APUBEF

Pennsylvania Journal of Business and Economics

Volume 11 Number 1 ISSN: 2156-9444 Fall 2005

PJBE Office of the Editor

Disclaimer
The facts, opinions, and conclusions set forth in the articles contained in this issue are those of the authors, and quotations should be so attributed. They do not necessarily represent the views and opinions of the Association of Pennsylvania University Business and Economics Faculty (APUBEF) or the editors; nor can APUBEF and the editors assume any responsibility for the accuracy or validity of any of the information contained herein.

EDITORIAL NOTES

The Fall 2005 edition of the *Pennsylvania Journal of Business and Economics* (PJBE) is the culmination of the efforts of many individuals who volunteered their time and energy to create a quality, general-interest business and economics journal that is both useful and enjoyable to read. We thank the members of the Editorial Review Board and their colleagues who agreed to review manuscripts for this edition.

All manuscripts accepted for publication in this edition underwent both a double-blind review for content and a rigorous review of grammar, formatting and style. We thank all the authors for their patience with this process; it can get lengthy at times. However, we believe it is worth the extra time and effort to help produce a quality, well-written journal. The acceptance rate for this issue is once again 40%. That is down from earlier editions and reflects our reviewers' efforts to increase standards, while still providing useful feedback to authors.

The PJBE continues to be listed in Cabell's, and all information about the journal was recently updated. In particular, Dr. Jonathan Kramer's term as an editor has expired. Dr. Leon Markowicz will be handling the review process for the Spring 2006 edition. Dr. Kevin Roth will continue to be in charge of producing and distributing the journal.

Finally, we thank all those individuals who submitted manuscripts for possible inclusion in this edition. We encourage all our colleagues to consider the PJBE as an outlet for their work.

Table of Contents

ACADEMIC INSTRUCTION IN TECHNOLOY-ENHANCED ENVIRONMENTS: ASSURING THE BALANCE OF TECHNOLOGY AND CONTENT

Peter W. Stonebraker, Northeastern Illinois University
James E. Hazeltine, Northeastern Illinois University

ABSTRACT

Technology-enhanced instruction has evolved from relatively unstructured experimentation to adoption as a full instructional pedagogy. In the process, emphasis has shifted from usability and reliability of the technology to the more traditional content-focused academic concerns of excellence and access. This paper addresses the benefits of enhancing traditional business courses with technology supplements, and the simultaneous assurance of the technology-content balance. Students in four undergraduate courses compared perceived benefits of technology-enhanced and non-enhanced pedagogies; significant differences in perceptions of instructor administrative role and of community supportiveness were found, affirming the use of technology to enhance traditional classroom pedagogies.

INTRODUCTION

"In times of change, learners inherit the earth."
Eric Hoffer

Apocryphal changes are occurring in the way that knowledge is transferred. Peter Drucker's comment: "Long distance learning... may well make obsolete within 25 years that uniquely American institution, the freestanding undergraduate college" (Drucker, 1998, p. 53) is an eerie reminder of Shirley Terreberry's: "The dinosaurs were impressive creatures in their day" (Terreberry, 1968, p. 613). Lyman Porter put the matter more directly: "New technology will stimulate more change in the upcoming years than universities have seen in the last 40 to 50 years" (Porter, 1996). Few academics or administrators seriously challenge the general thrust of this prognosis. In a paradigm shift which may surpass the development of the scaled numbering system (Bernstein, 1998) or the use of the blackboard or overhead projector, the ability to use and transfer knowledge has inexorably changed. Knowledge has emerged as the growth engine of universities and, more broadly, of society; in fact, it is growing faster than traditional media can handle (Ward, 1994). At the heart of this process are the efficiencies and limitations of technology-enhanced pedagogies and the contingencies of its application.

These new technologies permit, according to proponents, delivery of "new, better, cheaper, and faster" instruction (Bardach, 1997; Taylor, 1995). But detractors scoff at such claims, finding them overly bold and emphasizing only ease of use rather than explicit learning outcomes. Many academics have followed these issues with concern and have sought satisfactory pedagogic responses. As Montagu (2001) notes, these developments require vigilance to assure a continued balance between technology and content. Universities must respond to new technology in order to attract and retain qualified students and to train them for the extant professional and social environments. However, most universities are simultaneously committed to assure substantive educational processes. At issue is: what combination of technology and content sustains the traditional academic commitment to excellence and access and how should the balance be assessed?

This paper broadly differentiates traditional and technology-enhanced pedagogies or instructional environments. Unfortunately, there is no consistent theory of either technology-enhanced learning or of its application to academic pedagogies (Mandviwalla & Hovav, 1998). Even the definitions of various associated terms (combinations of distance, on-line, computer mediated, asynchronous, virtual, education, technology, pedagogies or learning) are as varied and extensive as the number who practice it (Taylor, 2002). Some emphasize media; for example: "The delivery of education or learning though electronically-mediated instruction including satellite video, audio, audio graphic computer, multi-media technology and learning at a distance" (Leonard, 1996). Others address links between participants: the "use of technology (e.g. voice, video, data, print) to bridge the instructional gap that is caused when the instructor and student are separated by physical distance" (Fell, 1996). The term "technology-enhanced instructional environments" is used here as an aggregate to incorporate all such efforts; it includes the following characteristics:

1) Electronic mediation (including audio, video, data, and print)
2) Delivery over a distance (defined in spatial or temporal terms)

3) Impersonal or interpersonal activity (synchronous or time-delayed)
4) Static or dynamic presentation (variable regularity of updating)
5) Processes to gain, transfer and assess credible knowledge
6) Degree of integration with traditional learning methods

The first five characteristics (media, distance, interactivity, dynamism, and credible knowledge) are extensively noted in the literature (Benigno & Trentin, 2000; Chang & Fisher, 1999; Cheung & Kan, 2002; Kaynama & Keesling, 2000; among others). Regarding the sixth, integration with traditional learning methods, examples range from extensive enhancement to almost total avoidance. Full and rapid adoption of technology enhancements is not acceptable to many academics for a variety of reasons including the need for appropriate faculty and student technology training (Educom Staff, 1996; DeSieno, 1995), limited student maturity (Stonebraker, 1998; Carr, 2000), lack of feedback on student needs (Twigg, 1994; Valenta, Therriault, Dieter, & Mrtek, 2001), and assurance of program excellence and representativeness of extant practices (Smith, 2001; Montagu, 2001). For these and other reasons, technology enhancement means a vast middle ground of supplementing traditional classroom pedagogies with technology and a unhurried and considered adoption of new technologies for specific academic goals and programs. Proponents of enhanced technology remain concerned with issues such as which technologies to implement, how to be assured that transfer of academic content is not impaired and how to measure the cost and benefits of such efforts.

REVIEW OF THE LITERATURE

Larson (2002) uses the four marketing utilities – form, time, place and possession – to differentiate traditional from technology-enhanced pedagogy. Traditional pedagogies are professor-centered, synchronous, scheduled and constrained by configuration, equipment and faculty/student availability, while technology-enhanced pedagogies are student-centered, asynchronous and available any time and anywhere. Similarly, Sauer (2001) characterizes technology-enhancement as dynamic, experiencing obsolescence and requiring just-in-time training of transitory knowledge, as opposed to the more stable and durable underlying academic processes of traditional pedagogies. Additionally, Smith (2001) differentiates the spontaneity of the traditional classroom from the extensive structuring generally associated with distance-learning formats. Similar distinctions between traditional and technology-enhanced pedagogies are drawn by Siegel (1996), Kerka (1996) and Twigg (1994).

A key common element, however, between traditional and technology-enhanced pedagogies is a strongly felt obligation to assure both teaching excellence and student access. In this study, access means the ability to conveniently use course content in a structured setting. Traditional pedagogies require direct person-to-person, as opposed to technology-enhanced, interaction precisely because traditional pedagogies are both highly interpersonal and highly dynamic (Hoffman & Novak, 1996). Further, traditional learning processes involve some component of community (Rovai, 2002), defined as: "people who are socially interdependent … in discussion and decision making" (Bellah, Madsen, Sullivan, Swidler, & Tipton, 1985). Technology-enhanced environments, by contrast, shift the nature and extent of interaction and access, thereby changing the learner's perception of the instructor's role and of the supportiveness of the learning community. This shift can result in more standardized, impersonal faculty-student interactions, higher drop rates and higher-risk student behaviors, such as enrolling in too many courses or ineffective preparation (Rovai, 2002; Carr, 2000). Table 1 categorizes these distinctions between traditional and technology-enhanced pedagogies.

Table 1
General Classification of Differences Between Traditional and Technology-Enhanced Pedagogies

	Traditional Pedagogies ⟷	Technology-Enhanced Pedagogies
Form	Synchronous	Asynchronous
Time	Scheduled	Anytime
Place	Classroom	Anywhere
Focus of content	Teacher-centered	Student-centered
Focus of pedagogy	Process (means)	Outcomes (ends)
Flexibility	Standardized lecture notes	Customized to participants
Content	Stable, durable	Dynamic, transitory
Number of students	Space delimited	Unlimited
Instructor Preparation	Some (transparencies)	Extensive electronic preparation
Interaction	Spontaneous, dynamic	Structured, static
Interactivity	Personal	Impersonal
Sense of Community	Stronger	Weaker
Drop Rates	Lower	Higher

THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

Regrettably, there is little high-confidence research linking student perceptions of instructor role or of community to the goals of excellence and access (Valenta et al., 2001), particularly (as is common) when enhanced technology supplements rather than replaces traditional pedagogies. Clearly, the costs of technology (faculty time and other university resources) should be committed only if they are supported by assurance of excellence and access.

Two issues arise frequently in the distance-learning literature. The first is perception of the instructor's role in the implementation of course activities and creation of an environment conducive to learning (Kaynama & Keesling, 2000; Chang & Fisher, 1999; Valenta, et al., 2001). Those researchers identified course structuring and design activities, as well as assurance of convenient and efficient access, as associated with the role of the instructor.

The second variable is perception of community in the classroom (Rovai, 2002; Benigno & Trentin, 2000; Valenta et al., 2001). Technology can take away as much as 93% of communication interaction, because it strips away the demeanor, body language, and even some of the vocal tonality and emphasis normally found in interpersonal communication (Mehrabian, 1968).

These relationships are modeled in Figure 1 and are subsequently elaborated. See Figure 1 on page 9.

The Dependent Variables

Universities generally are concerned with excellence of and access to instruction (some even incorporate wording to this effect in their mission statements). These concerns are particularly salient where large portions of the student body are minority or first-generation college attendees because such students are perceived to be at greater risk.

Course grades have been used frequently as a direct measure of the quality of student performance or success. Grades and grade point average measures are indicators of ability to advance academically and are viewed as precursors for future academic success. The use of course grades as a measure of student performance is established by studies in a variety of business disciplines, including economics (Anderson, Benjamin & Fuss, 1994), accounting (Bouillon & Doran, 1992), business communications (Cheung & Kan, 2002), and finance (Didia & Hasnat, 1998). Kock (1998) uses grades and grade point averages to summarize the results of numerous distance learning studies, involving as many as 16,500 students at a major university.

Access can be operationalized as the number of separate occasions on which a student enters a content, communication or student-group area on a course web site. Larson (2002), for example, has used frequency of participant interactivity by electronic media as an access measure, and Benigno and Trentin (2000) have employed both quantitative and qualitative measures of participant message traffic in a multiple stage evaluation of interaction and student involvement in learning.

The Independent Variables

Student perceptions of the instructor's role in assuring the administrative efficiency of course delivery and perceptions of community supportiveness are well established as contributors to pedagogical effectiveness in learning environments that rely solely on asynchronous communication (Marsh & Wells, 1996; Atwong & Hugstad, 1997; Rovai, 2002; Benigno & Trentin, 2000, among others). At issue in this study is the impact of those variables on traditional, classroom-centered programs that are technology-enhanced. A more positive student perception of the role of the instructor or of sense of community, compared to a classroom-only setting, could be seen as a source of added value by the university and of enhanced service to the learning community. And further, a relationship between such positive perceptions and course access or course success would be seen as an additional contribution to an improved academic environment. Based on these arguments, we hypothesize that:

> *H1: The perceptions of the instructor's role and of community support in a technology-enhanced instructional environment are significantly greater than those of traditional environments.*

The Instructor's Role

The first independent variable is the perception of the instructor's role in a technology-enhanced classroom, compared with that of a classroom-only setting. Marsh and Wells (1996) and Atwong and Hugstad (1997) argue that technology enhancement permits new ways to:

1) provide access to course materials and lectures
2) enhance the structural design of instructional materials
3) facilitate efficient control of students' time

Mandviwalla and Hovav (1998) and Valenta et al. (2001) found perceptions of access to be an important aggregate factor in the attractiveness and visibility of distance education programs. But little has been published to demonstrate how the instructor's role in delivering technology-enhanced content contributes to university program goals of excellence and access. Thus, we hypothesize that:

H2a: The perception of greater access to course materials is positively related to course success.

H2b: The perception of greater visibility of the structural design of course materials is positively related to course success.

H2c: The perception of greater control of personal time is positively related to course success.

H3a: The perception of greater access to course materials is positively related to course access effort.

H3b: The perception of visibility of the structural design of course materials is positively related to course access effort.

H3c: The perception of greater control of personal time is positively related to course access effort.

Perception of Community

Scholars have also emphasized the importance of retaining a sense of community in distance learning pedagogies because of the generally positive effects of community on participant behaviors and learning (Rovai, 2002). Group cohesion is identified as a contributor to the perception of the community in several different ways, including social cohesion (Benigno & Trentin, 2000) and interpersonal trust (Rovai, 2002). Additionally, group interactivity has been identified by several studies as contributory to the perception of community (Fulford & Zhang, 1993; Benigno & Trentin, 2000; Rovai, 2002; Valenta et al., 2001; Kaynama & Keesling, 2000). And finally, commonality of learning expectations has also been identified as a contributor to perception of community (Benigno & Trentin, 2000; Rovai, 2002). But once again, there has been little investigation of the relationship of perception of community to university goals of excellence and access in a technology-enhanced environment. This study aggregates the participative and interactive, cognitive and meta-cognitive (Benigno & Trentin, 2000) and co-participatory and qualia functions (Chang & Fisher, 1999) to define the following three perceptions of community variables:

1) Cohesion (friendship, benevolence, bonding, mutuality, credibility)
2) Group interaction (task-based, social-emotional or self-directed learning)
3) Common expectancies/goals (sharing purposeful patterned activities, including cognitive and other learning)

With these in mind, we hypothesize:

H4a: The perception of group cohesion is positively related to course success.

H4b: The perception of group interaction is positively related to course success.

H4c: The perception of opportunity to achieve learning goals is positively related to course success.

H5a: The perception of group cohesion is positively related to course access effort.

H5b: The perception of group interaction is positively related to course access effort.

H5c: The perception of opportunity to achieve learning goals is positively related to course access effort.

METHOD

The Environment

This study was carried out at an urban, regional, commuter university. Reflecting the area's demographic make-up, many students speak English as a second or third language and are the first generation of their family to attend college. Most students work part- or full-time to pay education-related expenses. Because a high proportion are first generation, minority and/or non-traditional students, many students are perceived as at higher risk. For these reasons, enrollment in most business courses is capped at approximately 30 students, and the average undergraduate business course enrollment is approximately22, allowing for extensive faculty-student interaction.

A number of the university's business courses supplement traditional classroom content delivery with Blackboard, a web-based e-learning platform that permits access to on-line lecture materials, downloadable homework assignments, demonstration examinations and quizzes and e-mail.

Students are nevertheless expected to attend the roughly 40 semester hours of classes and to pick up handouts and other materials.

The Instrument

A two-page survey was administered to 64 students in four undergraduate business courses: two sections of production/operations management taught by one co-author and one section of strategic management and a section of retailing taught by the second. Content delivery methods used in the courses were essentially identical: classroom lectures and discussion were supplemented by web-accessible course materials and lecture notes, demonstration quizzes, exam formats, and example problem solutions and case studies, an e-mail facility and student self-assessment exercises. The two co-authors, who share similar professional backgrounds, have frequently exchanged information on classroom technologies and pedagogy, evaluated each other's classes and presented pedagogic papers together. Further, only one of the study's seven independent measures yielded a significant (α=.05) difference in magnitude between classes – two sections taught, as it happens, by the same instructor. The possibility that the outcomes of this study may be confounded by differences in course content and in interpersonal and teaching styles across sections and instructors is nevertheless acknowledged.

Respondents were asked to compare the course in which they were enrolled to a current or prior course that does not use Blackboard in terms of:

- ease of access to instructional or lecture materials (Instructor's Role)
- organization of the instructional materials (Instructor's Role)
- control of time (Instructor's Role)
- ability to develop group cohesion (Community)
- ease of interaction with others in the class (Community)
- opportunity to achieve learning goals (Community)
- overall assessment of course difficulty

These measures were used to test Hypothesis 1 and as predictor variables for the remaining four hypotheses.

An optical-scan form was used to facilitate entry of the Likert-scaled five-point response data. Respondents were also asked the number of previously completed Blackboard courses (a measure of familiarity with the technology), their gender, age, computer access, and student identification numbers so that survey forms could subsequently be linked to course grades and to individual access frequencies maintained by Blackboard, the two measures treated as dependent variables (course success and access effort, respectively) for tests of the remaining hypotheses. Four of the completed instruments were found to be defective, thus n = 60.

FINDINGS

The differences between respondents' mean scores and the midpoints (assigned a value of 3) for each of the Likert-scaled measures were interpreted as indicators of students' perceptions of the value of Blackboard enhancement relative to a traditional classroom-only pedagogy. If those means were three or less, the inevitable conclusion would be that the Blackboard supplement detracted from traditional course presentation. The extensive commitment of instructor time, as well as university technology cost, would not be supported. If, on the other hand, average scores were greater than three, a reasonable conclusion would be that students perceived that technology enhancement added value to the course. Table 2 presents the mean values and t-test statistics for the seven perception variables.

Table 2
Mean Values, Standard Deviations, and Test Values for the Perception Variables

Variable†	Mean Value	Standard Deviation	t for H_0: μ=3
Perception of Instructor's Role			
Access to instructional/ lecture materials	4.308	.846	12.457**
Design of instructional materials	4.154	.775	12.000**
Facilitate control of time	3.877	1.008	7.015**
Perception of Community			
Ability to develop group cohesion	3.554	.936	4.771**
Ability to interact with group	3.723	.992	5.875**
Opportunity to achieve learning goals	4.000	.884	9.125**
Overall assessment	4.261	.735	13.842**

** p <.01
† On a scale of 1 – 5, with 3 as neutral, what is your perception of (variable) in the technology enhanced course compared to a traditional course?

The means range from 3.554 to 4.308, and all are significantly different (α=.01) from the scale midpoints, though the magnitudes of the community variables are lower than those of the instructor role variables. Notably, the mean score for perceived overall ease of the Blackboard supplemented courses is significantly higher than for a non-supplemented traditional course. These findings indicate that, overall, students perceive Blackboard as a useful supplement to the traditional classroom pedagogy, particularly for access to course materials and lectures, design of instructional materials and, to a lesser extent, opportunity to achieve learning goals and facilitation of control of time. The results thus support Hypothesis 1.

Stepwise regression analysis was used to test Hypotheses 2 through 5. As the results in Table 3 indicate, three of the sub-hypotheses – all related to the instructor's role – were supported. Course success, measured by students' final grades, is associated positively and significantly with easier access to content materials, a finding that supports Hypothesis 2a (see Figure 2a). An association between final grades and perceived greater control of time is also significant and positive, supporting Hypothesis 2c (see Figure 2b). Further, access effort, measured by Blackboard-reported access frequencies, is associated positively and significantly with perceived ease of access to content materials, consistent with Hypothesis 3a (see Figure 2c). Although a relationship between course success and access effort was not one of the hypotheses tested, it proved to be positive and statistically significant (see Figure 2d), reinforcing a well-established dictum that greater course study effort is associated with higher grades. See pages 10 and 11 for Table 3 and Figure 2.

The relationship between course grades and perceptions of the availability of course materials proved, interestingly, to be non-linear. Marked differences were found between A/B students and C students with respect to perception of availability of course materials (refer to Figure 2a), but A and B students did not differ from each other. A/B students generally felt course materials to be more easily available than did C students (α=.01).

The hypotheses concerning community, H4 and H5, are not supported by the findings of this study. The evidence here suggests that students' perceptions of community do not differ between technology-enhanced and non-technology enhanced course settings. Given that all classes met regularly, with ample opportunity for students to interact with each other and with the instructor, the supplemental use of technology may not have been sufficient to impact the community variables either positively or negatively. One could nevertheless conclude that the use of a technology supplement does not appear to have impaired a sense of community.

Perhaps the most important finding of this research is that the perceptions regarding the technology-enhanced pedagogy were more positive than for un-enhanced, traditional pedagogies. Respondents perceived the overall difficulty of technology-enhanced courses and each of the six instructor role and community variables as significantly more positive than their experiences with traditional technology.

CONCLUSIONS AND APPLICATIONS

Contributions

This study addressed the vast middle ground of technology-enhanced pedagogy of a kind common in universities which will not or cannot adopt fully on-line course delivery, yet feel that they must encourage technological enhancements to support student needs. The results of this study clearly demonstrate that technology-enhanced pedagogy can effectively supplement traditional pedagogies.

