemptive priority.

**MAXIMIZATION OF MAXIMUM DEVIATION BETWEEN PROJECTED
GROUP MEANS AS SECONDARY GOAL**

The MIP3G model (Loucopoulos & Pavur, 1997) is a mixed-integer programming model specifically for the three-group classification problem. It assigns a weight a_k to each attribute variable X_k ($k = 1, 2, \dots, p$) and thus generates a discriminant score $a_0 + \sum_{k=1}^p a_k X_k^{(i)}$ for each observation i ($i = 1, 2, \dots, n$). Such score is projected onto a line which is divided into three intervals, one for each group, with a gap of width e between adjacent intervals for enhanced group separation. An observation is correctly classified if its discriminant score falls in the interval assigned to its group; otherwise it is misclassified.

Notation:

a_k is the weight assigned to variable X_k

$X_k^{(i)}$ is the value of variable k observation i

a_0 is a locational adjustment to the discriminant function

\acute{e} is the width of the middle interval

e is the width of the gap between adjacent intervals

M_1 is the maximum deviation of the discriminant score of a misclassified observation from the nearest endpoint of the interval assigned to its group

M_2 is the maximum deviation of the discriminant score of a correctly classified observation, that belongs to either the leftmost or the rightmost group, from $-e$ or $e + \acute{e}$ respectively

$$I_i = \begin{cases} 1 & \text{if observation } i \text{ is misclassified} \\ 0 & \text{if observation } i \text{ is correctly classified} \end{cases}$$

$$K_2 = \begin{cases} 1 & \text{if group } G_2 \text{ is assigned the interval on the left} \\ 0 & \text{if group } G_2 \text{ is assigned the interval in the middle} \end{cases}$$

$$K_3 = \begin{cases} 1 & \text{if group } G_3 \text{ is assigned the interval on the right} \\ 0 & \text{if group } G_3 \text{ is assigned the interval in the middle} \end{cases}$$

$$\min \sum_{i=1}^n I_i$$

Formulation:

s.t.

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - M_1 I_i - (e + e') K_2 + (M_2 + e) K_3 \leq M_2 \quad \forall i \in G_1 \quad (1)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + M_1 I_i - (M_2 + e) K_2 + (e + e') K_3 \geq e' - M_2 \quad \forall i \in G_1 \quad (2)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - M_1 I_i + (e + e') K_2 \leq e' \quad \forall i \in G_1 \quad (3)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + M_1 I_i + (M_2 + e) K_2 \geq 0 \quad \forall i \in G_1 \quad (4)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - M_1 I_i - (M_2 + e) K_3 \leq e' \quad \forall i \in G_1 \quad (5)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + M_1 I_i - (e + e') K_3 \geq 0 \quad \forall i \in G_1 \quad (6)$$

$$K_2 + K_3 \geq 1 \quad (7)$$

$I_1, I_2, \dots, I_n, K_2, K_3$ binary variables

a_0, a_1, \dots, a_p sign-unrestricted variables

The MIP3G model identifies three intervals $[-M_2 - e, -e]$, $[0, e']$ and $[e + e', e + e' + M_2]$ and assigns one of the following group orderings to the three intervals: (G_1, G_2, G_3) , (G_2, G_1, G_3) and (G_2, G_3, G_1) . The other three possible group orderings are just mirror images of the aforementioned group orderings that can be generated by the multiplication of the discriminant scores by -1. In the above group orderings G_1 is the only group that can be assigned to any one of the three intervals. However, the choice was arbitrary and does not affect the classification results in any way.

$$\text{Now let } \bar{X}_h = a_0 + \frac{\sum_{k=1}^p \sum_{i \in G_h} a_k X_k^{(i)}}{n_h} \quad h = 1, 2, 3 \text{ and } \delta \text{ is a non-negative variable.}$$

By changing the objective function to $\min P_1 \sum_{i=1}^n I_i - P_2 \delta$ and adding the following constraints:

$$\bar{X}_1 - \bar{X}_2 + (M_1 + M_2 + e + e')(1 - K_2 + K_3) \geq \delta \quad (8)$$

$$\bar{X}_3 - \bar{X}_1 + (M_1 + M_2 + e + e')(1 + K_2 - K_3) \geq \delta \quad (9)$$

$$\bar{X}_3 - \bar{X}_2 + (M_1 + M_2 + e + e')(2 - K_2 - K_3) \geq \delta \quad (10)$$

the model is converted into a goal programming formulation (LGP1). The last three constraints guarantee that the deviation between the projected mean of the group assigned to the leftmost interval and the projected mean of the group assigned to the rightmost interval will be greater than or equal to δ . Finding a discriminant function by maximizing the deviation between projected group means is similar to the approach used in obtaining the linear discriminant function (Fisher, 1936).

The deviation between the lower endpoint of the leftmost interval and the upper endpoint of the rightmost interval is $(M_2 + e) + (e + \acute{e} + M_2) = 2M_2 + 2e + \acute{e}$. Furthermore, the maximum deviation of a misclassified observation from its group is M_1 . Thus, if $P_1 > P_2(2M_1 + 2M_2 + 2e + \acute{e})$, the first goal is preemptive over the second goal. This follows since the first goal consists of binary variables.