Further, these findings confirm the intuited, though not hypothesized, expectations of the researchers that the instructor role variables play a greater role for student performance in a technologically enhanced course setting than do the community variables. Student perceptions of course materials availability and of control of time were found to be more important, and perceptions of group cohesion and interaction less important, in differentiating technology-supplemented and non-supplemented classes.

Limitations

Because of the nature of the student population and of the technology enhancements used here, the findings of this study may not be fully generalizeable to some programs. The population of the present study may be more at-risk than that of other programs, and the technology enhancements may be differently applied. In this study, technology enhancement was found to be a value-adding supplement to traditional classroom activities and applicable to situations where university policies dictate excellence and access of program for potentially at-risk students.

Philosophically, this research has accepted the perspective that faculty responsibility is to facilitate student learning, but that some input (effort) on the part of the student is required. This study emphasized contributions of technology to the outcomes for A/B students but did not consider how the technology could be used to facilitate or support the needs of C students. A much more elaborate methodology and instrument would be required to evaluate that further question. Additionally, this study also did not attempt to address gender and age or other demographic predictor variables that have been considered by prior studies. Given the rather egalitarian and homogeneous (as regards gender and age) daytime student body evaluated here, these issues were not explored.

Further Study

Further research might address several issues not considered here. For example, this study did not address life-style or risk-related demographics, such as the number of concurrent courses in which a student enrolls, whether the student is employed and for how many hours, marital status, number of dependents, minority status etc. These variables might show some explanatory power, particularly as regards non-traditional, under-performing, or at-risk students. Additionally, further studies should consider the "less successful" students and those who, for whatever reason, did not make an effort to access the Blackboard platform regularly. A more complete elaboration of motivational, time and skills variables would be necessary to address these issues.

Though this study notably demonstrates the effectiveness of technology as a supplement of traditional pedagogies, further study is necessary to fine-tune the contribution of technology as a tool to facilitate substantive learning. Technology has tremendous abilities to efficiently deliver a variety of content to consumers of learning services. Some very "hot" media (McLuhan, 1964) overwhelm participants with entertainment, but not necessarily useful or accurate content – or, as LeDuc noted, "the tension between substance and display peak with the use of technology in higher education" (1996, p. 124). Thus, it is for responsible educators to assure the appropriate "coolness" of this new and exciting medium and to adapt and demonstrate its value in pursuit of knowledge-based activities.

REFERENCES

Anderson, G., Benjamin, D., & Fuss, M.A. (1994). Determinants of Success in University Introductory Economics Courses. *Journal of Economic Education,* Spring: 99-119.

Atwong, K. T. & Hugstad, P. S. (1997). Internet Technology and the Future of Marketing Education. *Journal of Marketing Education, 19*(3), 44.

Bardach, K.C. (1997). Patterns and Trends in Executive Education. *Selections, 14*(1), 18-25.

Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A. & Tipton, S. M. (1985). *The Habits of the Heart: Individualism and Commitment in American Life.* New York: Harper & Row.

Benigno, V. & Trentin, G. (2000). The Evaluation of Online Courses. *Journal of Computer Assisted Learning, 16,* 259-270.

Bernstein, P. L. (1998). *Against the Gods: The Remarkable Story of Risk.* New York: Wiley.

Bouillon, M. L. & Doran, B. M. (1992). The Relative Performance of Female and Male Students in Accounting Principles Classes. *Journal of Education for Business, 67*(4), 224-228.

Carr, S. (2000, February 11). As Distance Education Comes of Age, The Challenge Is Keeping the Students. *The Chronicle of Higher Education,* pp. A39-A41.

Chang, V. & Fisher, D. (1999). *Students' Perceptions of the Efficacy of Web-based Learning Environment: The Emergence of a New Learning Instrument. Proceedings of the HERDSA Annual International Conference, Melbourne,* 12-15.

Cheung, L.L.W. & Kan, A. C. N. (2002). Evaluation of Factors Related to Student Performance in a Distance-Learning Business Communication Course. *Journal of Education for Business, 77*(5), 257-264.

DeSieno, R. (1995). Net Law: The Faculty and Digital Technology. *Educom Review, 30*(4).

Didia, D. & Hasnat, B. (1998). The Determinants of Performance in the University Introduction Finance Course. *Financial Practice and Education, 8*(1), 102-107.

Drucker, P. F. (1998). The Next Information Revolution. *Forbes ASAP Supplement,* Aug 24: 46-58.

Educom Staff (1996). Should Distance Learning Be Rationed? *Educom Review, 3*(4).

Fell, S. P. (1996). cited from Segrest, Personal Communication (Electronic Mail) Associate Director of Interactive Distance Learning, Florida State University, Sep. 20.

Fulford, C. P. & Zhang, S. (1997). Perceptions of Interaction: The Critical Predictor in Distance Education. *The American Journal of Distance Education, 7*(3), 8-21.

Hoffman, D. L. & Novak, T. P. (1996, July). Marketing in Hypermedia Computer-mediated Environments: Conceptual Foundations. *Journal of Marketing, 60,* 50-68.

Kaynama, S. & Keesling, G. (2000). Development of a Web-based Internet Marketing Course, *Journal of Marketing Education, 22*(2), 84-89.

Kerka, S. (1996). Distance Learning, the Internet, and the World Wide Web. *Eric Digest,* EDO-CE-96-168.

Kock, J. V. (1998, September 11). How Women Actually Perform in Distance Education. *The Chronicle of Higher Education,* p. A60.

Larson, P. (2002). Interactivity in an Electronically Delivered Marketing Course. *Journal of Education for Business, 77*(5), 265-269.

LeDuc, A. L. (1996). What is Truly Important about Information Technology in Higher Education. *Journal of Computing in Higher Education, 89*(1), 124-139.

Leonard, B. (1996). Distance Learning: Work & Training Overlap. *HRMagazine, 4*(4), 40-47.

Mandviwalla, M. & Hovav, A. (1998). Adapting Business Process Redesign Concepts to Learning Processes. *Business Process Management, 4*(3), 186.

McLuhan, M. (1964). *Understanding Media: The Extension of Man.* New York: McGraw Hill Book Co.

Marsh, L. C. & Wells, K. L. (1996). Key Aspects of Computerized Courses. *Journal of Computing in Higher Education, 8*(2), 72-93.

Mehrabian, A. (1968). Communication without Words. *Psychology Today,* 2, 53-55.

Montagu, A. S. (2001). High-Technology Instruction: A Framework for Teaching Computer-Based Technologies. *Journal on Excellence in College Teaching, 12*(1), 109-128.

Porter, L. (1996). Distinguished Speaker at the Southern Management Association Luncheon, Nov. 8.

Rovai, A. P. (2002, April). Building Sense of Community at a Distance. *International Review of Research in Open and Distance Learning,* (3), 1.

Sauer, P. (2001). E-Learning Emerges as the Next Horizon in Corporate Training with Promises of Cost-Savings. *Chemical Market Reporter,* Sept 3: 8-12.

Siegel, C. F. (1996). Using Computer Networks (Intranet and Internet) to Enhance Your Students' Marketing Skills. *Journal of Marketing Education, 18* (Fall), 14-24.

Smith, L. J. (2001). Content and Delivery: A Comparison and Contrast of Electronic and Traditional Marketing Planning Courses. *Journal of Marketing Education, 23*(1), 35-44.

Stonebraker, P. W. (1998). The Asynchronous Learning Platform; A "Course on A CD". Proceedings of the Decision Sciences Institute Annual Meeting, November, Las Vegas, Nevada. 1: 6.

Taylor, S. S. (2002). Online: Off Course or On Track? *Community College Week, 14*(20), 10-12.

Terreberry, Shirley. (1968). "The Evolution of Organizational Environments." *Administrative Science Quarterly, 12,* 590-613.

Twigg, C.A. (1994). The Need for a National Learning Infrastructure. *Educom Review, 29*(5).

Valenta, A., Therriault, D., Dieter, M., & Mrtek, R. (2001). Identifying Student Attitudes and Learning Styles in Distance Learning. *Journal of Asynchronous Learning Networks, 5*(2),111-127.

Ward, D. (1994). Technology and the Changing Boundaries of Higher Education. *Educom Review, 29*(1).

Peter W. Stonebraker, Arizona State University, is a professor of operations management at Northeastern Illinois University. His research interests include operations strategy, technology innovation and implementation and innovative pedagogy.

James E. Hazeltine, D.B.A. University of Kentucky, is professor emeritus and former associate dean of the College of Business and Management at Northeastern Illinois University. His research interests include marketing research methodology and innovative technology.

Figure 1

The Contribution of Technology-Enhanced Pedagogies to Traditional Pedagogies

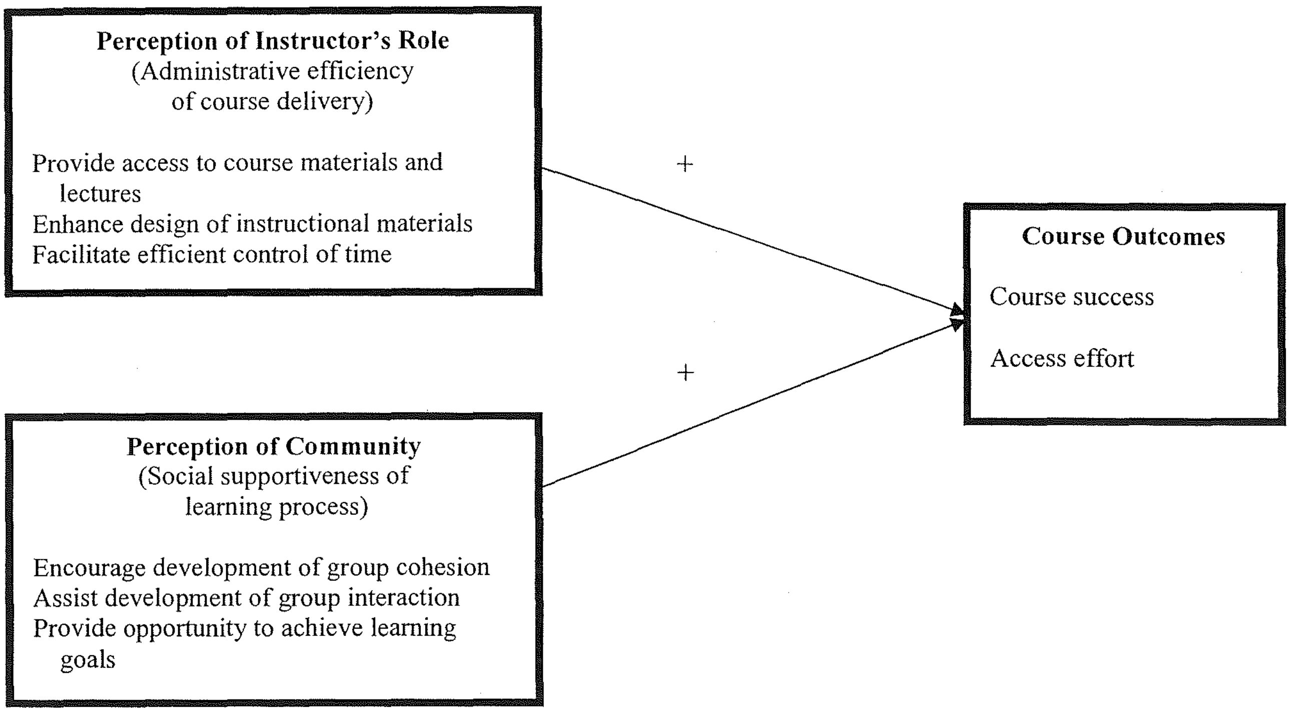
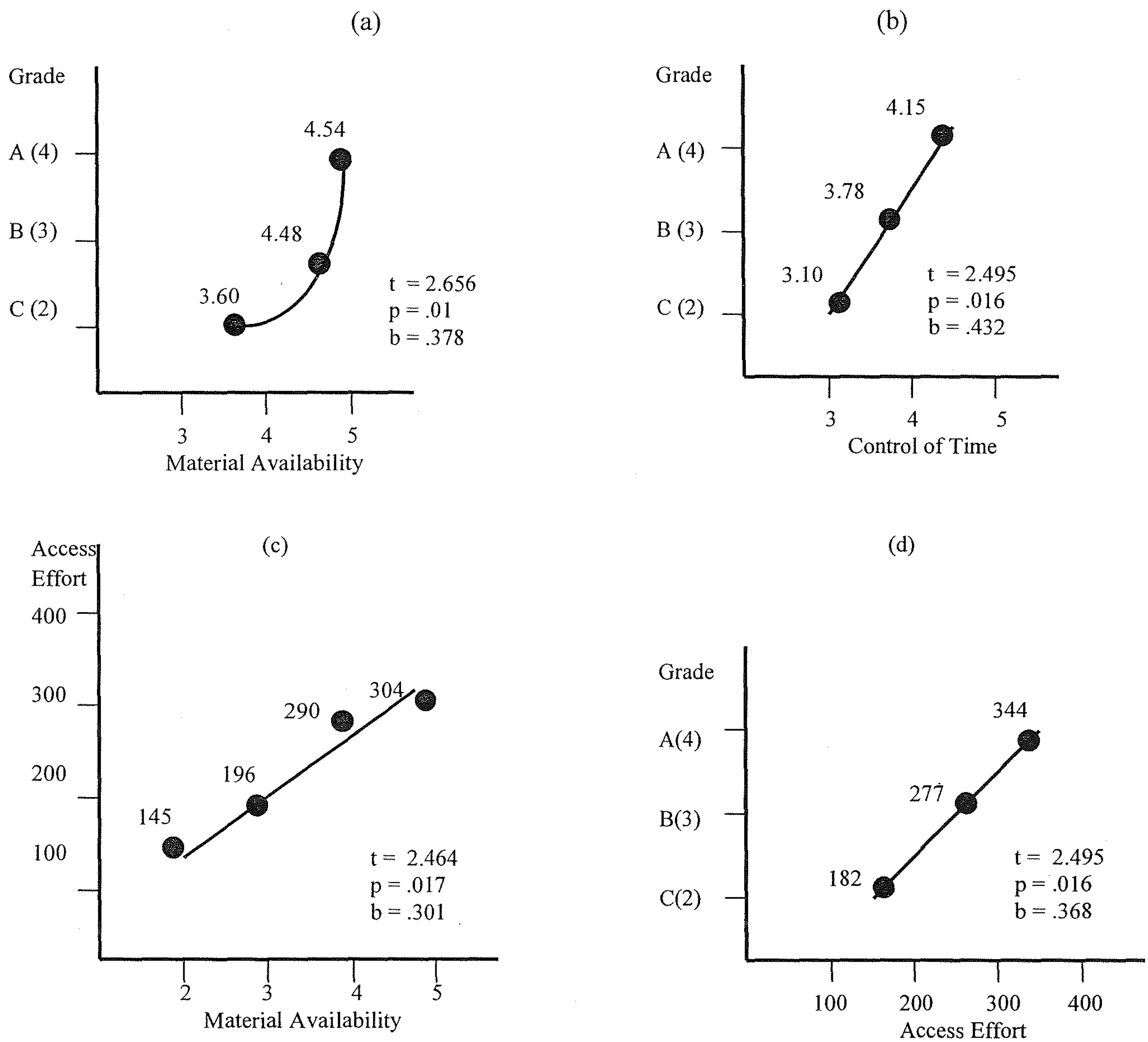


Table 3
Stepwise Regression Results for Tests of Hypotheses 2 – 5
(non-significant variables omitted)

Dependent: Course Grade	*Adj $R^2 = 0.255$*	*$F = 11.079$*	*$p(F) = 0.000$*
	Beta	**t**	**p(t)**
Control of Time	.309	2.436	0.18
Ease of Materials Access	.309	2.430	0.18
Dependent: Access Frequency	*Adj $R^2 = .101$*	*$F = 7.984$*	*$p(F) = 0.006$*
	Beta	**t**	**p(t)**
Control of Time	.340	2.826	.006

Figure 2

Significant Regression Relationships



MAIL RESPONSE RATES AMONG BUSINESS AUDIENCES: AN ASSESSMENT OF QUESTIONNAIRE LENGTH, CONTENT AND SENSITIVE QUESTION PLACEMENT

Stephen Batory, Bloomsburg University
Anne Heineman Batory, Wilkes University

ABSTRACT

Mail survey response rates among business audiences are generally very low which may decrease one's confidence in research findings. Guidelines for increasing business response rates are often based on surrogate consumer research. This study examined the influence of questionnaire length, type of content and sensitive question placement on mail response rates from small business owners. Questionnaires were mailed from a regional state university to businesses randomly selected throughout Pennsylvania. Results indicated no significant influence between questionnaire length (measured by both number of pages and number of questions) and response rate. Type of content and placement of sensitive questions in the questionnaire were found to have a statistically significant influence on response rate.

INTRODUCTION

The need to collect customized business information both effectively and economically is increasing in this information-based age of management. Spending on business-to-business (B2B) information was estimated at $14.5 billon in 2002 and was expected to grow at an annual rate of 7% (Keefe, 2002). Similarly, the number of academic studies focusing on business audiences is also increasing (Dennis, 2003). A problem exists, however, in soliciting information from business audiences through mail surveys. Business response rates are traditionally low, and overall survey response rates have declined since the mid 80's (Bickert & Schmitthein, 1999). It was estimated that 45% of targeted audiences refused to participate in a survey in 2002, compared to a 31% refusal rate in 1992 (Jarvis, 2002).

The economics of methods to increase survey response rates are well documented. Personal interviews are generally too expensive, which makes them impractical. There are also the limitations of personal concerns for interviewer safety due to neighborhood crime as well as respondent concern for disguised selling. Telephone polls are very popular to conduct but are generally limited by the number of questions, the number of contacts to complete a survey (Price Waterhouse LLP, 1996) and response rates as low as 2% are reported (Pierson, 1996). Caller identification, answering machines and the high volume of intrusive telemarketing clearly have decreased the effectiveness of telephone surveys (Jarvis, 2002). A popular method to collect data continues to be mail surveys. Mail surveys are relatively inexpensive, eliminate interviewer bias and are convenient for respondents' completion (Brennan, 1992). Concerns for privacy, time pressure on respondents and questionnaire length are some of the many characteristics that are considered to influence mail response rates. In addition, in this stage of terrorism, the fear of mailed anthrax may be a concern.

In contrast to consumer response rates, relatively little recently published information exists on business response rates. Response rates, however, are of critical concern to researchers and decision makers needing information from small businesses where rapid expansion (number of companies, sales nd employment) has occurred throughout the 90's. As one example, a mail-based study of 4,600 businesses in Pennsylvania conducted by the prestigious Wharton School of the University of Pennsylvania received less than a 10% response rate (Reed, 1996). A literature review by Dennis (2003) indicated that one third of refereed journal articles relied on mail surveys as their principal data source. The need to understand differences between consumer and business respondents is also important because the two groups have been shown to respond differently to the same response inducement methods (Schlegelmilch & Diamantopoulos, 1991; Diamantopoulos & Schlegelmilch, 1996; Jobber & Saunders, 1993). Thus, there is a continuing need to better understand business audience response rates.

LITERATURE REVIEW

A literature review was performed to identify issues that influence mail response rates among business audiences. Research issues were then categorized into four major study areas: cover letter issues, contact procedures, incentives and questionnaire characteristics. Sub-elements within each major category were also identified. The research based generalizations on business mail response rates are summarized in Table 1 on page 22. The literature review produced in excess of 20 research issues, of which 16 have received some attention with business audiences. Most notably, the issues of type of content and question placement had not been empirically studied with a business audience.

The first identified category in mail response studies was cover letter issues and solicitation procedures. Sub-elements are the type of participation appeal, sponsorship source and degree of personalization. For example, the type of cover letter appeal such as altruistic, egotistical and social utility has been shown to influence response rates based on the target audience (Forsgren, 1989; Sebastian, 1994). Enabling a potential respondent to identify with the sponsor's solicitation appeal is considered a positive influence on response rate.

The second category was contact procedures with potential respondents. Increasing the number of contacts generally increases response rate (Jobber, 1998; Erdogan & Baker, 2001). Differences in the effectiveness of pre and post contact procedures such as telephone or mail may vary by business, religious and consumer audiences (Chiu & Brennan, 1990).

The third category influencing response rates are incentives, such as monetary or non-monetary. Generally, prepaid monetary incentives are more effective than promised incentives or non-monetary incentives in increasing response rates (Forsgren, 1989; Furse & Stewart, 1982; Jobber & O'Reilly, 1996).

The fourth category was questionnaire characteristics such as length, content and sensitive information requests which are the focus of this study.

Questionnaire Length

A number of research studies have addressed survey length and response rates. Clausen and Ford as early as 1947 indicated that questionnaire length did not affect response rates. However, they did show an increase in response rates when interesting questions were added to an uninteresting survey. They inferred a direct effect on mail response rates by survey content but not length. Twenty-five years later, a literature review by Berdie (1973) reaffirmed no strong relationship existed between questionnaire length and response rates. Berdie, however, pointed out methodological problems in prior studies such as questionnaire design, the number of questions, subject matter and type of audience that were not analyzed or controlled which could mediate the relationship between questionnaire length and response rate. For example, a study of medium-sized cabinetmakers reported a higher response rate for a one page versus three page questionnaire (Smith, Olah, Hansen, & Cumbo, 2003). But, multiple reminders by postcards and letters, elimination of open ended responses versus scaled item questions and elimination of sensitive questions about employees and sales may have skewed the results. In contrast, an empirical study of non-profit organizations found no differences in executives responding to a 20 page questionnaire versus a one-page questionnaire. The researchers concluded they could use more complicated instruments in their broader study of administrative and fundraising costs (Hager, Wilson, & Pollak, 2003).

It is generally accepted that a shorter survey will result in a higher response rate than a longer survey. This generalization has not been well supported in prior studies because the definition of short or long remains subjective. For example, a test by the U.S. Bureau of Census to improve response rates indicated that a postcard that asked only two questions (name and age of all household residents) did not improve response rates compared to longer versions (Pierson, 1996). Similarly, a study by Dillman, Sinclair and Clark (1993) showed that shortening the census questionnaire by 50 questions produced only a 6% increase in response rate. There seems to be a basic predisposition to participate or not participate which may be attributed to a number of personal, social and situational factors.

A study by Wu and Vosika (1983) addressed questionnaire length and response rate among small businesses. A difference of 29 questions between two surveys did not create a noticeable response. In contrast, other studies (Heberlein & Baumgartner, 1978; Baumgartner & Heberlein, 1984) have shown negative effects from longer questionnaires. Using multiple regressions to analyze several studies, Farrell and Elkan (1994) also indicate a negative effect on response rates as questionnaire length is increased. Methodological issues may explain the apparent inconsistency in questionnaire length and mail response rate. Potential methodological issues such as questionnaire design (format of questions), number of pages, and number of questions, survey content and audience characteristics were not addressed.

Despite this inconsistency in questionnaire length and response rate, shorter questionnaires remain as one suggestion for increasing consumer response rate. However, little published dialogue exists about business response rates and length of surveys as mediated by other influences.

Questionnaire Content

After an extensive literature review, Forsgren (1989) concluded that the single most important factor in increasing response rate is whether the survey is judged to be relevant and important to the respondent. Increasing the importance of survey content to the respondent and decreasing survey length were argued to increase response rates by Heberlein and Baumgartner (1978). Questionnaire content varied by topics such as work, personal or household issues. Their average questionnaire had 72 questions on seven pages and took 30 minutes to complete. Each additional question added to the questionnaire reduced response rate by approximately .05 percent. Callahan and Cassar (1995) also lend indirect support to the primal importance of survey content. They discovered that managers of small businesses with experience in buying marketing research information generally are not likely to believe that research studies are worth their costs. The value and, thus, importance of market research are often perceived as low, which may help explain generally low business response rates. The issue of survey content is especially important. Business managers may view survey participation as a potential leakage of valuable competitive data.

Questionnaire Placement of Sensitive Information

An influence on business survey responses worth pursuing is the sensitive nature of the questions posed. Published efforts to link survey response and question sensitivity are very limited. A consumer study by Blair, Bradburn and Stocking (1977) showed that negative response effects in surveys increase as questions about drinking and sex become more threatening. Placement of these sensitive questions is also important. McFarland (1981) recommended formatting a survey with general questions first, then more specific, sensitive questions later. In an attempt to support his theory, McFarland performed a telephone survey and concluded that question order between general and specific questions had little effect on survey response rate. The findings are limited to a telephone survey and do not extend to printed surveys where the target audience can preview the total survey. In analyzing the U.S. decennial census questionnaire, researchers found that answering a difficult or objectionable question about one's social security number lowered responses (Dillman, Sinclair, & Clark, 1993).

In addition to the issue of survey response rate, Hosseini and Armacost (1993) also suggest that direct, self-reporting of sensitive data or behaviors by respondents may not give reliable results. They indicate that underreporting increased with the sensitivity of the questions. Techniques to reduce inaccurate reporting were suggested, such as hiding a sensitive question in a set of general questions, prefacing a sensitive question with a frame of reference statement and formatting sensitive questions in context of how others might feel or behave instead of the responder. However, there is little evidence regarding these methods or their effectiveness. Barnett (1998) also addressed question sensitivity and how it could cause error and bias in reporting data. He also recommended guaranteeing anonymity, prefacing questions with statements suggesting that the behavior is not unusual and changing the mode of administration to minimize the problem. Study results of each method, however, were inconclusive and did not address survey response rate.

Developing guidelines from past studies has limitations because studies generally mix one or more mail survey characteristics such as audience (consumer or business), type of solicitation appeal, questionnaire length, type of content and type of incentive. The number of unreported, uncontrolled survey characteristics often confounds findings. For example, potential respondents were telephoned to develop their identity to personalize mailings (Erdogan & Baker, 2001). The study results may be confounded because the study objectives were explained and potential respondents were encouraged to participate. Thus, commonly recommended guidelines such as questionnaire length are not consistently supported by research results.

The potential number of research issues that could be addressed, as shown in Table 1, highlights the complexity of making mail survey generalizations. Mail surveys address each of the four major categories and one or more sub-elements. Yet the literature review reveals that each study is often reported as unique and independent from the other studies. The reviewed studies are not categorized in context of each of the four major areas or their sub-elements. This incomplete reporting may be a basis of inconsistent findings. The following study was undertaken to contribute to the issue of business response rates as influenced by questionnaire length, type of content and sensitive question placement.

METHODOLOGY

Two separate studies were conducted among the target audience of small businesses. Businesses throughout Pennsylvania were randomly selected for each study to allow for a diversity of companies. Delimitation by location ensured that the firms faced similar state governance regulations. The Small Business Association, through the database of Dun & Bradstreet, provided a mailing list of small businesses. A one time mailing without pre or post contact was conducted. Neither monetary nor promised incentives were available due to a limited budget. The profile of respondents, as shown in Table 2, is as follows: male, 45-54 years of age, a college graduate in a top management position.

Table 2
Sample Profile

		Study One	Study Two
Gender	Male Female	76% 24%	86% 14%
Education	High School Some College College Graduate Master's Degree or Higher	22 % 24 % 37 % 17 %	12% 19% 45% 24%
Age	18-24 years 25-34 years 35-44 years 45-54 years 55-65 years 65 + years	1 % 13 % 27 % 39 % 15 % 6 %	0% 7% 23% 45% 23% 11%
Employment Position	Top Management Marketing Position Non marketing position	64% 10% 26%	72% 5% 23%

Questionnaire Design and Distribution

Each survey packet contained a questionnaire, a self-addressed and prepaid business return envelope and a separate cover letter. The cover letter used a pragmatic appeal by indicating responses were to be used to understand small business management practices, and it assured confidentiality of response. The cover letter came on beige-colored stationery with the letterhead of a mid-sized, regional university in North Central Pennsylvania. Additional efforts to encourage responses included printing questionnaires on beige-colored paper using two different color prints and varying print sizes and the placement of five visual aids (clipboard art of an owl reading a book) throughout the questionnaire to attract attention. Questions were presented on four, 8 ½ x 11 double-sided pages in a stapled, folded-over 17 x 11 paper brochure. The surveys were organized into sections by content topics and characteristics about the company and respondent. To facilitate ease of completion, question responses were of a fixed response format such as a Likert scale, (selecting a response from a range, strongly agree - strongly disagree) or dichotomous categories. Respondents only needed to place a check mark or circle their answers to minimize completion time. All questionnaires used identical cover letters, type font, color scheme and clipart The questionnaires were pre-tested by administering them to a group of small business seminar participants. The pilot study results were used to reword and eliminate questions.

Study One used four questionnaires to manipulate length and content as summarized in Table 3. A total of 3000 mailings were divided into four samples of 750 businesses to receive one of the four questionnaires. The total number of questions ranged from a high of 51 questions for questionnaire A to a low of 43 for questionnaire D. Three topics were used to measure the effects of questionnaire content. Each survey asked questions on two of the following three topics: marketing practices and ethics (ME), product innovation (PI) or the respondents' personal values (PV).

Table 3
Survey Characteristics: Type of Content Area

Survey	Length Pages	Questions	Company and respondent characteristics	Marketing Practices & Ethics	Product Innovation	Personal Values
Study 1 A	5	51	X	X		X
B	4	47	X	X	X	
C	4	47	X	X		X
D	4	43	X		X	X
Study 2	4	32	X	X		

Study Two was performed using identical contact procedures and questionnaire characteristics as in Study One. Again, 750 businesses were randomly selected to receive a survey packet. In Study One, however, requests for sensitive information on sales, profit and employment trends were placed on page one of the surveys. In Study Two, the same three questions were placed on page three instead of page one. Study Two was a four page, 32 question survey covering marketing practices and ethics, in addition to classification information on company and respondent characteristics.

RESULTS

Questionnaire Length

Number of Pages The first objective was to analyze response rate and questionnaire length based on the number of pages. The response rate for questionnaire A was compared to questionnaires B, C and D as presented in Table 4. Questionnaire A was five pages in length, which represents a 20% increase over the other four-page surveys. Questionnaire A produced a 6.3% response rate. The weighted average of response rate for questionnaires B, C and D was 6.8%. Statistical analysis (a z-test for differences of proportions) indicated no statistically significant relationship between the five-page and the four-page questionnaire (Zikmund, 2003).

Table 4
Questionnaire Length and Response Rate

Number of Pages	Response Rate	Significance
A = 5 pages	6.3%	Not Significant
B, C, D = 4 pages	6.8%*	Z Test of proportions, P> .05
Number of Questions	**Response Rate**	
A = 51	6.3%	Not significant
B&C = 47	5.3%**	Chi Square goodness of fit, P>.05
D = 43	8.3%	

*Weighted average of 4 page surveys = 6.8%
**Weighted average of 47 question surveys = 5.3%

Number of Questions

The second research objective was to analyze response rate and questionnaire length based on the number of questions. Results are presented in Table 4. Questionnaire A had 51 questions and a response rate of 6.3%. Questionnaire D, at 43 questions, had a response rate of 8.3%. Both questionnaires B and C had 47 questions and response rates of 6.2% and 4.4% respectively for a weighted average of 5.3%. The number of questions ranged from a high of 51 to a low of 43, representing a 15.8% difference. Statistical analysis indicated no significant differences among response rates and the number of questions.

Questionnaire Content

The third research objective was to analyze survey content and response rate. Three content topics were presented as shown in Table 5. A comparison among the three topics indicates that questions on Marketing Ethics (ME) lowered response rates. This is especially evident in questionnaire C where the topic of marketing ethics and personal values received the lowest response rate of 4.4%. The chi square test for goodness of fit indicated a statistically significant difference among response rates and type of survey content (Zikmund, 2003).

Table 5
Survey Content

Survey Content	Response Rate	Significance
A Marketing Practices, Ethics and Personal Values	6.3%	Significant
B Marketing Practices, Ethics and Product Innovations	6.2%	Chi Square test for goodness of fit p = .00
C Marketing Practices, Ethics and Personal Values	4.4%	
D Product Innovation and Personal Values	8.3%	

Sensitive Question Placement

Requests for sensitive information consisted of three questions on company profit, sales and employment trends over the past two years. Respondents were presented a measurement scale to indicate if profits, sales and hiring were increasing, about the same or decreasing over the past two years. These information requests appeared on page one in Study One and page three in Study Two. Study Two produced a 15.8% response, which represents a significant difference from Study One's overall response rate of 6.4%, as shown in Table 6.

Table 6
Question Placement: Requests for Sensitive Information

Questionnaire Placement	Response Rate	Significance
Page 1	6.4%	Significant
Page 3	15.8%	Z Test, P= .00

DISCUSSION

Questionnaire length based on either a 20% reduction in the number of pages or a 16% reduction in the number of questions produced a positive, but insignificant, statistical effect on response rate levels. An issue may be one of a perceptual threshold, as suggested by Wu and Vosika (1983). Any survey in excess of a preconceived subjective page length may be too long for the targeted audience. The threshold for a "long survey" may already have been exceeded at four pages. Considering the similar response rates among the short and long surveys, length may not be an issue among business respondents. While common sense suggests the use of shorter surveys, this suggestion is not supported by this study under controlled circumstances.

Alternately, analysis of survey content produced a significant difference in response rates which supports the importance of survey relevance to the respondent as suggested by Forsgren (1989). When content is compared, the highest response rate occurred for requested information on new product utilization and innovation acceptance. In comparison, the lowest response rate occurred for requested information on marketing ethics and personal values. Potential respondents to a cold-call mail survey are concluded to overview the content of the survey and then respond based on their interest level. This observation may help to explain the inconsistent influence of survey length and response rate.

The importance of survey content needs to be highlighted, as researchers often do not have control of research issues under investigation. It is logical to accept respondent preview of the total survey content before or during the questionnaire completion process. One's time is valuable, and survey completion occupies time. Since respondents are often over-solicited with many important surveys, the threshold has risen to gain large audience cooperation as multiple sources compete for time and interest levels.

The comparison of Study One with Study Two also reinforces prior studies that recommend placing sensitive information requests towards the end of a questionnaire. Placement of sensitive questions at the start of the questionnaire negatively influences response rate. Reasons may vary such as stimulating one's concern for privacy, anticipation of additional requests for sensitive information and its subsequent use. In contrast, placement of non-sensitive questions at the start of the questionnaire is likely to gain a respondent's initial cooperation to provide information. The influence of sensitive information requests can only be partially attributed to question placement as Study Two contained fewer questions than Study One. However, there was a similar decrease in the number of questions in Study One, which produced no effect on response rate. In addition, both Study One and Two were four pages in length. As a result, question placement is considered the primary cause of the increased response rate between Study One and Study Two.

When a business survey is conducted, a mail questionnaire remains a very competitive delivery and response vehicle. In these two studies, the mail survey characteristics that increased response rates were the relevancy of the survey content and placement of sensitive questions on company performance.

STUDY CHARACTERISTICS AND FUTURE RESEARCH

It is important to note study characteristics and limitations for future research. This was a one time, cold-call survey which may typify academic research. There were no pre or post efforts to contact potential respondents due to a limited budget. The survey was addressed to the company itself rather than an individual within the business. The cover letter came from a business professor at a regional university to a mass audience compared to a well-recognized sponsor that may have an established working relationship with the potential respondents, such as trade or professional associations.

The study re-affirms the need to update research on business response rates. Reliance on guidelines based on organizations surveying their professional memberships or manufacturers surveying their distributors may not be representative benchmarks for evaluating small business mail response rates. The literature review and the presented data indicate multiple variables may influence mail response rates. Perhaps experimental factorial designs are needed to investigate main effects and interaction effects while controlling selected variables. Reliance on enclosed or promised monetary incentives, however, may ultimately emerge to be the only way to assure sufficient response rates to minimize potential concern over non-response bias. Still, if researchers were to avoid incomplete reporting, perhaps a better understanding of mail response rates could be documented. Too often, research articles neglect to disclose important survey characteristics on major issues such as solicitation procedures and appeals, contact procedures, the use of incentives and questionnaire characteristics, such as content.

In the future, one of the issues to be evaluated is seasonality. Although Dennis (2003) investigated a Friday versus Monday mail date and found no effect, none of the reviewed studies considered seasonality. In the present study, both of the questionnaires were mailed during spring, a few days before the Easter/Passover season and holiday(s). Business professionals are believed to have demanding workloads. Perhaps many respondents were overburdened by seasonal or end of quarter demands which would influence survey completion. A second issue in need of continued research is the combination of questionnaire characteristics. What cues do respondents use to evaluate their participation?

With new technologies and ever-changing lifestyles, it is certain that, to combat the recent drop in response rates, continuous research and evaluations will have to be made to gain the potential richness of mail surveys.

REFERENCES

Barnett, J. (1998). Sensitive questions and response effects: an evaluation. *Journal of Managerial Psychology, 13- 1/2,* 63-77.

Baumgartner, R. M., & Heberlein T.A. (1984). Recent Research on Mailed Questionnaire Response Rates. In D. C. Lockhart (Ed.), *Making Effective Use of Mailed Questionnaires* (pp. 65-76). San Francisco: Jossey-Bass.

Berdie, D. R. (1973). Questionnaire Length and Response Rate. *Journal of Applied Psychology, 58,* 278-280.

Bickart, B. & Schmitthein D. (1999). The Distribution of Survey Contact and Participation in the United States. *Journal of Marketing Research, 36(2),* 286-295.

Blair, E., Sudman, S., Bradburn, N.M. & Stocking, C. (1977). How to Ask Questions About Drinking and Sex: Response Effects in Measuring Consumer Behavior. *Journal of Marketing Research, XIV,* 316-21.

Brennan, M. (1992). Techniques for Improving Mail Survey Response Rates. *Marketing Bulletin, 3,* 24.

Callahan, T.J. & Cassar, M.D. (1995). Small Business Owners' Assessments of their Abilities to Perform and Interpret Formal Market. *Journal of Small Business Management, 33*(4), 1-9.

Chawla, S.K. (1994). Does the Name of the Sender Affect industrial Mail Response? *Industrial Marketing Management, 23*(2), 111.

Chiu, I. & Brennan M. (1990). The Effectiveness of some Techniques for Improving Mail Response Rates: A Meta Analysis. *Marketing Bulletin, 1,* 13-18.

Clausen, J. A. & Ford, R. (1947, September). Controlling Bias in Mail Questionnaires. *Journal of the American Statistical Association,* 497-511.

Dennis, William J. Jr. (2003). Raising Response Rates in Mail Surveys of Small Business Owners: Results of an Experiment. *Journal of Small Business Management, 41*(3), 278.

Diamantopoulos, A. & Schlegelmilch, B.B. (1996). Determinants of Industrial Mail Survey Responses: A Survey-on-Survey Analysis of Researchers' and Managers' View. *Journal of Marketing Management, 12,* 505-531.

Dillman, D.A. Sinclair, M.D. & Clark, J.R. (1993). Effects of Questionnaire Length, Respondent-Friendly Design, and a Difficult Question on Response Rates for Occupant-Addressed Census Mail Surveys. *Public Opinion Quarterly, 57*(3), 289-304.

Erdogan, B.Z. & Baker, M.J. (2001). Increasing Mail Survey Response Rates from an Industrial Population. *Industrial Marketing Management, 31*(1), 65.

Faria, A.J., & Dickinson, J.R. (1996). The Effect of Reassured Anonymity and Sponsor on Mail Survey Response Rate and Speed with a Business Population. *Journal of Business & Industrial Marketing, 1*(1), 66-76.

Farrell, B., & Elken, T. (1994). Adjust Five Variables for Better Mail Surveys. *Marketing News, 28*(18), 20.

Forsgren, Roderick A. (1989). Increasing Mail Response Rates: Methods for Small Business Researchers. *Journal of Small Business Management, 27*(4), 61.

Furse, D.H., & Stewart, D.W. (1982). Monetary Incentives Versus Promised Contribution to Charity: New Evidence on Mail Survey Response. *Journal of Marketing Research, XIX,* 375-80.

Hager, M.A., Wilson, S., Pollak, T.H., & Rooney, P.M. (2003). Response Rates for Mail Surveys of Nonprofit Organizations: A Review and Empirical Test. *Nonprofit and Voluntary Sector Quarterly, 32*(2), 252.

Heberlein, T. A. & Baumgartner, R.M. (1978). Factors Affecting Response Rates on Mailed Questionnaires: A Quantitative Analysis of the Published Literature. *American Sociological Review, 43*(4), 447-462.

Hosseini, J.C., & Armacost, R.L. (1993). Gathering sensitive data in organizations. *American Behavioral Scientist*, *36*(4), 443-572.

Jarvis, S. (2002, February 14). CMOR Finds Survey Refusal Rate Still Rising. *Marketing News, 36,* 4.

Jobber, D. (1989). An Examination of the Effects of Questionnaire Factors on Response to an Industrial Mail Survey. *International Journal of Research in Marketing, 6*(2), 129.

Jobber, D., & O'Reilly, D. (1998). Industrial Mail Surveys. *Industrial Marketing Management, 27(2),* 95.

Jobber, D., & O'Reilly, D. (1996). Industrial Mail Surveys: Techniques for Inducing Response. *Marketing Intelligence & Planning, 14*(1), 29-35.

Jobber, D., & Saunders, J. (1993). A Note on the Applicability of the Bruvold-Comer Model of Mail Response Rates to Commercial Populations. *Journal of Business Research, 26*(3), 223-226.

Kalafatis, S.P. & Tsogas, M.H. (1994). Impact of the Inclusion of an Article as an Incentive in Industrial Mail Surveys. *Industrial Marketing Management, 23*(2), 137.

Kanuk, L., & Berenson, C. (1975, November). Mail Surveys and Response Rate: A Literature Review. *Journal of Marketing Research,* 440-453.

Keefe, L., editor (2002, July 8). B-To-B. *Marketing News, 36,* 18.

London, S.J., & Dommeyer, C.J. (1990). Increasing Response to Industrial Mail Surveys. *Industrial Marketing Management, 19*(3), 235.

Marquies, K. H. (1977). Survey Response Rates: Some Trends, Causes and Correlates. Rand Corporation.

McFarland, S.G. (1981). Effects of question order on survey responses. *Public Opinion Quarterly, 45*(2), 208-216.

McPheters, R., & Kossoff, J. (2003). Effects of Differential Enhancements on Mail Response Rates. *Journal of Advertising Research, 43*(1), 14.

Mitchell, V., & Nugent, S. (1991). Industrial Mail Surveys: The Costs and Benefits of Telephone Pre-notification. *Journal of Marketing Management, 7,* 257-269.

Pierson, J. (1996, May 2). Preparing for 2000, Census Bureau Tests Carrots vs. Sticks. *The Wall Street Journal,* p. B1.

Price Waterhouse LLP (1996). *National Survey of Small Business Finances, Methodology Report.* Washington, D.C.: Price Waterhouse LLP.