MAXIMIZATION OF MINIMUM DEVIATION BETWEEN PROJECTED GROUP MEANS AS SECONDARY GOAL

Another secondary goal that is proposed in this paper is the maximization of the minimum deviation between projected group means. It is expected that such goal will enhance group separation and thus improve the classificatory performance of the model in the holdout sample.

New Notation:

ϕ is the minimum deviation between projected group means

Formulation:

$$\text{LGP2: } \min P_1 \sum_{i=1}^n I_i - P_2 \phi$$

s.t.

constraints (1) - (7)

$$\bar{X}_1 - \bar{X}_2 + (2M_1 + 2M_2 + 2e + e')(2 - K_2 - K_3) \geq \phi \quad (11)$$

$$\bar{X}_2 - \bar{X}_1 + (2M_1 + 2M_2 + 2e + e')(1 + K_2 - K_3) \geq \phi \quad (12)$$

with ϕ being non-negative and $P_1 > (M_1 + M_2 + e + e'/2)P_2$. This condition guarantees that the goal minimizing the number of misclassifications is assigned preemptive priority over the goal of maximizing the minimum deviation between projected group means.

$$\bar{X}_1 - \bar{X}_3 + (2M_1 + 2M_2 + 2e + e')(1 - K_2 + K_3) \geq \phi \quad (13)$$

$$\bar{X}_3 - \bar{X}_1 + (2M_1 + 2M_2 + 2e + e')(2 - K_2 - K_3) \geq \phi \quad (14)$$

$$\bar{X}_3 - \bar{X}_2 + (2M_1 + 2M_2 + 2e + e')(1 + K_2 - K_3) \geq \phi \quad (15)$$

$$\bar{X}_3 - \bar{X}_2 + (2M_1 + 2M_2 + 2e + e')(1 - K_2 + K_3) \geq \phi \quad (16)$$

MINIMIZATION OF SUM OF DEVIATIONS OF MISCLASSIFIED OBSERVATIONS AS A SECONDARY GOAL

Another secondary goal that is considered is the minimization of the sum of the deviations of the discriminant scores of misclassified observations from the nearest endpoint of the interval assigned to their group.

New Notation:

d_i is the deviation of the discriminant score of a misclassified observation from the nearest endpoint of the interval assigned to its group.

Formulation:

$$\text{LGP3: } \min P_1 \sum_{i=1}^n I_i + P_2 \sum_{i=1}^n d_i$$

s.t.

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - d_i - (e + e')K_2 + (M_2 + e)K_3 \leq M_2 \quad \forall i \in G_1 \quad (17)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + d_i - (M_2 + e)K_2 + (e + e')K_3 \geq e' - M_2 \quad \forall i \in G_1 \quad (18)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - d_i + (e + e')K_2 \leq e' \quad \forall i \in G_2 \quad (19)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + d_i + (M_2 + e)K_2 \geq 0 \quad \forall i \in G_2 \quad (20)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - d_i - (M_2 + e)K_3 \leq e' \quad \forall i \in G_3 \quad (21)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + d_i - (e + e')K_3 \geq 0 \quad \forall i \in G_3 \quad (22)$$

$$d_i \leq M_1 I_i \quad \forall i \in (G_1 \cup G_2 \cup G_3) \quad (23)$$

$$K_2 + K_3 \geq 1 \quad (24)$$

As long as $P_1 > P_2 M_2 \left[\begin{array}{c} n - \max\{n_h\} \\ h \end{array} \right]$, the goal of minimizing the

number of misclassified observations is preemptive over the goal of minimizing the sum of the deviations of the discriminant scores of misclassified observations from the nearest endpoint of the interval assigned to their group.

MAXIMIZATION OF THE SUM OF MINIMUM DEVIATIONS OF CORRECTLY CLASSIFIED OBSERVATIONS AS A SECONDARY GOAL

The maximization of the sum of the minimum deviations of the discriminant scores of correctly classified observations from the endpoints of the gaps between adjacent intervals can also be considered as a secondary goal.

New Notation:

ζ_{hl} is the minimum deviation of the discriminant scores of correctly classified observations that belong to group G_h ($h=1,2,3$) from the lower endpoint of the interval assigned to its group.

ζ_{hu} is the minimum deviation of the discriminant scores of correctly classified observations that belong to group G_h ($h=1,2,3$) from the upper endpoint of the interval assigned to its group.

Formulation:

$$\text{LGP4: } \min P_1 \sum_{i=1}^n I_i - P_2 \sum_{h=1}^3 (\zeta_{hu} + \zeta_{hl})$$

s.t.