Reed, Adrienne (1996). Survey May Become Gauge for Business-Government Relations. *Northeast Pennsylvania Business Journal, May-June,* 22.

Sebastian, P. (1994, November 22). Charity Tries Two Letters to Melt Cold Hearts. *The Wall Street Journal,* p. B1.

Smith, R., Olah, D., Hansen, B., & Cumbo, D. (2003). The Effect of Questionnaire Length on Participant Response Rate: A Case Study in the U.S. Cabinet Industry. *Forest Products Journal, 53-*11/12, 33.

Wu, B.T., & Vosika, Jana. (1983). Improving Primary Research: An Experimental Study of Mail Survey Response. *Journal of Small Business Management, April,* 30-37.

Zikmund, W.G. (2003). *Exploring Marketing Research* (8th ed.). Mason, Ohio: Thomson South-Western.

Stephen Batory, Ph.D. University of Maryland, is a professor of marketing at Bloomsburg University of Pennsylvania, Bloomsburg, PA. His other research interests include new product innovation, academic integrity and small business management.

Anne Heineman Batory, Ph.D. University of Maryland, is a professor of business administration at Wilkes University of Pennsylvania, Wilkes Barre, PA. Her other research interests include emotional intelligence, academic integrity and small business management.

Table 1
Influences on Mail Survey Response Rates By Business Audiences: A Summary of the Literature*

Review article:	Dennis (2003)	London (1990)	Mitchell (1991)	Brennan (1992)	Chawla (1994)	Kalafatis (1994)	Faria (1996)	Jobber (1989) (1993) (1996) (1998)	McPheters, & Kossoff (2003)	Erdogan & Baker (2001)
Research areas and issues										
(1) Cover Letter/Solicitation										
(a) Personalization (ex. Name, Job Title)	I			P	P, I					
(b) Postage (ex. Stamp, Metered, Parcel)	I									
(c)Promise of confidentiality							P	P		
(2) Contacts										
(a) Pre-notification (ex. phone, mail)	I		P					P	P	
(b) Follow-up Contact (ex. phone, mail)				P			P	P		P
(c) Re-send Survey				P				P		P
(3) Incentives										
(a) Enclosed Incentives								P		
Monetary	I	P		P			P	P		
Non-Monetary (Trade Article)						N				
Non-Monetary (Pen)								P		
Pre-stamped return envelope								P		
(b) Promised Incentives										
Non-Monetary (Survey Results)						I		I		
Non-Monetary (Sweepstakes)		P								
(4) Questionnaire Characteristics										
(a) Color or B&W	I							I		
(b) Double-sided pages								N		
(c) Sensitive Information Questions										
(d) Length (# of pages or # of questions)								P,I		
(e) Type of Content										

P = Positive impact on response rates
N = Negative impact on response rates
I = Inconclusive or no impact on response rates
* Studies did not always report statistical significance

DETERMINANTS OF RESEARCH AND DEVELOPMENT EXPENDITURES

Gary Kayakachoian, Rhode Island College
Henry Oppenheimer, University of Rhode Island

ABSTRACT

This research develops and tests a model of research and development expenditures. Ordinary least squares is employed. The study utilizes Fortune 500 data from 1999-2003. The results indicate that there is a positive relationship between the proportion of firm sales made overseas and R&D expenditures. There is a strong negative relationship between debt ratio and R&D. This agrees with the findings of Crutchley and Hansen (1989), Bradley, Jarrell and Kim (1984) and Long and Malitz (1985), all of which found that firms with larger R&D expenditures have lower levels of debt. In addition, there is a significant negative relationship between institutional ownership and R&D expenditures. There is no significant negative relationship between dividend payout ratio and R&D. Last, there is a significant negative relationship between insider ownership and R&D expenditures.

INTRODUCTION

Jensen and Meckling (1976) detailed two types of agency costs, namely the agency conflicts of equity and debt. When the owner and manager of a firm are the same person, s/he will make operating decisions that maximize profit. Utility is derived from pecuniary returns. Utility also comes from consumption of various perquisites. If this owner-manager sells shares in the firm or simply hires managers, an agency conflict will be created because managerial interests and shareholders' interests may differ. The owner-manager will only incur a portion of the costs of the various (managerial) perquisites obtained. Thus, the stockholders must spend money to monitor the (owner-) managers. The monitoring cost will be reflected in the share price. This is known as the agency cost of equity.

Jensen and Meckling (1976) noted that creditors will not let the debt level of a firm reach, or approach, a level of 100%, despite capital structure theory suggesting that high debt levels are optimal. At such a high level of debt, the manager might have strong incentive to invest in projects with the promise of extremely high payoffs if successful, even if such projects have a very low chance of success. If such investments are successful, the manager and shareholders receive the gains. If the investments fail, the creditors bear the costs. Bondholders can include various covenants in the bond agreement to limit the behavior of managers. The costs associated with covenants are known as monitoring costs. Because the monitoring costs are imposed on the manager through the bond covenant, it is in the manager's interest to see that the monitoring is made in the least costly way. This monitoring cost is part of the agency cost of debt.

Managers simultaneously (or nearly simultaneously) select three financial policy variables: 1) the firm's external debt (and consequently, capital structure); 2) dividend payout; and 3) capital budgeting projects. Their goals are to reduce the sum of the two agency costs, minimize the cost of capital and maximize firm value. For example, some argue that the agency cost of equity is lowered when a manager owns a higher proportion of common shares, thus aligning his/her interests with those of the common shareholders. Debt issuances can also lower the agency cost of equity, assuming the manager holds a sizable proportion of shares in the firm.

Rozeff (1982) and Easterbrook (1984) suggest that another way to lower the agency cost of equity involves increasing dividends. Paying a larger dividend increases the likelihood that the firm will have to go to the capital markets, where it will be monitored by the investment community. However, when capital is raised to help pay for the dividend increase, the firm will have to pay flotation costs to investment bankers.

Thus, insider ownership, debt financing and dividend payout can serve as substitutes in reducing equity agency costs for a firm. This substitutability hypothesis was formalized by Bathala, Bowlin and Rao (1995); they found empirical support for it in their study.

Undertaken capital budgeting projects must bring in enough cash flow to make interest payments to creditors, to repay the face value of debt, to provide expected share price appreciation for common shareholders and to provide dividends (if any) to common and preferred shareholders. When cash flow exceeds these requirements, there will be a gain in common shareholder wealth. However, capital budgeting decisions are made by managers and, consequently, lead to higher agency costs.

Crutchley and Hansen (1989), Bradley, Jarrell and Kim (1984) and Long and Malitz (1985) all found that firms with larger research and development and advertising expenditures have lower levels of debt. Why? Advertising and research and development may be viewed as proxies for discretionary capital budgeting. In other words, such expenditures are subject to the discretion of the manager, which leads to higher agency costs and, thus, lower levels of debt. It is difficult for outsiders to immediately judge the benefit of research and development expenditures because most firms consider such activities to fall under the heading of proprietary information. Further, there is no immediate payoff. Research and development is a current cost with an uncertain distant outcome, perhaps five, 10, or more years into the future. Advertising[1] while also a current cost, has a temporally closer outcome, generally within weeks or months, maybe even within days. Generally, advertising is highly visible, and it is often relatively easy to judge its effectiveness. For example, competing firms can, and do, conduct marketing research to measure the effects of a new advertising campaign on consumers.

The purpose of this research is to: 1) utilize theory to develop and test a model of R&D expenditures and 2) explore whether firms with higher proportions of their business overseas have higher R&D expenditures. In the process of this development and examination, the research will explore some new independent (explanatory) variables, suggested by theory, that will increase our understanding of research and development costs.

R&D HYPOTHESES TO BE TESTED

When a firm engages in business overseas, it may be difficult for investors to monitor R&D conducted outside the United States. Because of this weaker monitoring, a firm may in fact have higher research and development expenditures than it needs. In other words, there may be a positive relationship between overseas sales and the ratio of research and development costs to sales. However, there may be a problem with this relationship.

A firm may make X% of its sales overseas, but there is no reason for X% of its R&D to be conducted overseas. For example, just because 40% of its sales are overseas does not imply that 40% of the R&D is overseas. All the firm's R&D may be conducted in the United States despite hefty foreign sales. Unfortunately, annual reports and SEC Form 10-K's do not provide the percentage of R&D conducted overseas. Thus, there may be noise in the relationship between the ratio of research and development costs to sales and the proportion of firm sales made overseas.

In addition, to meet needs of international customers, more R&D expenditure is needed. For example, products must be able to meet the governmental regulations of foreign countries. Products must also be able to function in different climatic conditions around the world. In addition, products must be able to run using different types of electricity. Thus, there should be a positive relationship between overseas sales and the ratio of research and development costs to sales:

<u>Hypothesis 1</u>: There will be a <u>positive</u> relationship between the ratio of research and development costs to sales and the proportionof firm sales made overseas.

Crutchley and Hansen (1989), Bradley, Jarrell and Kim (1984) and Long and Malitz (1985) have found that firms with larger research and development expenditures have lower levels of debt. R&D is a proxy for discretionary investment opportunities. Stated differently, R&D spending is subject to the discretion of the managers, which leads to higher agency costs, and lower levels of debt. Thus, we hypothesize that there will be a <u>negative</u> relationship between the ratio of research and development costs to sales and debt ratio.

<u>Hypothesis 2</u>: There will be a <u>negative</u> relationship between the ratio of research and development costs to sales and debt ratio.

When dividend payout ratio is high, there is less free cash flow under the control of management. This means that there is less money available for other projects, including research and development work. In other words, when dividend payout is high, research and development expenditures are likely to be lower. Thus, there should be a <u>negative</u> relationship between the ratio of research and development costs to sales and dividend payout ratio. There may be noise in this relationship, though. If R&D work is highly valued by a firm, the R&D budget may perhaps be one of the last budgets to be cut.

Hypothesis 3: There will be a negative relationship between the ratio of research and development costs to sales and dividend payout ratio.

Agency costs will be lower when insider ownership is higher. Higher insider ownership means that insiders bear a higher proportion of the costs of their perquisite consumption. A convergence-of-interests with shareholders will take place, and insiders will be less likely to waste funds on unnecessary R&D. Thus, there should be a negative relation between the ratio of research and development costs to sales and insider ownership.

Hypothesis 4: There will be a negative relationship between the ratio of research and development costs to sales and insider ownership.

Institutional owners have the ability to influence managers. They can get some idea of what is happening with R&D and express displeasure when they consider it wasteful. Thus, there will be a negative relationship between the ratio of research and development costs to sales and institutional ownership. Again, this negative relation may be relatively weak, or perhaps even positive. Fund managers may simply sell shares if they are unhappy with what a firm is doing with research and development. Also, the institutional holdings may be too insignificant to be able to affect or concern firm management:

Hypothesis 5: There will be a negative relationship between institutional ownership and the ratio of research and development costs to sales.

THE REGESSION MODEL EMPLOYED

We will utilize the following regression model:

(1) **RDSALES** **= f1 (FORSALES(E+), DEBTRAT(E-), PAYOUT(E-), INSOWN(E-), INSTIOWN(E-), PMARGIN(E+), TATURN(E+), TOBINSQ(E+), INDDUMS(E?), YEARDUMS(E?))**

where,

RDSALES: ratio of research and development expenditures to sales (the R&D intensity of the firm). From COMPUSTAT.

FORSALES: the proportion of overseas sales made by the firm (overseas sales divided by total sales). From the annual report or SEC Form 10-K.

DEBTRAT: debt ratio (book value of long-term debt divided by book value of total assets). From COMPUSTAT.

PAYOUT: dividend payout ratio (dividends per share divided by the earnings per share). From COMPUSTAT.

INSOWN: insider ownership (the number of common shares owned by insiders divided by the total number of common shares outstanding). Insiders consist of officers, directors, beneficial owners and principal shareholders owning 10% or more of a firm's shares. From COMPACT D/SEC.

INSTIOWN: proportion of institutional ownership. From COMPACT D/SEC.

PMARGIN: income divided by sales. From COMPUSTAT.

TATURN: sales divided by total assets. From COMPUSTAT.

TOBINSQ: market value of equity, plus book value of long-term debt, plus book value of short-term debt, plus preferred stock at liquidating value, all divided by book value of total assets. From COMPUSTAT.

INDDUMS: a series of dummy variables to be employed to control for industry.

YEARDUMS: a series of dummy variables to be employed to control for year.

Several variables (TOBINSQ, PMARGIN, TATURN, INDDUMS, YEARDUMS) are used as control variables. These are used to provide better specification in estimation and to try to avoid omitted variables relevant to the model.

Certain industries engage in more R&D than others. For example, the amount of R&D performed by pharmaceutical firms greatly exceeds that performed by food processing firms. Thus, it is essential to control for industry effects when researching the issue of R&D intensity of the firm. This will be done throughout the course of the study. In addition, Tobin's Q, insider ownership and debt ratio all vary by industry. Thus, there is a need for interaction terms (Tobin's Q times industry dummies, insider ownership times industry dummies and debt ratio times industry dummies). There is a need to control by year to allow for any social or political effects or any other effects, if they exist. A series of dummy variables will be employed to control for year.

Most of the data for this study is obtained from the Compustat Industrial Research and PDE tapes. The data for INSOWN (insider ownership), and INSTIOWN (proportion of institutional ownership) are from COMPACT D/SEC. The proportion of overseas sales made by the firm comes from its annual report or SEC Form 10-K.

The study employs Fortune 500 Industrial and Fortune 500 Service data from 1999-2003. The Fortune 500 for 1999 are employed and are used as a base for 2000-2003. For the year 1999, we select all companies that have a number in the Fortune rank field (DATA279=Fortune rank) of COMPUSTAT. Banks, utilities and property and casualty companies, in other words all S.I.C. codes in the 6000's, are excluded from the study. In addition, all electric, gas and sanitary services utilities (S.I.C. codes of 4900's) are excluded. This leaves a total number of records of 2,463 over five years. The breakdown: 492 in 1999, 491 in 2000, 499 in 2001, 500 in 2002 and 481 in 2003.

RESULTS[2]

The R&D Intensity model (See Table 1 page 28) has an adjusted R-square of 0.5136. There is a strong negative relationship between debt ratio and R&D Intensity. The coefficient is -0.01329, and it has a "t" value of -3.92. (In other words, when debt ratio increases by 1%, R&D Intensity decreases by 0.01329%.) This is in accord with the findings of Crutchley and Hansen (1989), Bradley, Jarrell and Kim (1984) and Long and Malitz (1985), as all three studies found that firms with larger R&D expenditures have lower levels of debt. Further, the result is intuitive because R&D spending is subject to the discretion of managers, which leads to higher agency costs and lower levels of debt.

There is a significant negative relationship between insider ownership and R&D Intensity, with a coefficient of -0.00721 ("t" value of -1.72, p-value of 0.0860). As discussed earlier, agency costs will be lower when insider ownership is higher, as insiders bear a higher proportion of the costs of their perquisite consumption. A convergence-of-interests with shareholders takes place, and insiders are less likely to waste funds on unnecessary R&D. Thus, the significant negative relationship confirms the above.

There is a significant negative relationship between institutional ownership and R&D Intensity. The coefficient is -0.00657 and the "t" value is -2.06. As institutional ownership increases by 1%, R&D Intensity decreases by 0.00657%. This was expected. Institutions can exert influence on (the firm's) R&D activities. The result is consistent with agency cost theory.

As predicted, there is a significant positive relationship between the proportion of firm sales made overseas and R&D Intensity. The coefficient for the proportion of overseas sales is 0.04209, with a "t" value of 14.13. Clearly, this is a very strong relationship. When firms conduct R&D overseas, monitoring is more difficult for investors. Because of this weaker monitoring, firms can engage in more R&D spending than is optimal.

There is no significant negative relationship between dividend payout ratio and R&D Intensity. There is an insignificant ("t" value of -0.84) negative relationship, which was not expected. Jensen (1986) makes the lack of a significant negative relationship understandable. He states that dividends have limited value as a control device because managers can break their promise to pay them. Thus, the lack of statistical significance found in this research is not entirely surprising.

REFERENCES

Bathala, C. T., Bowlin, O. D., &. Rao, R.P. (1995). Debt Structure, Insider Ownership, and Dividend Policy: A Test of the Substitutability Hypothesis in an Agency Framework. *Research in Finance, 13,* 237-260.

Bradley, M., Jarrell, G. A., & Kim, E. H. (1984). On the Existence of an Optimal Capital Structure: Theory and Evidence. *Journal of Finance, 39,* 857-878.

Crutchley, C. E., and Hansen, R. S. (1989). A Test of the Agency Theory of Managerial Ownership, Corporate Leverage, and Corporate Dividends. *Financial Management, 18,* 36-46.

Easterbrook, F. H. (1984). Two Agency-Cost Explanations of Dividends. *American Economic Review, 74,* 650-659.

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review, 76,* 323-329.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics, 3,* 305-360.

Lindenberg, E. B., & Ross, S. A. (1981). Tobin's Q Ratio and Industrial Organization. Journal of Business, *54,* 1-32.

Long, M. S., & Malitz, I. B. (1985). Investment Patterns and Financial Leverage. In B. M. Friedman (Ed.), Corporate Capital Structures in the United States (pp. 353-377). Chicago: University of Chicago Press.

Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance, and the Theory of Investment. *American Economic Review, 48,* 261-297.

Modigliani, F., & Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *American Economic Review, 53,* 433-443.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management Ownership and Market Valuation. *Journal of Financial Economics, 20,* 293-315.

Perfect, S. B., & Wiles, K. W. (1994). Alternative Constructions of Tobin's q: An Empirical Comparison. *Journal of Empirical Finance, 1,* 313-341.

Rozeff, M. S. (1982). Growth, Beta, and Agency Costs as Determinants of Dividend Payout Ratios. *Journal of Financial Research, 5,* 249-259.

[1] COMPUSTAT has many records without information on advertising expenditures. Approximately 70% of the data in this study would have been eliminated if advertising had been included as an independent variable. Further, advertising was not statistically significant. Thus, advertising expenditures are not included in the study.

[2] In the model employed in this study, multicollinearity is not a problem. Specifically, all variance inflation factors are less than 10. All condition numbers are under 20.

Gary Kayakachoian, University of Rhode Island, is an assistant professor of finance at Rhode Island College, Providence, RI. His other research interests include agency theory, market efficiency, and international finance.

Henry R. Oppenheimer, Purdue University, is an associate professor of finance at University of Rhode Island in South Kingston, RI. His other research interests include market microstructure, decimalization, market efficiency, risk arbitrage and Leland's beta.

Table 1

Multiple Regression Model: 1999-2003
Dependent Variable: R&D intensity of the firm (RDSALES)

Independent Variables	Para. Est.	P-Value
Intercept	0.00647 (2.00)	0.0451
Overseas sales %	0.04209 (14.13)	<0.0001
Debt ratio	-0.01329 (-3.92)	<0.0001
Dividend payout ratio	-0.00021 (-0.84)	0.4004
Insider ownership	-0.00721 (-1.72)	0.0860
Institutional ownership	-0.00657 (-2.06)	0.0391
Profit margin	-0.01448 (-1.95)	0.0513
Total asset turnover	-0.00252 (-2.83)	0.0046
Tobin's Q	0.00296 (3.05)	0.0023
2000 Dummy Variable	0.00061 (0.37)	0.7084
2001 Dummy Variable	0.00062 (0.38)	0.7005
2002 Dummy Variable	-0.00117 (-0.72)	0.4696
2003 Dummy Variable	-0.00193 (-1.19)	0.2347
Adjusted R-square	0.5136	

LABOR MANAGEMENT RELATIONS: CONNECTING THEORY AND PRACTICE

Joan Benek-Rivera, Bloomsburg University

ABSTRACT

The author has written an experiential exercise based on actual classroom events. The activity is framed in the context of labor management relations. It presents students with the details of a grievance filed by the union. Students assume the role of an arbitrator and render a decision. In addition to facilitating students' understanding of the mechanics of arbitration, the exercise motivates students to explore an ethical issue. Attention to ethics is particularly relevant in business courses given the contemporary business climate and recent incidents involving Enron, WorldCom, Martha Stewart and others. A detailed teaching note is included.

INTRODUCTION

This exercise is based on a management decision of a university instructor and it is believed that students can easily identify with a setting of this nature. It is designed as an arbitration exercise in which students decide on an appropriate remedy in a dispute between two parties. The scenario is framed in a labor relations context in which students assume the role of an arbitrator and hear (read) arguments from both parties involved--the instructor in the role of "management" and the alleged offenders of the academic honesty policy in the role of "union."

A second-year instructor was faced with a difficult but important decision that involved disciplinary action against students. She wondered if this experience could be of benefit to anyone besides the parties involved. The evening class in labor relations would soon be studying arbitration. Arbitration is a process that uses a neutral third party to make a decision, eliminating the need to go through the courts. Arbitration has been a staple in union contracts and an increasing number of employers now require the use of arbitration to settle non-union, employment-related disputes (Mathis & Jackson, 2003). Grievance arbitration is used in disputes that arise from differing interpretation of a collective bargaining agreement. Disciplinary matters are among the more prevalent topics in grievance arbitration (Grievance Guide, 2000).

The previous year the labor relations class had some difficulty trying to apply arbitration concepts to assignments involving actual contracts negotiated by employers and unions. The instructor decided it would be worthwhile to use the events of the past week (from the morning class) to introduce the evening class to some of the mechanics of arbitration as practiced in the United States. This incident was also expected to evoke some discussion on ethics in a setting familiar to students and on the different perceptions often associated with right and wrong. After numerous revisions, a handout was developed that contained the following information.

EXPERIENTIAL EXERCISE: A DISPUTE OVER DISCIPLINE

Was either the highest possible grade of D, or withdrawal from the course, fair for violation of course rules? If not, what would be a more appropriate remedy?

BACKGROUND

Jaime (not his real name), a college senior, was enrolled in BUS 1234, Computer Applications, at Anywhere State University. About midway through the semester, Jaime was involved in what appeared to be a breach of academic honesty. After investigating the alleged incident, the instructor decided that academic dishonesty was involved. Jaime had two options: either withdraw from the course immediately (without a failing grade) or finish the course with the understanding that the highest grade Jaime could attain would be a D.

Assume that Jaime, the student, is a "union member" who was permitted to file a grievance seeking a more favorable outcome than the two offered by "management" (the instructor). Also, assume that the course syllabus was negotiated by the class and the instructor at the beginning of the semester. Appendix 1 contains provisions of this "contract" which apply to Jaime's situation.

Appendix 1 contains several paragraphs from the course syllabus which are analogous to provisions that would appear in a contract between union and management. The contract provisions outline pertinent course policies on assignments and academic dishonesty. Details are provided on management's observations of what events transpired during the alleged cheating incident and the actions taken by management as a result. The union also presents its position on the matter and requests that management's decision be overturned by the arbitrator

"Management's" Position

BUS 1234 meets Tuesday and Thursday from 8:00 a.m. to 9:20 a.m. On Tuesdays, students learn various software applications and are given several exercises to practice so that they become comfortable with each application. On Thursdays, assignments covering what was learned during the previous class session are distributed at the beginning of class, and students have the entire class period to work on the assignments. The instructor is available during the entire period, as well as during regular office hours (seven hours a week) to assist students having problems with the homework. Assignments made at 8:00 a.m. on Thursday are always due the following Tuesday at 8:00 a.m., before lessons on new material are covered.

On Tuesday, October 13, the instructor collected word processing homework from the previous Thursday's assignments and began grading it later the same day. The instructor noticed identical typographical errors on the work submitted by two students-- Jaime and Pat (not her real name), who sat next to one another in class and dated each other. Everyone in the class turned in eight pages of homework. In the case of Jaime and Pat, of those eight pages, five pages contained identical typographical errors which appeared in the same words and in the same locations on each page.

On Thursday, October 15, at the beginning of class, the instructor announced that there would be a spot check of all work diskettes. Students were told to use their back-up diskettes during the class period. Their work diskettes would be available for them to pick up in the instructor's office later that day.

Immediately after class, the instructor retrieved the homework files on both Jaime's diskette and Pat's diskette and made copies of those files from both diskettes. The instructor was also able to access the most recent file copy of each assignment on each diskette. In all cases, the most recent file copy of the assignments in question had Pat's name; Pat's name was on the files contained on Jaime's diskette.

The following Tuesday the instructor asked to see both Jaime and Pat (individually) immediately after class, and the instructor showed each student what had been discovered. Jaime insisted that each student did their own work. Jaime claimed to be at the computer lab the previous evening (before the assignments were due) about 30 minutes before closing time and to have had trouble retrieving the assignments he started a few days earlier. When asked about the required back-up diskette, Jaime said, "Nobody keeps back-up copies of diskettes." The instructor reminded Jaime of Paragraph 2 of the syllabus. Jaime then explained that the lab was ready to close, so Jaime then went to Pat's house, borrowed Pat's diskette and finished the homework on Pat's home computer.

When asked about Pat having had the work completed by then (at 10 p.m. Monday night, before Jaime arrived), Jaime acknowledged that Pat's work was completed, but that Jaime "undid" Pat's work and proceeded to re-create the files and do the assignments from scratch. Jaime denied that anything dishonest had occurred. Jaime reminded the instructor that he was an ROTC cadet. It appeared that Jaime was trying to sway the instructor by implying that ROTC cadets had integrity and would not engage in cheating.

After speaking with Jaime, the instructor met with Pat, who didn't have much to say but also denied any wrongdoing--other than sharing diskettes to help a friend. Pat also said that any decision made by the instructor would be a judgment call.

As the instructor concluded conversations with each student, both Jaime and Pat were informed that, after all the facts and statements were carefully weighed, and if it was determined that dishonesty did occur, they could either withdraw from the course immediately without penalty or remain in the course for the duration of the semester, with the understanding that the highest grade each could receive would be a D.

The instructor rechecked both students' diskettes for the assignments in question and noticed that on Jaime's diskette, which was allegedly last used in the computer lab shortly before closing at 10 p.m. on Monday night, October 12, the time logged in for working on those assignments was approximately 8:00 p.m. Several hours after Jaime and Pat met with the instructor, the instructor received a bouquet of flowers from Pat with a note saying, "We're sorry for any grief we caused and we trust you will make the right decision."

The instructor shared all the above information with the department head and concluded that Jaime had not done his own work and that, under the terms of the syllabus, both students had engaged in academic dishonesty. The following day Pat requested withdrawal from the course. Jaime challenged the instructor by appealing to the department head, who upheld the instructor's decision. The instructor agreed to have a third party outside the department review the particulars of this situation and also agreed to abide by the third party's final decision.

"Union's" Position

Even after Pat had withdrawn from the class, Jaime insisted that no wrongdoing had occurred and stated that he would remain in the class, as a matter of principle. Jaime argued that the penalty options imposed by the instructor in the syllabus were too severe. Furthermore, it could not be proven that Jaime had not done his own work.

Jaime stated that he was an officer in the cadet corps and would be foolish to jeopardize his future military career by engaging in such activity. Jaime appealed to the instructor for leniency and indicated he knew that the instructor's spouse was in the military.

Jaime requested that the arbitrator reduce the severity of the penalty to something other than withdrawal from the course or a grade of D.

ASSIGNMENT

Assume the role of an arbitrator (judge) and decide whether any rule violation(s) occurred in this scenario. Consider the questions that follow when making your decision. Be creative and make any assumptions you deem necessary.

Questions for thought and discussion

1. What are the relevant facts in this situation?

2. Has the grievant (Jaime) been properly informed of the definition of and consequences of academic dishonesty? If so, how? If not, what could have been done differently to adequately inform Jaime?

3. How would you decide this grievance? Explain why your decision favors one side over another.

4. What role, if any, do ethics play in this scenario? Explain.

Class time required for discussion: 30-40 minutes

REFERENCES

Adler, N.J. (1997). *International Dimensions of Organizational Behavior* (3rd ed.). Cincinnati: South-Western.

Campbell, C., Swift, C., & Denton, L. (2000). Cheating Goes High-tech: Online Term Paper Mills. *Journal of Management Education, 24*(6), 726-740.

Cavanagh, G. (1998). *American Business Values with International Perspectives.* Upper Saddle River, NJ: Prentice-Hall.

Chidley, J. (1997, November 24). Tales Out of School: Cheating Has Long Been a Great Temptation, and the Internet Makes It Easier Than Ever. *Maclean's*, 110, 76.

Grievance Guide (2002). Washington, DC: BNA Books.

Hastings, M. (2003, September 8). Cheater Beaters. *Newsweek*, 142, E16.

Herman, E., Schwarz, J., & Kuhn, A. (1992). *Collective Bargaining and Labor Relations.* Englewood Cliffs, NJ: Prentice-Hall.

Holly, W., Jennings, K., & Wolters, R. (2001). *The Labor Relations Process.* Fort Worth, TX: Harcourt.

Ivancevich, J., Duening, T., Gilbert, J., & Konopaske, R. (2003). Deterring White Collar Crime. *Academy of Management Executive, 17*(2), 114-127.

Mathis, R.L. & Jackson, J.H. (2003). *Human Resource Management* (10th ed.). Cincinnati: Thomson South-western.

McCabe, D., & Trevino, L. (1996). What We Know about Cheating in College. Change: *The Magazine of Higher Learning* (January/February), 28-33.

McCabe, D., Trevino, L., & Butterfield, K. (2001). Cheating in Academic Institutions: A Decade of Research. *Ethics and Behavior, 11*(3), 219-232.

PR Newswire. Big majority believes tough new laws needed to address corporate fraud; most majority at least somewhat confident that Bush will support such laws. 27 July 2002.

Trompenaars, F. (1993). *Riding the Waves of Culture: Understanding Cultural Diversity in Business*. London: Economist Books.

Trompenaars, F. (1996). Resolving International Conflict: Culture and Business Strategies. *Business Strategy Review*, 7(3), 51-68.

Joan Benek-Rivera, Texas Tech University, is an associate professor of management at Bloomsburg University of Pennsylvania, Bloomsburg, PA. In addition, she is certified as a Senior Professional in Human Resources (SPHR). Her research interests include management education and human resource management issues.

Appendix 1
Pertinent Provisions of The Union-Management Contract
(The Course Syllabus)

PARAGRAPH 2. REQUIRED COURSE MATERIALS

Section b. Two, 3-1/2 inch diskettes for use on the PC are required. (Note: Computer Applications was taught on PCs in the Business Department's Computer Lab). One diskette is to be used as the student's daily work diskette and one is to be used as a back-up diskette for all homework and other assignments; there will be no excuses for lost files if your diskette gets misplaced or damaged and if you have no back-up diskette.

PARAGRAPH 4. COURSE EVALUATION CRITERIA

Section a. *All assignments will receive either a letter grade or checkmark indicating completion--all assignments must be completed and turned in by 8:00 a.m. on the due date announced in class. No late assignments will be accepted.* However, assignments may be turned in early--by slipping them under the instructor's office door.

PARAGRAPH 6. ACADEMIC DISHONESTY

At no time will cheating be allowed either on tests or on turned-in assignments. Such acts will automatically result in the following:

Section a. A grade of F for the semester for test dishonesty.

Section b. A grade of D for the semester for not doing your own work on assignments.
Diskettes may be collected and spot checked on occasion.

It is the responsibility of the student to avoid the appearance of dishonesty--come to class prepared, with the proper materials and do your own work; be sure to have a back-up diskette.

PARAGRAPH 8. COMPUTER LAB HOURS

The lab is open Monday-Friday from 8 a.m. to 10 p.m., except when classes are scheduled in the lab during daytime hours. The lab is open on weekends during the hours posted outside the room.

PARAGRAPH 9. OTHER

The instructor reserves the right to change or modify the contents of this syllabus at any time.

Teaching Note for Instructor
Labor Management Relations: Connecting Theory and Practice (Instructor's Manual)

OBJECTIVES

This activity was designed to introduce a concept on a level with which students can relate; afterwards students can transfer their learning to situations in the business world. The primary objective is to introduce students to the mechanics of arbitration. More specifically, this exercise is designed to (1) provide students an opportunity for assuming the role of an arbitrator in a dispute between two parties by reviewing facts presented by both sides, interpreting the meaning of policy provisions and rendering a decision; (2) encourage debate/discussion on the ethical aspects of behavior; and (3) encourage students to think of management situations in their immediate environments (school, work, personal lives) as a basis for understanding more complex events occurring in the business world.

SUGGESTED TEACHING APPROACH

This scenario is deemed appropriate for use in different business courses. It was designed specifically for labor relations and human resource management courses which encompass issues relating to grievances, arbitration, disciplinary action and due process. In addition, the subject matter lends itself to discussions in ethics courses, particularly those concerning ethical challenges at the individual or personal level. It may also be used in organizational behavior courses which cover some of these topics.

The exercise has been successfully used in an undergraduate, first semester labor relations course. It is recommended for use primarily at the undergraduate level.

ANALYSIS OF EXERCISE

Analysis of the scenario begins with collection and investigation of relevant facts. Students should also consider the bases for credibility of all participants, as third party reviews of situations of this nature often rely on such credibility. Students, acting as arbitrators, should also suggest alternative remedies to resolve the situation--remedies other than those offered by management (the instructor). They may also consider what actions both sides can take to better handle situations of this type which occur subsequent to the incident described here. For example, perhaps a grade of zero or "D" should be given for only the assignment in question and not for the entire semester. Such an issue would need to be agreed to by both sides so that it becomes a provision in the syllabus (contract). Students are encouraged to be creative in generating decision alternatives and to draw upon their experiences.

Problem Identification

The instructor discovered identical typographical errors (same words and locations) on five of eight pages of homework submitted by two students in the same class. This situation alerted the instructor to a potential occurrence of academic dishonesty as addressed in the course syllabus (Paragraph 6 of Appendix 1). Additionally, Jaime indicated he had failed to maintain a back-up diskette as required by Paragraph 2 of Appendix 1.

Pertinent Human Resource Functions

The activity, as designed, applies to labor relations--specifically arbitration of grievances. This situation also applies to employee (student) rights and discipline, as well as to ethical behavior.

Cross-cultural Applications

Although this exercise describes arbitration as commonly practiced in the United States, it is suitable for discussion over the definition and role of arbitration or related processes in other cultures. Ethics and the meaning(s) of honesty and dishonesty in other cultures can be compared to accepted definitions of ethics in the American culture. In global business decisions, the meaning of right and wrong may be subjective and culturally determined.

Some see the United States as a universalistic society where rules are considered absolute, should apply to everyone and be upheld at all times, whereas other cultures are viewed as particularistic. In the latter, the nature of the relationship between parties takes precedence over rules and laws (Trompenaars, 1993). For example, when one determines if a rule applies to everyone and should be upheld, it makes a difference if the parties are friends or relatives. In the particularistic view, the "right" action is one that supports or otherwise maintains or strengthens the bonds between people who have relationships.

Universalistic societies depend on detailed contracts to specify the rules of business, whereas particularistic societies use looser agreements and the strength of relationships (Adler, 1977). In the context of this exercise, students would likely agree that cheating is wrong, regardless, and consequences outlined in the "contract" (syllabus) are in order. On the other hand, students might also take the particularistic approach and give weight to the circumstances of the individuals involved in the transgression and opt to give them a second chance. Trompenaars (1996) acknowledges that the two extremes may be reconciled; universalism and particularism can be found in the same person. Analysis of the situation by students, who can relate to the students in the scenario, will potentially reveal a number of different opinions along these lines.

If one believes the United States culture is indeed universalistic, it is interesting to note that, when decisions are implemented, "the American business executive tends not to apply the great ethical laws immediately to work. He is preoccupied chiefly with gain" (Brenner & Molander, 1977). More recent evidence continues to support this assertion. Cavanagh reports the "prevalence of corporate crime and of unethical and greedy acts by individuals" (Cavanagh, 1998, p. 102), including bribery, fraud, illegal campaign contributions, stealing, trade secrets, price fixing, tax evasion and insider trading. In Cavanagh's recurring survey of graduate business students from 1974 through 1988, between 51% and 75% thought that business is overly concerned with profits; in 1996, 69% felt that way. A PR Newswire survey (2002) revealed that 68% of respondents believed that senior executives are less trustworthy and honest than they were 10 years earlier (PR Newswire, 2002). Additionally, there have been a number of corporate scandals of late involving criminal and unethical behaviors at firms like ImClone, WorldCom, Enron, Tyco, Arthur Andersen, Adelphia Communications and others (Ivancevich, Duening, Gilbert, & Konopaske, 2003).

At the Academy of Management meeting in 2002, corporate scandals were addressed at a special presidential panel session entitled "The Crisis in Corporate Confidence." Four papers presented at the session were published in The Academy of Management Executive, Volume 16, Number 3, August 2002. Educators are looked to as a positive influence on future managers' ethical behavior. The topic of business ethics receives further attention in a series of five papers published as a special topic in The Academy of Management Executive, Volume 18, Number 2, May 2004. It appears that ethical issues in business are a very timely topic and warrant continued discussion in business schools.

Computer Cheating Issues

Although the primary purpose of this exercise is to introduce students to arbitration, the background information presented may lend itself to exploring the issue of computer cheating (in the context of an information technology lesson, for example). Although studies reveal that the percentage of college students who admit to cheating has not changed much over the last three decades, new technologies in education (computers, Internet) have given rise to new ways of cheating (McCabe & Trevino, 1996; McCabe, Trevino, & Butterfield, 2001). Instructors wishing to move the class discussion in this direction may find the following literature helpful: Campbell, Swift & Denton (2000); Chidley (1997); Hastings (2003).

Suggested Answers To Discussion Questions

1. What are the relevant facts in this situation?

   The following list is not all inclusive:

   a. Relevant facts from management's perspective:
      - syllabus outlined procedures to be followed
      - back-up diskette was required by all students
      - penalties for academic dishonesty were defined
      - identical errors appeared on both students' papers

- one student did not have a back-up diskette
- one student borrowed another student's homework diskette
- one student immediately withdrew from the course after meeting with the instructor

b. Relevant facts from union's perspective:
- students willingly turned in diskette for spot check
- students willingly met with instructor after class
- Jaime admitted experiencing problem with computer on campus and using a friend's computer to complete the assignment on time
- this was the first time behavior of either student was questioned (i.e., no prior problems with integrity)
- there was no guarantee that the campus computers accurately reflected the correct time of day students logged on/off
- instructor was not at student's home and did not see who did what on the assignment

2. Has the grievant (Jaime) been properly informed of the definition of and consequences of academic dishonesty? If not, what could have been done differently to adequately inform Jaime?

Yes, in paragraph 6 of the syllabus and during the meeting with the instructor

3. How would you decide this grievance? Explain why your decision favors one side over another.

Decision may go either way, so long as supporting justification is provided (see Question #1). Some decisions tend to favor management because policies were clearly spelled out but were not followed by union. In other instances, the ruling is in favor of union because all evidence is circumstantial; i.e., no concrete proof exists that union members violated the honesty policy.

4. What role, if any, does ethics play in this scenario? Explain.

Even within the same culture, individuals do not necessarily share one definition of "cheating." Some individuals view sharing a homework diskette simply as helping a friend and associate this behavior with good intentions, unlike the bad intentions often associated with the word "cheating."

Following a code of conduct (i.e., rules spelled out in the course syllabus) gives students an opportunity to practice ethical behavior which will be expected of them in the workplace. Is such practice necessary? Or is the classroom situation too artificial for a meaningful learning experience?

* There are multiple answers to these questions due to different perceptions, backgrounds and interpretations of individuals analyzing the case.

Additional Questions And Answers

1. When rendering a decision of this type, what guidelines would you suggest be used by third parties (such as arbitrators) to assess the credibility of the parties involved?

The following list is not all inclusive:

- control of emotions in discussions, such as tone of voice
- previous knowledge of behavior of all parties involved
- previous experience in assessing credibility of others
- soundness of information presented by parties, i.e., is it reasonable?

2. Is the syllabus too harsh regarding penalties for dishonesty? What other remedies may be used?

Answers to this question will also vary. Some will argue that instructors have an obligation to all students to discourage dishonest behavior, regardless of the circumstances. Others may argue that a more appropriate remedy would be a failing grade on the assignment in question only (not a D for the semester). Others may suggest that dishonesty policies for individual courses be the same as those quoted in student handbooks issued by the university.

3. Is it a feasible practice to routinely have a third party review a university instructor's decisions affecting students?

While students may have a strong preference for this option and most instructors would be wary of it, it is not uncommon for universities to have such a mechanism in place for the protection of both sides. Students may appeal a final grade, for example, which may consist of a multi-step procedure, beginning with the instructor and moving on to department head, dean, university committee, etc., for resolution. From the student's perspective, it is not always believed that decisions by anyone within the university hierarchy are "neutral" as is the intended case of arbitration.

Guidelines For Class Discussion

Students read the exercise and prepare notes for discussion before class. An alternative to class discussion in the traditional sense would be a role play in which team assignments (union, management and arbitrator teams) are made beforehand and the students act out the situation in class. After the role play, students discuss the questions provided. Using a role play may require more time than the 30-40 minutes recommended.

A role play provides students the opportunities to practice the behaviors associated with arbitration of a grievance. Four sets of roles are needed: Union representatives (on behalf of the students who were disciplined); Management representatives (on behalf of the instructor); Arbitrator (the Arbitrator role may be assumed by an individual or by a three-member panel); Witnesses (students would be needed to play the role of witnesses-Pat, Jaime, instructor and any others).

1. Union, Management, and Arbitrator(s) set a date (a future class period) for the hearing.

2. Union and Management sides prepare to present their respective cases to the arbitrator. They may prepare pre-hearing statements (optional statements of parties' issues and positions) and pre-hearing stipulations (outlining agreed-upon issues and certain facts, prepared jointly by the two parties), witness lists, specific questions to elicit testimony from witnesses and interviews of witnesses.

3. Hearing convenes. In a formal setting, there are sworn witnesses, rules of evidence, exhibits and final briefs. In a less formal setting, witnesses are not sworn, and hearing all sides of the story is more important than strict rules of evidence. Opening statements, witness testimony, cross examination and closing statements are heard.

4. During the hearing, the arbitrator's duty is to keep order and objectively hear and record the facts presented; the arbitrator should avoid acting like a judge, being arrogant or talking too much. Post-hearing briefs submitted by both sides after the hearing has ended, recapping their own versions of the case, are optional.

5. The arbitrator's ultimate responsibility is to render a final and binding award, in writing, for either side. The award is based on the arbitrator's interpretation and application of organizational policy (the contract or syllabus in this exercise).

Decision-making guidelines for the arbitrator role include:

- assess credibility of witnesses
- interpret and decide on the meaning of the contract language (provisions listed in syllabus)
- determine intent of parties regarding (1) contract language or (2) actions resulting in the grievance
- determine intent based on past practice
- consider any previous arbitration awards with similar circumstances

- take into account the reasonableness and fairness of decision

These steps and role behaviors are summarized from Herman, Schwarz & Kuhn, 1992; Holly, Jennings, & Wolters, 2001.