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - M_1 I_1 - (e + e') K_2 + (M_2 + e) K_3 + \zeta_{lu} \leq M_2 \quad \forall i \in G_1 \quad (25)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + M_1 I_1 - (M_2 + e) K_2 + (e + e') K_3 - \zeta_{1l} \geq e' - M_2 \quad \forall i \in G_1 \quad (26)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - M_1 I_1 + (e + e') K_2 + \zeta_{2u} \leq e' \quad \forall i \in G_2 \quad (27)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + M_1 I_1 + (M_2 + e) K_2 - \zeta_{2l} \geq 0 \quad \forall i \in G_2 \quad (28)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} - M_1 I_1 + (M_2 + e) K_3 + \zeta_{3u} \leq e' \quad \forall i \in G_3 \quad (29)$$

$$a_0 + \sum_{k=1}^p a_k X_k^{(i)} + M_1 I_1 + (e + e') K_3 - \zeta_{3\ell} \geq 0 \quad \forall i \in G_3 \quad (30)$$

$$K_2 + K_3 \geq 1 \quad (31)$$

$$\zeta_{h\ell} + \zeta_{hu} \leq M_2 \left(n_h - \sum_{i \in G_h} I_i \right) \quad h = 1, 2, 3 \quad (32)$$

$$\zeta_{1\ell} + \zeta_{3u} \leq (1 + K_2 - K_3)(M_2 + e') \quad (33)$$

$$\zeta_{2\ell} + \zeta_{1u} \leq (1 - K_2 + K_3)(M_2 + e') \quad (34)$$

$$\zeta_{2\ell} + \zeta_{3u} \leq (2 - K_2 - K_3)(M_2 + e') \quad (35)$$

where $\zeta_{h\ell}, \zeta_{hu} \geq 0$ ($h=1,2,3$), $M_1 \geq 2(M_2+e) + \acute{e}$, and $M_2 \geq \acute{e}$. The inclusion of constraint (32) assures that the deviations $\zeta_{h\ell}$ and ζ_{hu} will be zero, if all the observations of group G_h are misclassified. Constraints (33-35) guarantee that at most four of the deviations $\zeta_{h\ell}$ and ζ_{hu} ($h=1,2,3$) will be non-zero. These are the minimum deviations of the discriminant scores of correctly classified observations from the endpoints of the gaps between adjacent intervals. Thus, this secondary goal indirectly maximizes the width of the gaps between adjacent intervals, in order to enhance group separation. It has been shown that increasing the width of the gaps between adjacent intervals can improve the classificatory performance of the model in the holdout sample (Pavur & Loucopoulos, 2001).

COMPUTATIONAL RESULTS

The classificatory performance of the above lexicographic goal programming models was compared against that of Fisher's linear discriminant function (LDF) and Smith's quadratic discriminant function (QDF) using the data of a diabetic study of 145 individuals (Reaven & Miller, 1979). A total of 33 of these individuals were overt diabetic, 36 were chemical diabetic, whereas 76 were non-diabetic. The results of the leave-one-out cross-validation procedure are given below:

Model	Misclassifications
LGP1	7
LGP2	6
LGP3	9
LGP4	6
LDF	14
QDF	12

Thus, all lexicographic goal programming models outperformed their parametric counterparts. On this data set, the LGP model that maximizes the minimum deviation between projected group means as well as the model that maximizes the sum of minimum deviations of correctly classified observations yielded the lowest number of misclassifications using the leave-one-out procedure.

CONCLUSIONS

In this paper, lexicographic goal programming models for the three-group classification problem are proposed that assign preemptive priority to the goal of minimizing the number of misclassifications in the training sample. Using the data of a diabetic study, it is shown that the secondary goals improve the holdout classificatory performance of the model that assigns preemptive priority to the minimization of the number of misclassifications in the training sample. Further studies are needed to assess the classificatory performance of the proposed models under different group configurations and group overlap.

References are available upon request from c-loucopoulos@neu.edu

FURTHER EVIDENCE ON THE DETERMINANTS OF AUDIT COMMITTEE DILIGENCE

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ABSTRACT

A central component of reliable financial reporting is an effective and diligent corporate audit committee. Prior research has documented the positive outcomes arising from an audit committee diligently carrying out its responsibilities. Using meeting frequency as a proxy for diligence, Raghunandan and Rama (2007) investigated firm-specific and governance factors associated with diligent audit committees. Their results, based on 2003 data from S&P SmallCap firms, indicated that firm size, industry litigiousness, board of director activity, and large blocks of stock held by outsiders all were associated with more diligent audit committees. This study extends their work by focusing on the 2008 fiscal year, a period after the initial implementation of the Sarbanes-Oxley reforms had passed, and on both larger (S&P 500) and smaller (Russell Microcap) firms. The results are markedly different between the sample subgroups and from those reported by Raghunandan and Rama (2007). The only consistent result is that firms with active boards of directors are likely to have active audit committees as well. The findings indicate that (1) the incentives for audit committees to serve as an effective instrument of corporate governance differ from S&P 500 firms to S&P SmallCap firms to Russell Microcap firms and (2) external factors, such as the impact of working to implement the reforms imposed by Sarbanes-Oxley, need to be considered in future research.