Epilogue

Although, in the actual incident, the instructor was willing to have her decision reviewed by a third party, including the University ROTC Board, such a review was not pursued by the student. Before the semester ended, Jaime did in fact withdraw from the course and received a grade of "W."

Hispanic-American Acculturation and Media Preferences in the Purchase of Paint

Denise T. Ogden, Pennsylvania State University – Berks/Lehigh Valley

This research was funded in part from a grant from the Paint Consumer Research Panel (PCRP), Washington, D.C.

ABSTRACT

In an effort to attract the growing minority population, retailers are turning their attention to Hispanic shoppers. This paper focuses on preferences of Hispanic Americans for information formats in retail advertising. Of particular interest is whether the level of acculturation experienced by an individual is a moderator in the preference for information formats. A telephone survey was conducted to determine preferences for sources of product information of Hispanic Americans for household paint. Additional data were collected to determine the level of acculturation of the consumer. Three groups were chosen to facilitate the comparison of relative positions: (1) Hispanics high in acculturation, (2) Hispanics low in acculturation and (3) Anglos. The findings indicate no difference between preferences for Hispanics versus Anglos. There was also no difference between Hispanic High in Acculturation (HHIA) and Hispanics Low in Acculturation (HLIA) in preferences for sources of product information.

INTRODUCTION

In the past decade, retailers have engaged in strategies to attract minority shoppers. Due to the growing Hispanic population, marketers are increasingly turning their attention to this market. The United States Census Bureau reports that African-Americans, Hispanics and Asians make up the fastest growing groups in the United States. Of particular interest is the Hispanic market. In 2003 Hispanics became the largest minority community in the United States. In some major cities, such as Los Angeles and New York City, the "minority" population outnumbers the "non-minority" population. Purchasing power for the Hispanic market is estimated at nearly $600 billion in 2003 (Mann, 2004). According to the U.S. Hispanic Chamber of Commerce (2004), by 2008, disposable income of Hispanic Americans will top $1 trillion. This purchasing power represents substantial opportunity for marketers. Because 87% of Hispanics live in 10 states (Valdés & Seoane, 1995), they represent an attractive target market that is easy to reach. Additionally, Hispanic consumers tend to be brand conscious, loyal consumers (Peñaloza, 1994), both of which are appealing features to marketers.

This paper focuses on preferences of Hispanic Americans for sources of information in retail advertising in the purchase of household paint. Paint was chosen because it is a consumer durable that has never been tested and because little information exists concerning Hispanic consumers and their purchase of paint. Of interest are media preferences in the purchase of do-it-yourself (also known as DIY) paint and whether Hispanic consumers' media preferences for paint information differ from Anglos'. Also of interest is whether the level of acculturation experienced by Hispanic consumers is a moderator in media preferences. The research was sponsored in part by a grant from the Paint Consumer Research Panel (PCRP), Washington, D.C.

RESEARCH ON EFFECTIVENESS OF HISPANIC MEDIA PREFERENCES

Although a few studies shed some light on Hispanic media habits, research in this area is lacking. This may be due to historical views of Hispanic Americans. Historically, Hispanics have been viewed as a lower income and less educated group (Korgaonkar, Karson, & Lund, 2000). In a review of consumer behavior-related articles in five top academic research journals from 1993 – 1996, Jacoby (1998) found that research on minority groups was scarce. This dearth of activity may be attributed to what Valencia (1989) calls "ethnic marketing myopia from ... academia" (p.23). More recently, due to the growth and buying power of Hispanics, marketing practitioners have stressed that understanding culture is very important when attempting to market to ethnic groups (Gore, 1998). Despite the increased importance of cultural-related research in marketing, only a limited amount of attention has been given to ethnic subcultures and consumer acculturation (Kara & Kara, 1996; O'Guinn & Faber, 1985; O'Guinn & Faber, 1986).

Webster (1990-91) found differences in attitudes toward marketing practices between Anglos and Hispanics who possessed varying degrees of subcultural identification. These differences were present even after social class and income effects were removed from the analysis. In another study, Webster (1992) found significant differences between Hispanics who identified more closely with their subculture and Hispanics who did not in information search patterns associated with reference groups, advertising, in-store search and miscellaneous readership. The research concludes that different strategies are required to reach language-based segments within the Hispanic subculture.

Differences in advertising effectiveness and media preferences between Hispanics low in acculturation and Hispanics high in acculturation have been found. Several studies have found that Hispanics use television and radio as sources of product information more often than their Anglo counterparts (Kim & Kang, 2001). Hispanics appear to rely heavily on commercial sources of information such as television and radio but less on print media such as newspapers and magazines (Deshpande, Hoyer, & Donthu, 1986; O'Guinn & Meyer, 1983; Webster, 1992).

In comparison to Anglos, Hispanics and Blacks are reported to consume significantly more television and radio on a weekly basis (Nielsen Media Research, 2000; Radio Advertising Bureau, 2002). Although television is the primary media for Hispanics, Spanish-first Hispanics (those who learned Spanish before English) spent 5.2 hours a day compared to English-first Hispanics (those who learned English first), who watched a total of 4.4 hours a day of television. English-first Hispanics spent slightly less time listening to the radio than Spanish-first Hispanics (2.9 hours/day). Print media were reportedly the media least frequently used by Hispanics (newspaper = 36 min/day; magazine = 1.2 hours/day). There were slight differences in each area according to whether English or Spanish was the first language learned (Strategy Research Corporation as cited by Mogelonsky, 1995, p. 21). Because language usage is often used as a measure of acculturation, this indicates a potential for differences based on level of acculturation.

It seems reasonable to conclude that there will be differences in television and radio usage for information on paint. Therefore, the following hypotheses are proposed:

H1 Hispanics will be more likely to use television and radio as sources of product information than Anglos.

H2 The extent to which Hispanics will be more likely to use television and radio and sources of product information is moderated by the degree of acculturation: the higher the degree of acculturation the less likely the usage of television and radio for sources of product information.

METHODOLOGY

The results reported in this paper were part of a larger study. For the study, a survey instrument that included questions designed to measure the degree of acculturation and product related questions was developed. The portion of the survey that measured acculturation was an adapted and modified version of Valencia's (1985) Index to Measure "Hispanicness." The questions from the acculturation scale have been merged with other product and demographic questions.

The English questionnaire was translated into Spanish using the translation and back-translation technique to make sure that the concepts, when translated, maintained their original meaning. The method recommended by Brislin (1970) was followed. Specifically, a bilingual expert (from academia) translated the questionnaire into Spanish. Next, two people typical of the targeted group back-translated the Spanish language version into English (with no previous exposure to the original English version), and corrections were made until the versions in both languages were judged to be the same by a bilingual expert. The translated questionnaires were pre-tested to determine acceptability. The pre-test was also designed to ascertain face-validity of the questions. Thirty participants (15 Anglos and 15 Hispanics) took the survey and, because no changes to the survey were necessary, these results were combined with the final tallies.

Universe and Sampling Frame

The universe of interest was U.S. Hispanic and Anglo consumers residing in the United States. The sampling frame was a consumer national database, generated by a consumer research company. This company collects demographic information such as age, gender, ethnicity, race, income, etc. of individuals and households in the United States. As requested, the company provided a random list of 2,500 people with Spanish surnames and 2,500 people with English surnames. The data were provided on note-cards, with each card containing the name, city, state and telephone number of the potential respondents. Both English and bilingual speakers (Spanish/English) conducted the telephone interviews to gather the data. The bilingual speakers called the Hispanic sample. The goal of the research was to obtain 300 usable surveys. This sample size allowed analysis of the groups under study and provided roughly similar sample sizes by which to run comparisons.

Statistics

After survey administration, respondents were assigned to one of three mutually exclusive groups: Hispanics high in acculturation (HHIA), Hispanics low in acculturation (HLIA) and Anglos. ANOVA was utilized to test the hypotheses. Post hoc tests were conducted when necessary. In addition, demographic information such as age, income, education level and marital status were collected and cross tabulations run to determine whether demographic variables contribute to differences between groups.

Independent Variables

Ethnicity. Ethnicity was measured using an emic approach. In this approach, the individual ascribes his/her national identity. Thus, the respondent's perception of ethnicity was recorded instead of the researcher's perception of ethnicity. Empirical research in cultural anthropology, social psychology and consumer behavior has determined this method to be the most appropriate (Cohen, 1978; Ember, 1977; Hirschman, 1981; Jorgensen, 1979; Minor, 1992; Valencia, 1982). In this study, two questions were used to measure ethnicity. First, subjects were asked, "With what ethnic group do you most strongly identify?" Second, subjects were asked how strong their identification was with the ethnic group they had selected. A bipolar scale ranging from 1 to 5, with 1 being very strong and 5 very weak, was used to record responses.

Acculturation. The level of acculturation was used as an independent variable in the statistical analysis. To measure the degree of acculturation of Hispanics, a revised version of an Index to Measure "Hispanicness" (Valencia, 1985) was used. The premise behind the scale is that some members of the Hispanic ethnic subculture are "more Hispanic" than others. The index measures the degree of acculturation of Hispanic consumers living in the United States. Valencia's scale was found the most appropriate for gathering these types of data. Most acculturation scales are used in psychology and are specific to the psychological phenomenon being tested (i.e. adjustment to school, psychiatric treatment, attitudes toward medical treatments, sex-role orientation, etc). Valencia's scale can be found in the proceedings of a consumer research organization (Association of Consumer Research) and is included in The Handbook of Marketing Scales (Bearden, Netemeyer, & Mobley, 1993).

Valencia's index is designed to measure: 1) strength of ethnic identification; 2) understanding of the English language; 3) extent of Spanish language maintenance; 4) length of time lived in the American culture; and 5) marital relationships (i.e. miscegenation) (Bearden et al., 1993). Valencia chose these measurements because prior research had indicated their importance in the measurement of acculturation (for the complete rationale, see Valencia, 1985), particularly in the Hispanic population.

When developing an index to measure Jewish ethnicity, Hirschman (1981) included religion as a factor because of the correlation between Jewish religion and culture. Valencia (1985) did not include religion because of the varied strength of religious beliefs and behavioral practices concerning church attendance in the Hispanic population.

Valencia's index was tested on a sample of respondents to a mail survey of people residing in New York, Los Angeles, Miami and San Antonio. After excluding unusable surveys, data from 178 Hispanic and 288 white respondents were used to develop the index (Bearden et al., 1993). Valencia reports a reliability estimate of .73. The correlation between the Hispanic index and the six-item measure of consumer acculturation was 0.17 ($p<.05$). Valencia (1985) cites differences in shopping behaviors between whites and low and high Hispanic groups as further evidence of the reliability of the index. Other data regarding means were not provided. Most researchers concur that the lower limit for a Cronbach alpha is .6 in exploratory studies and .7 for other studies (Robinson, Shaver, & Wrightsman, 1991). The median was used to divide Hispanics into high and low acculturation groups. Those above the median were classified as Hispanics high in acculturation (HHIA) and those below the median as Hispanics low in acculturation (HLIA).

Three groups were chosen to facilitate the comparison of relative positions: (1) Hispanics high in acculturation, (2) Hispanics low in acculturation and (3) Anglos. In order to get a strong response from a variety of geographic regions, telephone surveys were conducted over two weekends. A telephone bank from a local university was rented for survey administration. The survey administrators were given, on average, one hour of training in which the survey was explained. The administrators were allowed to practice until they felt comfortable with the survey and recording of the information. Calling took place from 2 p.m. – 10 p.m., which accommodated the various time zones. The survey took, on average, 15 minutes to complete and most survey administrators completed an average of two surveys per hour. A total of 316 surveys were completed. Of those, 292 were usable (i.e., could be classified as either Hispanic or Anglo).

Of the 292 usable surveys, 148 were Hispanic and 144 were Anglo. The Hispanic group was divided into high and low acculturation groups by using the median of the acculturation score. Based on the acculturation score, each individual was categorized into either the high level (HHIA) or low level (HLIA) of acculturation. A respondent with an acculturation score greater than the median (17) was included in the HHIA and those with acculturation scores less than or equal to the median were placed in the HLIA category. Acculturation scores ranged from 3 to 28. The result was 73 respondents in the high acculturated group (HHIA) and 75 in the low acculturated group (HLIA).

Dependent Variable

The question used to measure hypotheses one and two was, "Where are you most likely to get information on paint? I'll read a list and you tell me the ones that apply to you." Each item was read to the respondent, who then indicated a yes or no in response to each source. The following information source choices were provided: (1) newspaper, (2) sales circulars, (3) television, (4) neighbor or friend, (5) at a store that sells paint, (6) internet, (7) radio, (8) magazine, (9) other.

RESULTS

There were no significant differences between Anglos (mean=.1214) and Hispanics (mean=.1489) in their reported usage of television as sources of information on paint, F(1, 279)=.452, p>.05. Radio usage showed no significant differences for the groups studied: Anglos (mean=.0286); Hispanics (mean=.0213); F(1, 279)=.153, p>.05). Further analysis revealed no differences between Hispanics high in acculturation (HHIA) (mean=.0282) and those low in acculturation (HLIA) (mean=.0143); F(1, 279=.322) p>.05. for radio as a source of information. There was marginal significance for differences between Hispanics high in acculturation (HHIA) (mean=.0986) and Hispanics low in acculturation (HLIA) (mean=.20) on television usage F(1,279)=2.878, p<.1. These results are summarized in Table 1.

Table 1 also shows a breakdown of how many people indicated they used television and radio as sources of information on paint. As can be seen, only 17 out of 140 Anglos (12%) indicated using television as a source of information on paint. There were 21 out of 141 (14.8%) Hispanics that stated they used television as a source of information on paint. The percentages were even smaller for radio with 4 out of 140 (2.9%) indicating they used the radio as a source of information on paint. Of Hispanics, 3 out of 141 (2.1%) used the radio.

Table 1
ANOVA Summary for Hypotheses 1 and 2

H1 Television	N	No	Yes	Mean	F	Sig.
Anglo	140	123	17	.1214	.452	.502
Hispanic	141	120	21	.1489		
H1 - Radio						
Anglo	140	136	4	.0286	.153	.696
Hispanic	141	138	3	.0213		
H2- Television						
HHIA	71	64	7	.0986	2.878	.092
HLIA	70	56	14	.2		
H2- Radio						
HHIA	71	69	2	.0282	.322	.571
HLIA	70	69	1	.0143		

The ANOVA revealed no significant differences between Hispanics and Anglos in using the newspaper F(1, 279)=1.338, p>.05; neighbors or friends F(1, 279)=.199, p>.05; or magazines F(1, 279)=.238, p>.05 as sources of information for paint. There were significant differences between Hispanics and Anglos with using sales circulars F(1, 279)=9.5, p<.05.; the Internet (marginal significance) F(1, 279)=3.356, p<.1; and gathering information at a store that sells paint F(1, 279)=12.8, p<.01. In summary, Anglos were more likely to get their information from the Internet (marginally significant) and stores that sell paint than Hispanics. Hispanics were more likely to get their information from sales circulars. Table 2 reports the summary ANOVA statistics. The analysis revealed no differences between Hispanics high in acculturation and those low in acculturation (p>.05).

Potential Influence of Income and Education. The statistical analysis was re-run with income and education input as covariates. There was no statistical change in the significance levels reported.

Table 2. ANOVA Summary for Other Sources of Information on Paint

		Mean Square	F	Sig.
Newspaper	Between Groups	.184	1.338	.248
	Within Groups	.137		
Sale circulars	Between Groups	1.826	9.501	.002
	Within Groups	.192		
Neighbor or friend	Between Groups	.032	.199	.656
	Within Groups	.161		
At a store that sells paint	Between Groups	3.100	12.880	.000
	Within Groups	.241		
Internet	Between Groups	.190	3.356	.068
	Within Groups	.057		
Magazine	Between Groups	.023	.238	.626
	Within Groups	.096		
Other	Between Groups	.038	.749	.388
	Within Groups	.051		

CONCLUSIONS AND RECOMMENDATIONS

Hypothesis one deals with whether or not Hispanics use television and radio as sources of product information. Hypothesis two states that higher acculturated Hispanics would use television and radio less than the lower acculturated Hispanics. Although there were not significant differences (p>.05), an important managerial implication is that the findings suggest that television and radio may not be useful media in delivering information on paint to either the Hispanic or Anglo groups. Only 17 out of 140 Anglos and 21 out of 141 Hispanics indicated that they used television as a source for information on paint. The numbers for radio were smaller: 4 out of 140 for Anglos; and 3 out of 141 for Hispanics. Marketers should re-evaluate the media choices used for delivering information on paint.

The data suggest that, to reach Anglos, a useful medium not adequately considered may be the Internet. Paint companies should use the Internet as an education tool and a way to draw consumers to a particular retailer. In addition, because Anglos indicated information on paint was gathered while in the store, the training of retail personnel is important. To reach Hispanics, sale circulars should be considered. In addition, television should be explored as a method to introduce paint and paint-related products to Hispanics low in acculturation. A Spanish language commercial would reach this segment most effectively.

Some researchers have suggested Hispanics may not differ significantly from Anglos in their consumption behaviors (Minor, 1992; Saegart, Hoover, & Hilger, 1985). The findings of this study support this research in that Hispanics and Anglos may not differ significantly in selected areas of consumption behavior when the product is paint. Perhaps a potential explanation for the lack of differences found in this study is that the Hispanics high in acculturation (HHIA) may be similar in responses to Anglos, which may make noticeable significant differences more difficult to uncover.

The findings of this study suggest a need for future research. First, research should look at different types of products (i.e. value-expressive vs. utilitarian) and whether product type moderates the impact of acculturation. In-store research should be conducted to determine whether in-store media preferences differ. The impact of the Internet and other non-traditional types of media could be studied to determine what factors contribute to effectiveness. Future research could further analyze whether differences exist between sub-groups of Hispanics (i.e., Mexican, Cuban, Puerto Rican). Additionally, future research should incorporate different ethnic groups such as Asian Americans and African Americans.

Potential Limitations

Although the strengths of the study outweigh the limitations, this study has potential limitations. One deals with the newest immigrants. Those Hispanics that have recently immigrated may not have an established address or telephone number, so this group may not be adequately represented. A potential limitation addressed in the methodology stage was the hesitancy for people to provide demographic data. This was addressed by using categories instead of asking open-ended questions. Also, Hispanics that speak Spanish may have been more comfortable with conducting the interview in their primary language and, therefore, were less apprehensive about providing information.

REFERENCES

Bearden, W. O., Netemeyer, R. G., & Mobley, M. F. (1993). *Handbook of marketing scales.* Newbury Park: Sage.

Brislin, R. W. (1970). Back translation for cross-cultural research. *Journal of Cross-Cultural Psychology, 1,* 185-216.

Cohen, R. (1978). Ethnicity: Problem and focus in Anthropology. *Annual Review of Anthropology, 7,* 379-403.

Deshpande, R., Hoyer, W. D., & Donthu, N. (1986). The intensity of ethnic affiliation: A study of the sociology of Hispanic consumption. *Journal of Consumer Research, 13,* 214-220.

Ember, C. R. (1977). Cross-cultural Cognitive Studies. *Annual Review of Anthropology, 6,* 33-36.

Gore, J. P. (1998). Ethnic marketing may become the norm. *Bank Marketing, 30*(9), 12-14.

Hirschman, E. C. (1981). American Jewish ethnicity, its relationship to some selected aspects of consumer behavior. *Journal of Marketing, 45,* 102-110.

Jacoby, J., Johar, G. V., & Morrin, M. (1998). Consumer behavior: A quadrennium. *Annual Review of Psychology, 49,* 319-344.

Jorgensen, J. G. (1979). Cross-cultural comparisons. *Annual Review of Anthropology, 8,* 309-331.

Kara, A., & Kara, N. R. (1996). Ethnicity and consumer choice: A study of Hispanic decision processes across different acculturation levels. *Journal of Applied Business Research, 12*(2), 22-34.

Kim, Y-K., & Kang, J. (2001). The effects of ethnicity and product on purchase decision making. *Journal of Advertising Research, 41*(2), 39-48.

Korgaonkar, P. K., Karson, E. J., & Lund, D. (2000). Hispanics and direct marketing advertising. *The Journal of Consumer Marketing, 17*(2), 137-157.

Mann, J. (2004, March 4). Bilingual Hispanic television viewers prefer programs in Spanish, study finds. *Knight Ridder Tribune Business News*, 1.

Minor, M. (1992). Comparing the Hispanic and non-Hispanic markets: How different are they? *Journal of Services Marketing, 6*(2), 29-32.

Mogelonsky, M. (1995). First language comes first. *American Demographics, 17*:10, 21.

Nielsen Media Research. (2000). *2000 report on television.* New York.

O'Guinn, T. C., & Meyer, T. P. (1983). Segmenting the Hispanic market: The use of Spanish language radio. *Journal of Advertising Research, 23*(6), 9-16.

O'Guinn, T. C., & Faber, R. J. (1985). New perspectives on acculturation: The relationship of general and role specific acculturation with Hispanics' consumer attitudes. In E. C. Hirschman & M. B. Holbrook (Eds.), *Advances in Consumer Research* (12, 113-117). Provo, UT: Association for Consumer Research.

O'Guinn, T. C., & Faber, R. (1986). Advertising and subculture: The role of ethnicity and acculturation in market segmentation. *Current Issues and Research in Advertising, 9*(1), 133-147.

Peñaloza, L. (1994). Atravensando fronteras/Border crossings: A critical ethnographic exploration of the consumer acculturation of Mexican immigrants. *Journal of Consumer Research, 21,* 32-54.

Radio Advertising Bureau. (2002). *Radio marketing guide and fact book.* New York.

Robinson, J. P., Shaver, P.R., & Wrightsman, L.S. (1991). Criteria for scale selection and evaluation. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of Personality and Social Psychological Attitudes* (pp. 1-16). San Diego: Academic Press.

Saegart, J., Hoover, J., & Hilger, M.T. (1985). Characteristics of Mexican American consumers. *Journal of Consumer Research*, 12, 104-109.

Ueltschy, L. C. & Krampf, R.F. (1997). The Influence of acculturation on advertising effectiveness to the Hispanic market. *Journal of Applied Business Research, 13*(2), 87-101.

United States Hispanic Chamber of Commerce. (2004). Retrieved March 25, 2004 from http://www.ushcc.com

Valdés, M. I., & Seoane, M.H. (1995, September). Hispanic buying power. *American Demographics*, 10.

Valencia, H. (1982). Self report measures find elusive Hispanic consumers. *Marketing News, 23,* 19.

Valencia, H. (1985). Developing an index to measure 'Hispanicness'. In E. C. Hirschman & M. B. Holbrook (Eds.), *Advances in Consumer Research* (12, 118-121). Provo, UT: Association for Consumer Research.

Valencia, H. (1989). Hispanic values and subcultural research. *Academy of Marketing Science*, *17*(1), 23-28.

Webster, C. (1990-91). Attitudes toward marketing practices: The effects of ethnic identification. *Journal of Applied Business Research*, *7*(2), 107-116.

Webster, C. (1992). The effects of Hispanic subcultural identification on information search behavior. *Journal of Advertising Research, 32*(5), 54-62.

Denise T. Ogden, Temple University, is an assistant professor of marketing at The Pennsylvania State University (Lehigh Valley). Her research interests include retailing and integrated marketing communication (IMC).

IS TEACHING COMPARATIVE ECONOMIC SYSTEMS NECESSARY?

Tahany R. Naggar, West Chester University of Pennsylvania
Roger E. Bove, West Chester University of Pennsylvania

ABSTRACT

"How can history be interpreted without recognizing the differences between different economic systems? I do not think it is right to praise the logical elegance of a system which becomes self-contradictory when it is applied to the question it was designed to answer" Joan Robinson (1974, p.2).

The purpose of this paper is to review the importance and validity of a Comparative Economic Systems course for American Higher Education. To accomplish this purpose and in an effort to "internationalize" the curriculum at West Chester University of Pennsylvania (WCU), 20 questionnaires were mailed to universities in the State System of Higher Education of Pennsylvania and several universities in the Philadelphia area. In addition, several universities nation wide were contacted by electronic mail. These universities, to name a few, were Harvard, University of Maryland, New York University, University of Chicago, MIT, and several campuses of the University of California, University of Colorado, Colorado State University and Florida State University system. Furthermore, information on internet sites was also analyzed. Results of the questionnaire and of an informal survey of the course are reported.

INTRODUCTION

Corporations are constantly seeking employees with diverse backgrounds and academic degrees. They have long relied on informal networks and face to face or telephone negotiations to complete transactions. After World War II, the global markets experienced advances in telecommunications as well as telemarketing, reduction in trade barriers and transportation costs. The process of globalization and its impact is becoming of greater importance since the collapse of the USSR. Globalization is the interconnection of societies and the interdependence of economies and decision and policy makers. As the world becomes more internationalized, a growing, rather than a declining, interest in comparative economic systems is expected. As long as diversity and globalization are here to stay, the study of different economic systems in theory and practice is essential in the 21st century.

Man fabricates economic systems or institutions. They arise and are modified by laws that are passed, decrees that are issued, contractual arrangements, customs and habits of people and people's opinions of the good and right way of governance. A number of forces determine a nation's economy or economic system:

i. The historical and cultural sources of its people, desires and attitudes;
ii. Its natural resources and its usage of those resources;
iii. Its atmospheric and climate conditions;
iv. The philosophies of its people;
v. Its goals and ideals;
vi. Changes in social, cultural, political and economic aspects;
vii. Trial and errors in its growth and improvement process.

Each economy needs, separately from each of the above forces, to have a complete understanding of the world's economies. Such an endeavor is impossible to achieve during a formal higher education program. Professionals interested in comparative economic systems and the process of economic development perhaps achieve it at a later day. To fully understand the historical change in comparative economic systems, it is essential to turn back the hands of time to more than 25 years ago to the 1970s. Before the 1970s, Comparative Economic Systems was a young discipline unsure of itself. Briefly, there were three systems: capitalism, Marxian socialism and communism.

LITERATURE SURVEY – THE EARLY YEARS AND MODERN ECONOMIC SYSTEMS

A causal glance around countries and continents reveals that various forms of economic organizations provide a variety of livelihoods to its population. At one extreme of the spectrum is a type of economic system, which emphasizes freedom of individual choice by people and business entities.

This system is mainly referred to as "capitalism." However, at the opposite extreme is a type of a system in which society plays the key role in organizing, planning and implementing economic activity. In this type of a system, "full communism," there are no incentives for individuals to work or perform because the individuals are now accustomed to working for the society as a whole. An array of economies, "mixed economies," has a mix of various proportions of individual freedom and social objectives and falls between the two extremes.

These early and general models of economic systems are, in the 21st century, discussed in principles of economics textbooks. In hindsight, instructors should reveal to their students that a more complex array of economic systems would be studied during their junior or senior years or later, since material presented in a principles course is merely a part of a larger whole. Inherent in any presentation of any subject matter is the scarcity of time and effort relative to the amount of important material presented during the learning process.

Capitalism, in its purest theoretical form, did not exist even during the time of classical economists such as Adam Smith, David Ricardo and others, with whom it has been associated. In *An Inquiry into the Nature and Causes of the Wealth of Nations,* published in 1776, Adam Smith did not use the word "capitalism"; instead he referred to "commercial society." Capitalism is an abstract ideal rather than a description of historical situations. It can be distinguished from other economic systems because it is a type of a system in which individuals, singly or jointly, can own privately-owned properties and possess the right to use these resources. Furthermore, inheritance is essential for the existence of private property and provides a powerful incentive for the accumulation of wealth. Freedom of enterprise, competition and a limited role of government are basic institutions of capitalism.

The chief feature of "full" communism is that society, as a whole, owns all natural and manufactured production. Moreover, the common interest of the entire proletariat supersedes individual interests. Society is classless because the owning class has been largely destroyed and absorbed into the working class. The citizens are unable to store private possessions, nor do they deem it necessary. Yet, each person is motivated to produce his or her part in the cooperative undertakings of production. "The immediate aim of the Communists is ...the formation of the proletariat into a class, overthrow of the bourgeois supremacy"according to Marx as indicated in the translation by Ryazanov (1930). The Communist Party would, no doubt, make educational, cultural and economic decisions.

Four types of modern economic systems, namely market capitalism, command capitalism, market socialism and command socialism are theoretically possible. However, in practice, the actual modern economies are variations of these pure types of modern economic systems. These actual modern economies are mixed economic systems. In market capitalism, private firms and households are motivated by self-interest and utility maximization. Command capitalism is characterized by private ownership of production, but state coordination of economic activities. In the 1936 and 1944 Lange-Lerner model (Lerner, 1944), the Central Planning Board performs the functions of the market in market socialism. Command socialism lacks a free market and implies that economic decisions are government mandates. The government has complete authority and control over the economy.

QUESTIONNAIRE AND REPLIES

The letter sent to 20 schools, including all Pennsylvania State System of Higher Education institutions and a number of other schools that drew from a similar student population in New Jersey, as well as the electronic mail, asked a number of questions: (i) if the school taught Comparative Economic Systems, (ii) how often it has been taught, (iii) what prerequisites were demanded, (iv) at what level it was taught, (v) what level faculty were used, (vi) whether it satisfied any university or department requirements and (vii) what text, if any was used.

Only six replies were received by regular mail. However, many more replies were received electronically. Follow-up phone calls seemed to indicate that the majority of schools that did not reply did not teach the course. Our replies indicated that two Pennsylvania State System schools teach the course yearly and that one other school teaches it frequently. The course is often taught by a fairly senior faculty member, which can lead to problems when the faculty member retires. The only prerequisite is the basic micro and macroeconomics courses or a one-semester principles course. The Comparative Economic Systems course is required for some Economics major tracks or for some International Studies majors but, in business schools, must compete with courses like International Marketing. A large number of texts were mentioned as having been used in the past. These are listed in the Appendix. Very few were issued in the last five years.

The typical Comparative Economic Systems course seems to follow the outline of David Kennett's *A New View of Comparative Economics*, the most recent and, apparently, the most used text in the field. Kennett's book came out in 2001 and appeared in a second edition in fall 2003. The text begins in Part One by discussing basic economic institutions but also contrasts economies by indices of economic freedom, competitiveness and corruption. It then gives a historical overview, followed by brief descriptions of contemporary systems. In Part Two, it describes the operation of a market economy and modes of market and government failure. Part Three describes Western European Capitalism, including indicative planning, social democracy and the European Union. In Part Four, attention shifts to the Asian economies; Japan, South Korea and Mainland China are each given individual chapters, followed by a shorter discussion of Singapore, Taiwan and Indonesia and a summary chapter on the Asian Miracle. Part Five discusses Socialism, stressing the Soviet Union and Yugoslavia. Finally, Part Six describes transition, starting with Thatcherism in Britain and the change in Central and Eastern Europe.

A completely different organization of the Comparative Economic Systems Course seems to be implied by recent papers that have appeared under the title "The New Comparative Economics," authored in several versions by Andrei Schleifer, Raphael La Porta and Edward L. Glaeser at Harvard, Florencio Lopez-de-Silanes at Yale and Simeon Djankov at the World Bank with NBER sponsorship. The New Comparative Economics sees Comparative Economics as the study of alternate existing capitalist models. It focuses on the diversity of institutions, especially those regarding private property, and contrasts law and order as delivered by the political system, and conceived of as a method of protecting citizens and their gains from one another, with the rule of law, largely the limitation of government power to expropriate.

In one version, the law and order vs. rule of law approach is seen as a trade-off between disorder and dictatorship. This approach stresses that there is nothing inevitable about the institutions that various nations have but emphasizes that individual histories are important in perceptions of the relative social costs of dictatorship and disorder, so that institutions transplanted from countries like the United States and Britain may not be appropriate for colonies. A private communication from Djankov indicates that the NBER paper is being used in undergraduate courses at Harvard and MIT, but the only available syllabus was that of Gerard Roland at Berkeley for a course entitled "Comparative Economics Systems." Even the title is important. We mention below that we were disappointed to find that many larger schools no longer had the comparative course in their catalogs. Berkeley, like many other schools, had replaced it with a course entitled "Economics of Transition."

In fall 2004, Gerard Roland replaced the transition course with a course with the more traditional name, but, certainly, not traditional content. The economics of transition have been relegated to the last five of 15 lectures, though Roland's book on the transition is the longest reading assigned. Students are expected to read the Schleifer et. al. paper for the introductory lecture. Rather than the examination of individual economies, lectures compare coordination mechanisms, legal systems, financial systems, culture and political systems with emphasis on their effect on economic performance and growth.

This may well represent the future of the Comparative Economic Systems course, but there are three caveats to be considered. First, the degree of synthesis expected of an instructor in such a course is very demanding and it may be hard to find teachers like Roland with the necessary breadth of experience. Second, in view of the demands of employers for students with knowledge of specific areas in which they may be doing business, it may not be desirable to deemphasize particular economies like China, Japan, Russia and the European Union. Third, as mentioned below, Keynes' famous warning about "madmen in authority" may be relevant to forming the thinking of undergraduates and should motivate us not to forget the role of ideology in economic systems. However, a text using Roland's approach would be a major contribution to Economics.

AN INFORMAL SURVEY OF COMPARATIVE ECONOMIC SYSTEMS COURSES TAUGHT

Before the survey mentioned above was initiated, we went to the internet to find out what more recent renditions of the course looked like (See the Appendix). To our surprise, we found out that, in an age of globalization, relatively few college economics departments are teaching Comparative Economic Systems. In many larger schools, the course has been replaced by various Regional Studies courses, a very understandable substitution in schools that are homes of institutes that study different parts of the world. Smaller schools do not have that option, but some managed interesting variations on traditional courses.

Perhaps Dr. Barbara Hopkins at Wright State University taught the most interesting of these courses. This course, Comparative Non-Western Economic Systems, is part of the General Education Program. It does not use a traditional textbook but requires the purchase of a 2001 Oxford University Press book by Tim Allen and Alan Thomas called *Poverty and Development in the 21st Century.* A large number of slides are available from the website, and some parts of this material may be essential if the student is to understand how attitudes toward the economy differ throughout the world. She stresses the religious attitudes of Calvinism, Buddhism and Islam, the last two sympathetically, but not without noting their failings. The words non-western in the title do not prevent her from covering the usual Asian economies, especially Japan, China, Taiwan, Singapore and Hong Kong and from using them and the Asian Crisis to end with a critique of globalization.

Four of the other syllabi that we looked at are not dependent on textbooks. Dr. Satya Gabriel at Mt. Holyoke relies largely on her own writings, but the course seems to require student knowledge of post-structural Marxism, not likely in a business school. A great deal of the emphasis of the course is on China, but she does at least begin to study the Iranian revolution, the Israeli Kibbutz and Mondragon, the Basque mega-cooperative. Paul Hancock at Green Mountain College in Vermont employs a similar Marxian perspective but has students read two articles on Islamic Economics. This reinforces our own feeling that a sympathetic study of religious attitudes toward the economy should be part of any survey of world economies.

Dr. Andrew Larkin at St. Cloud State University in Minnesota divides the year among three books: John McMurtry's *Unequal Freedoms;* Ronald Dore's *Stock Market Capitalism: Welfare Capitalism*; and David C. Korten's *The Post-Corporate World.* The course is conducted without examinations, but requires a one-page reaction to the readings in every class, as well as several five-page papers and one 10-page paper. Style and promptness rules are set carefully. The course starts by developing criteria to judge economic systems, insisting that traditional economic criteria be supplemented by equity and environmental criteria. A history of economic systems follows, and then the usual economies (e.g., Sweden, a formerly Communist Central European Country, the EU, Japan, Russia and China) are quite critically evaluated.

Maria Willumsen, at Florida International University, also teaches without a conventional text but, after having students read Heilbroner's *The Making of Economic Society*, emphasizes the transition process, asking students to read six chapters in Baer and Love's collection, *Liberalization and its Consequences*, and two chapters in Gerard Roland's *Transition and Economics: Politics, Markets and Firms*.

Because Kennett's text, which was new to us at the time, was mentioned favorably in our survey and used by some of the courses we found on the internet (Asaftei, Bumpass, Frantz, Stanfield), we obtained the syllabus of his course at Vassar. He hardly limits his students to his textbook. Most lectures require another reading, often from a text, *The Road to Capitalism: Economic Transformation in Eastern Europe and the USSR* that he co-edited in 1992 but also from World Bank, IMF, EBRD and other sources. Kennett's course is also conducted without conventional exams. The student is expected to write four essays on given questions as take-home exams and a major paper. Students vote on what economies are covered in the last part of the course.

It seems unnecessary to summarize the more conventional courses. However, the efforts that Dr. Judith Smrha at Baker University in Kansas expects of her students seemed notable. Students are expected to present three case studies and to respond to three case studies done by other students, to participate in two special presentations with a German language class, to take nine short quizzes on specific countries and to take a cumulative take-home exam.

CONCLUSION

A revision of the Comparative Economic Systems course at West Chester University will occur. More attention must be given to the dichotomies of the New Comparative Economics and to non-Western, especially Islamic, models. Though it is extremely desirable that Economics majors take International Economics, the International Economics course does not convey to Business majors the diversity of economies or economic thought, and diversity education is one of the goals of our undergraduate curriculum. The closest to the Comparative Economic Systems in reaching diversity goals is Economic Development, which remains a popular course in the WCU curriculum. A History of Economic Thought course was taught, which, at least, gave students the idea that modern ideas about markets are not the only ones that are possible, but the appeal of that course to most Business majors is doubtful. However, ideology is not quite dead and the relationship of ideology/religion to the economic system is not an issue that can be ignored.

Responses to the present economic system that can only be called ideological, like the occasionally expressed belief that markets must be suppressed to allow for popular control of the economic system or the more frequently held opinion that markets can solve every problem, are often found among economists. Perhaps it is important that there be spaces between the political, economic and religious/ideological spheres and that, if these spheres are allowed to affect each other too much, the viability of society can be damaged. To give some examples, central European politicians destroyed any chance of any of the varieties of market socialism working, and in Iran, clerics' control of the political and economic system may do more lasting damage to Islam than it will do to the state or the economy. Of course, the prime example of this is the damage one Georgian bandit did to Marxism.

Economic systems have changed and modified over time. The 1980s to the present time have experienced a strong expansion of economic internationalism. Many European countries have joined the European Union. In the meantime, the United States, Canada, and Mexico established the North American Treaty (NAFTA) in the early 1990s. The process of economic integration shapes political and social institutions, as well as expands the role of multinational corporations. Business decisions made by executives of multinational corporations must be consistent with the type of economic system operating in that specific nation. An ultimate goal of corporate managers is to understand what works and what is acceptable. Employees of multinational corporations need to understand and learn the different types of economic systems and learn the successes and failures of other nations. Obviously, a Comparative Economic Systems course can be an important addition to the curriculum, and it is hoped that the economist's relatively pragmatic viewpoint can give the student a different and tolerant way of looking at the diversity of nations' histories, beliefs and ways of life, while preparing the student to function productively in an increasingly interconnected world.

REFERENCES

Allen, T., & Thomas, A. (2000). *Poverty and development into the 21st Century*. New York: Oxford University Press.

Asaftei, G. (2005). Economics 210 – Comparative economic systems (Syllabus). Retrieved May 20, 2005, from University of Richmond, Economics Department Web site: http://oncampus.richmond.edu/academics/business/departments/economics/Faculty/asaftei/Econ210-Spring05.pdf

Bumpass, D. (2005). Economics 335 (Sam Houston State University) – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Sam Houston State University, Economics Department Web site: http://www.shsu.edu/~eco_dlb/eco335.html

Dore, R. P. (2000). *Stock market capitalism: Welfare capitalism: Japan and Germany versus the Anglo-Saxons*. New York: Oxford University Press.

Frantz, R. (2004). Economics 330 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from San Diego State, Economics Department Web site: http://www-rohan.sdsu.edu/~frantz/E330.Syllabus.htm

Gabriel, S. (2003). Economics 321 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Mount Holyoke College, Economics Department Web site: http://www.mtholyoke.edu/courses/sgabriel/321.htm

Heilbroner, R. L., & Milberg, W. (2001). *The making of economic society* (8th ed.). Englewood Cliffs: Prentice Hall.

Hopkins, B. (2003). Comparative Non-Western Economic Systems (Syllabus). Retrieved April 20, 2004, from Wright State University, Economics Department Web site: http://www.wright.edu/~barbara.hopkins/250/250_2003syl.htm

Kennett, D. (2001). *A new view of comparative economic systems*. New York: Harcourt.

Korten, D. C. (1999). *The Post-Corporate world: Life after capitalism*. Bloomfield, Connecticut: Kumarian Press.

Larkin, A. (2001). Economics 360b – Comparative Economic Systems (Course Description and Syllabus). Retrieved May 20, 2005, from St.Cloud State University, Economics Department Web site: http://web.stcloudstate.edu/lalarkin/courses.html

Lerner, A. (1944). *Economics of control*. New York: McMillan.

McMurtry, J. (1998). *Unequal freedoms: The global market as an ethical system.* Bloomfield, Connecticut: Kumarian Press.

Robinson, J. (1974). *History versus equilibrium.* Thames Paper in Economics. London: Thames Polytechnic.

Roland, G. (2004). Economics 260A – Comparative Economics Systems (Apparently announced as Economics of Transition) (Syllabus). Retrieved May 20, 2005, from University of California, Berkeley, Economics Department Web site: http://elsa.berkeley.edu/users/webfac/groland/e260a_f04/e260a.shtml

Ryazanov, D. (1930). *The Communist manifesto of Marx and Engels.* New York: Harmondsworth.

Smrha, J. A. (2002). EC348 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2003, from Baker University, Economics Department Web site: http://www.bakeru.edu/html/faculty/smrha/ec348/index.html

Stanfield, J. R. (2001). Economics 370 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Colorado State University, Economics Department Web site: http://www.colostate.edu/Depts/Econ/courses/outlines/370syl-stanfield.pdf [2005]

Willumsen, M. (2002). 3003.02 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Florida International University, Economics Department Web site: http://www.fiu.edu/orgs/economics/syllabiS05/ecs3003b-willumsen.doc

Tahany R. Naggar is a professor of economics at West Chester University, West Chester, PA. She received her Ph.D.in Econmoics from the University of Oklahoma. Her other research interests include the economics of developing nations, and the oil and gas industries.

Roger E. Bove is an associate professor of economics at West Chester University. He received his Ph.D. from Harvard University. His other research interests include macroeconomic theory, and the study of nations in the eastern European bloc.

APPENDIX

Angresano, J. (1996). *Comparative economics.* Upper Saddle River: Prentice Hall.

Bornstein, M. (1994). *Comparative economic systems: Models and cases* (7th ed.). Homewood: R.D. Irwin.

Clark, B. S. (1998). *Political economy: A comparative approach.* Westport: Praeger.

Elliot, J. E. (1985). *Comparative economic systems.* Belmont, CA: Wadsworth.

Gardner, S. (1988). *Comparative economic systems.* New York: Holt, Rinehart and Winston.

Gregory, P. R., & Stuart, R. C. (1995). *Comparative economic systems* (5th ed). Boston: Houghton Mifflin.

Haitani, K. (1986). *Comparative economic systems: Organizational and managerial perspectives.* Englewood Cliffs: Prentice Hall.

Kohler, H. (1997). *Economic systems and human welfare.* Cincinnati: South-Western.

Lane, J. E., & Ersson, S. O. (1990). *Comparative political economy.* New York: Printer Publishers.

Lindblom, C. E. (1977). *Politics and markets: The world's political economic systems.* New York: Basic Books.

Loucks, W. N., & Whitney,W. C. (1973). *Comparative economic systems* (9th ed.). New York: Harper and Row.

Neuberger, E. et al. (1976). *Comparative economic systems: A decision-making approach.* Boston: Allyn and Bacon.

Porket, J. L. (1998). *Modern economic systems and their transformation.* New York: St. Martin's Press in association with St. Anthony's College.

Putterman, L. G. (1990). *Division of labor and welfare: An introduction to economic systems.* New York: Oxford University Press.

Rosser, J. B. Jr., & Rosser, M. V. (1995). *Comparative economics in a transforming world economy.* Chicago: Irwin.

Schnitzer, M. C. (2000). *Comparative economic systems* (8th ed.). Cincinnati: South-Western.

Smith, A. (1776). *Wealth of nations*. D.D. Raphael, editor. London: Everyone's Library Series 1991.

Zimbalist, A., Sherman, Howard J., & Brown, Stuart. (1989). *Comparing economic systems: A political-economic approach* (2nd ed.). New York: Harcourt Brace Jovanovich.

Internet Resources - Syllabi

Baetjer, H., Jr. (2005). Economics 323 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Towson University, Economics Department Web site: http://www.towson.edu/~baetjer/courses/syllabus-cs.htm

Block, T. (2000). Econ 43 – Comparative International Economic Analysis (Syllabus). Retrieved May 20, 2005, from Drew University, Economics Department Web site: http://courses.drew.edu/sp2000/ECON43.001

Chaudhuri, B. (2005). Economics 02:220:363:01 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Rutgers University, Economics Department Web site: http://economics.rutgers.edu/ugradprogram/Spring2005Syl/362Chaudhuri.pdf

Cobb, S. L. (2005). Economics 5070 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from University of North Texas, Economics Department Web site: http://www.econ.unt.edu/cobb/studentresources/4100SYL.02C.pdf

Coen, R. M. (2005). Economics 3305-0 – Comparative Economic Systems (Course Description). Retrieved May 20, 2005, from Northwestern University, Economics Department Web site: http://aquavite.northwestern.edu/cdesc/course-desc.cgi?school_id=400&dept_id=417&course_id=1741&quarter=W05

Grier, R. (2004). Economics 4823 (Univ. of Oklahoma) – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from University of Oklahoma, Economics Department Web site: http://faculty-staff.ou.edu/G/Robin.M.Grier-1/compsys.04.pdf

Huffman, S. K. (2004). Economics 370 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Iowa State University, Economics Department Web site: http://www.econ.iastate.edu/classes/econ370/Shuffman/sylabis_05o.html

Hancock, P. (2002). Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Green Mountain College, Economics Department Web site: http://www.vermontel.net/~hancockp/ces%20syllabus.htm

Kennett, D. (2003). Economics 367b – Comparative Economics (Syllabus). Retrieved May 20, 2005, from Vassar College, Economics Department Web site: http://irving.vassar.edu/faculty/dk/Econ367/home.htm.

Lawson, R. A. (2002). Economics 323 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Capital University, Economics Department Web site: http://capital2.capital.edu/faculty/rlawson/econ351spring2002.html

Lotspeich, R. (2000). Economics 442 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from University of Michigan, Economics Department Web site: http://www.umich.edu/~iinet/crees/outreach/lotspeichcompeconsyl.html

MacKenzie, D. (2004).BECO 323 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Ramapo College, Economics Department Web site: http://phobos.ramapo.edu/~dmackenz/classes/Comparative/CESUGSyll.doc

Marangos, J. (2005). Economics 370 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Colorado State University, Economics Department Web site: http://www.colostate.edu/Depts/Econ/courses/outlines/s05-ec370-marangos.pdf

Park, K. H. (2005). UI349 (Southeast Missouri) – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Southeast Missouri State University, Economics Department Web site: http://online.semo.edu/2005spring/ui349%2D74/class/syllabus.htm

Parker, E. (2003). EC 301 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from University of Nevada, Reno, Economics Department Web site: http://equinox.unr.edu/homepage/elliottp/ec301/

Putterman, L. (2005). Economics 158 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Brown University, Economics Department Web site: http://www.econ.brown.edu/fac/Louis_Putterman/courses/ec158.html

Schaniel, W. C. (2001). Economics 4470 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from University of West Georgia, Economics Department Web site: http://www.westga.edu/~econ/syllabi/s014470.pdf

Schute, L. (1999). Economics 412 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from California State Polytechnic University, Pomona, Economics Department Web site: http://www.class.csupomona.edu/ec/ec412.html

Trumbull, W. N. (2003). Economics 454 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from West Virginia University, Economics Department Web site: http://www.be.wvu.edu/divecon/econ/trumbull/home.html

Viksnins, G. J. (2005). Economics 357-01 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Georgetown University, Economics Department Web site: http://www.georgetown.edu/faculty/viksning/courses/econ257_gv.html

Yee, J. (2004). Economics 349 – Comparative Economic Systems (Syllabus). Retrieved May 20, 2005, from Wartburg College, Economics Department Web site: http://www.wartburg.edu/business/syllabi/EC349syl-W02.html

THE IMPACT OF THE TAX REFORM ACT OF 1986 ON THE REAL ESTATE AND SAVINGS AND LOAN INDUSTRIES

Jerry Belloit, Clarion University of Pennsylvania
Anthony Grenci, Clarion University of Pennsylvania

ABSTRACT

The Tax Reform Act of 1986 dramatically restructured many aspects of the taxation of income, particularly income from real estate rentals. Among the unintended consequences of this tax reform was a dramatic reduction in the most probable sales prices of income-producing properties. As a consequence of that reduction in prices, many investment properties experienced situations where the value decline was sufficient to leave a mortgage on the property that was greater than the price the property was likely to sell for. Many property owners in that situation chose to default on their loans. Since the value of the property was less than the mortgage value, significant losses for the lenders occurred. During the years immediately following the legislation, there was a near collapse of the savings and loan industry resulting from these loans' loses.

INTRODUCTION

The Tax Reform Act of 1986 (TRA) had a profound impact upon the real estate industry and as a result, the Savings and Loan Industry. It has often been suggested that the collapse of the industry during the late 1980s and early 1990s was a result of poor management, fraud and incompetent appraisals. This paper will suggest that another substantial reason for the Savings and Loan difficulties during the late 1980s and early 1990s was the losses incurred through the default of real estate loans caused by the loss in values of the properties used as collateral for those loans.

This paper will show how the values decreased by about 29-31% as a result of the reduction in after-tax income from the implementation of the 1986 Tax Reform Act. With typical loan-to-value ratios of 80%, this reduction left little or no equity in many properties. In addition, where there were market weaknesses from overbuilding and a decline in the oil industry, many property owners found that they were unable to collect as much rent as they had forecast. When faced with little or no equity in the properties and negative cash flows, many defaulted. These defaults had an even more negative impact as they began a downward spiral in values as the supply of properties increased. As the lenders sold more properties in an attempt to recover on the defaulted loans, prices were driven downward even more. As prices fell further, more owners found themselves paying on mortgages that were greater than the values of the properties that secured them. This spiraling decline became so severe in some markets that prices dropped as much as 75%.

To understand how this occurred, it is important to return to the end of the Carter Administration in 1980. At that time, the top marginal tax bracket was very high (70%). Taxable income losses from real estate operations could be used to offset earned income without significant limitation. Many doctors and other high income earners sought out real estate investments and structured them so that they would have a positive cash flow, but a negative taxable income primarily because of the depreciation deduction.

Depreciation allowances allowed the taxpayer to elect any class life for their real estate property provided that the life was justified. This might allow a depreciable life for a convenience store of 25-30 years, while an apartment building might suggest a life of 40 years. However, while the structure proper had a longer class life, the taxpayer was allowed to depreciate individual building components at more accelerated rates based again upon justification. For example, the value of the roof covering would be deducted from the value of the overall building, and then it would be depreciated perhaps over 20 years rather than the 40 years for the apartment building. Likewise, the carpeting was segregated and depreciated over five years. This segregation of building components often was extended to the plumbing, the electrical systems, the mechanical systems, paving, painting, etc. Shenkman (1987) suggested that this effectively gave a property with a 33-40 year class life, an effective life of 22 years. Double Declining Balance[1] depreciation was also allowed, resulting in increasing the depreciation deduction during the early years of the asset's life.

With the major overhaul in the tax code implemented during the Reagan Administration in 1981, the attractiveness of real estate as a tax shelter was substantially increased. The depreciation calculation was significantly changed in that it allowed a larger depreciation deduction. Taxpayers were relieved of the obligation and expense of justifying class lives, while both double declining balance depreciation and segregating building components were no longer available for new acquisitions. However, the class life for real estate was established under the Accelerated Cost Recovery System (ACRS) at 15 years. With Shenkman's estimate of an effective 22-year class life pre-ACRS, this change resulted in about a 47% increase in the depreciation deduction over what it would be under the straight-line method. While taxpayers who opted for double-declining balance would not have benefited as greatly under ACRS during the early years of the class life, nevertheless their depreciation deduction was enlarged.

At the onset of the 1981 Tax Reform Act, market interest rates were 16.82% (Federal Home Loan Mortgage Corporation data for 1981). Just prior to the implementation of the Tax Reform Act of 1986, market rates had fallen to 10.18%. From 1981 to 1986, the ACRS class life ratcheted upward from 15 to 19 years thereby reducing the depreciation deduction and making new acquisitions less beneficial from a tax standpoint. However, the falling interest rates reduced the actual interest expense of ownership. The net result of lower interest costs, offset by the reduction in the depreciation tax deduction, was still a significant increase in the after-tax cash flow afforded by real property investments. Consequently, there was a construction boom that lead to a significant increase in supply in many more popular markets.

THE TAX REFORM ACT OF 1986

The Tax Reform Act of 1986 (TRA)[2] was sponsored by Representative Richard Gephardt (D-MO) and Senator Bill Bradley (D-NJ) and signed into law on October 22, 1986 by President Ronald Reagan. In his speech before the signing, Reagan remarked, "I feel like we just played the World Series of tax reform – and the American people won."[3] Although the TRA included sweeping changes to many areas of tax law, below is a summary of the major changes that had the potential to affect the value of real estate.

- Changes to the Marginal Income Tax Rates

The TRA placed all individual taxpayers into two brackets: 28% and 15%. Previously there had been more than a dozen tax brackets. The top marginal tax rates fell from 50% to 28%, which is a 44% drop. The lowest tax rates increased from 11% to 15%, which is a 36% increase.

- Passive Loss Limitation Rules

Losses generated from passive activity (activities in which the taxpayer did not materially participate) were no longer available to offset gains from non-passive activities. Rental of real property is generally classified as passive income regardless of the extent of the owner-taxpayer's participation. However, if the taxpayer materially participates in the rental activity,[4] up to $25,000 of the passive losses may be used to offset earned income. This particular provision had an egregious result for many taxpayers who had purchased significant real estate investment properties to shelter active income. Real estate investments that had positive cash flows, yet negative taxable incomes, were limited as to their future ability to shelter active income. In effect in many cases, it was retroactive in penalizing taxpayers in this circumstance.

- Lengthening the Recovery Period for Real and Personal Property

The recovery period (useful life) for depreciable assets was increased dramatically. Real estate could no longer be depreciated in 19 years as it could be just before the TRA. Under the 1986 law, it was to be depreciated over 27½ years for residential and 31½ years for non-residential properties. Most personal property that would be used in real estate had been depreciated over three or five years before the TRA. Now it had to be depreciated over five or seven years.

- Repeal of Non-mortgage Interest as an Itemized Deduction

Before the 1986 Act, any interest expense was an itemized deduction. After the TRA, only mortgage interest was included as an itemized deduction. This put market pressure for mortgage interest rates to rise and non-mortgage interest to fall due to their new status of desirability/non-desirability.

- Repeal of Preferential Treatment of Capital Gains

Only 40% of capital gains had been taxed before TRA. Under TRA, capital gains were 100% taxable. Since the maximum tax rate before TRA was 50%, the maximum effective tax rate on the capital gain was 20% (40% times 50%). Under the TRA, with the repeal of the 60% capital gains exclusion, the effective maximum capital gains tax rate was 28%.

- Elimination of the Investment Tax Credit

Before TRA, an Investment Tax Credit (ITC) of 10% was given for investment in certain personal property that could be used in real estate. That credit was eliminated with the passage of the TRA.

- Low-income Housing Tax Credit

A Low-income Housing Tax Credit was created in the TRA to offset the anticipated ill-effects the TRA would have on the investment in low income real estate projects.

- Restriction on Banks' Write-off of Bad Debt

Before TRA, banks could write off as a tax deduction their allowance for (anticipation of) bad debt. After TRA, larger (more than $400 million in total assets) banks were permitted to write off only actual bad debts.

EXAMPLES OF THE IMPACT TRA HAD ON REAL ESTATE VALUE

To demonstrate the impact of the TRA on real estate values, an apartment building example and an office building example are given. In each case, the investment value of the property will be estimated assuming the purchase of a property under the tax law existing just before TRA and then under the TRA. These two types of properties were chosen because of the difference of how residential and commercial properties are treated under the tax law. The projects had similar expected return-on-investments commensurate with those available at the time. A detailed five-year cash flow analysis for each project, its assumptions and its expected profitability under each tax code are included in the appendix.

The apartment project is typical of the kind of property that provides an appropriate tax shelter for investors before TRA 1986. It was analyzed using the average market interest rates and financing terms commonly available in 1986. The project is a 40 unit apartment building with a purchase price of $1,606,000. Land value is estimated at 15% of the sales price. (Land value typically ranges between 10-20% of the value of most properties.) The investor's pre-1986 marginal tax rate was assumed to be 50%. That was lowered to 28% by the 1986 TRA.

The office project is also typical of the kind of property investors seeking a tax shelter pre-1986 TRA would have sought. Again, it was analyzed using the prevailing market interest rate and terms commonly available at the time. The project was a three-story, 12,000 sq. feet, suburban office building. Land was again estimated at 15%. The building purchase price was $1,250,000. The same assumptions were made about the taxpayer's income tax rates.

Table A summarizes the investments under the pre-1986 TRA and the 1986 TRA. An examination of these cash flows demonstrates how dramatically the after-tax cash flow for the investor was reduced. The after-tax cash flow was reduced by 25% and 26% for the apartment and office investments, respectively. This reduction in value was solely due to the Tax Reform Act of 1986. More disturbing, when the investments are examined for their investment values before and after the implementation of the TRA, the investment values for both types of investments fell below the values of the mortgages on each property.

For the apartment building example, the investment value dropped from $1,606,164 to $1,209,996, exceeded by the mortgage value of $1,284,931.

For the office building example, the investment value of the property dropped from $1,250,000 to $922,063, exceeded by the mortgage value of $994,354.

This is particularly significant in that the investment value gives an indication of what investors would pay to acquire the property if available for sale, thus it is indicative of its market value. In times of financial difficulty, the likelihood of default substantially increases when the balance due on the mortgage is greater than the market value of the property.

CONCLUSION

The collapse of the Savings and Loan Industry has been attributed to many things, but this paper demonstrates that a contributing factor for their financial failures was the decline in the collateral base of their commercial real estate loans caused primarily by the changes in the 1986 Tax Reform Act. This Act not only caused the decline in property values outright, but also because the provision limiting the offset of active income by passive losses was not restricted to new acquisitions, many taxpayers found that previously purchased real estate assets no longer afforded the tax sheltering benefits. As a consequence, many chose to liquidate those assets. This resulted in a further increase in the supply of investment properties that lead to a further drop in real estate prices.

REFERENCES

Shenkman, M. M. (1987). Investing in Real Estate After Tax Reform. *Chief Executive, 39,* 54-57.

Jerry D. Belloit is a professor of finance and real estate at Clarion University of Pennsylvania. He received his Ph.D. in Real Estate and Urban Analysis from the University of Florida. His other research interests are real property law, financial institutions, and urban analysis.

Anthony F. Grenci is a professor of accountancy at Clarion University of Pennsylvania, Clarion, PA. He received his Ph.D. in Accounting from the University of Pittsburgh. His other research interests include various applications of Benford's Law, the financial markets, and information technology.

Table A

	Apartment		Office	
	Pre-1986 TRA	1986 TRA	Pre-1986 TRA	1986 TRA
Rent Revenue	$174,096	$174,096	$136,864	$136,864
Less Interest	$131,393	$131,393	$101,679	$101,679
Less Loan Points	$3,855	$3,855	$2,983	$2,983
Less Depreciation	$71,855	$47,577	$53,591	$32,325
Taxable Income	-$30,012	-$8,728	-$21,389	-$123
Tax Rate	50%	28%	50%	28%
Taxes	-$15,006	-$2,444	-$10,695	-$34
Rent Revenue	$174,096	$174,096	$136,864	$136,864
Less Annual Debt Service	$138,171	$138,171	$106,925	$106,925
Less Income Taxes (Savings)	-$15,006	-$2,444	-$10,695	-$34
After-Tax Cash Flow	$50,931	$38,368	$40,634	$29,973
After-Tax Overall Rate[5]	0.031709579		0.032506973	
Given Investment Value	$1,606,164		$1,250,000	
Calculated Value		$1,209,996[5]		$922,063[6]
Mortgage	$1,284,931	$1,284,931	$994,354	$994,354
Loan-to-Value Ratio	80%	106%	80%	108%
Expected IRR	16.42%	13.08%	16.90%	13.65%

[1] Double Declining Balance Depreciation was a depreciation method that substantially accelerated the depreciation deduction in the earlier years of the investment in favor of reduced deductions in later years. The procedure involved calculating the original tax basis of the property divided by the useful life of the property and then multiplying that amount by two. The next year, the same calculation would occur after subtracting the depreciation taken the previous year from the basis of the property.

[2] PL99-514

[3] The Official Web Site of the Ronald Reagan Presidential Library http://www.reagan.utexas.edu/resource/speeches/1986/102286a.htm

[4] A taxpayer-property owner can materially participate if the taxpayer-property owner either functions as the property manager or is the employer of the property manager. Thus a taxpayer-property owner who hires a property management firm to manage the property (rent and maintain) is still materially participating.

[5] The After-tax Overall Rate is computed by dividing the After-Tax Cash Flow by the value of the property. The ratio can then be used to compute the investment value of similar investment properties by dividing their After-tax Cash Flow by the After-Tax Overall Rate. Investment Value = After-Tax Cash Flow ÷ After-tax Overall Rate.

[5] $1,209,996=$38,368÷0.031709579

[6] $922,063=$29,973÷0.032506973

APPENDIX

PRE-1986 TRA APARTMENT INVESTMENT							
Cost	$1,606,164		Operating Expenses		35%	V&C	4%
# of Units	Mo. Rent	Annual Rent	Rental Increases		3%		
30	550	$198,000		Land	15%	$240,925	
10	675	$81,000		Building		$1,365,239	
		$279,000		Owner's MTR		50%	
Holding Period		5	YRs	Depreciable Life		19	
				Month Placed in Service		1	
Capitalization Rate		10.9%		Selling Expenses		8.0%	
Term	10		Interest	10.25%		Points	3%
Amort. Period	30		Pay/Yr	12		DSCR	1.26
Principal	$1,284,931		Points	$38,548		ADS	$138,171
	Year	1	2	3	4	5	6
Gross Potential Income		$279,000	$287,370	$295,991	$304,871	$314,017	$323,437
Less Vacancy		$11,160	$11,495	$11,840	$12,195	$12,561	$12,937
Adjusted Gross		$267,840	$275,875	$284,151	$292,676	$301,456	$310,500
Less Expenses		$93,744	$96,556	$99,453	$102,437	$105,510	$108,675
Net Operating Income		$174,096	$179,319	$184,698	$190,239	$195,947	$201,825
Less Annual Debt Service		$138,171	$138,171	$138,171	$138,171	$138,171	
Before Tax Cash Flow		$35,925	$41,147	$46,527	$52,068	$57,775	
Less Mortgage Interest		$131,393	$130,664	$129,858	$128,964	$127,975	
Less Depreciation		$68,861	$71,855	$71,855	$71,855	$71,855	
Less Points Expensed		$3,855	$3,855	$3,855	$3,855	$3,855	
Tax Income		-$30,012	-$27,055	-$20,869	-$14,435	-$7,738	
Taxes		-$15,006	-$13,528	-$10,434	-$7,217	-$3,869	
Before Tax Cash Flow		$35,925	$41,147	$46,527	$52,068	$57,775	
Less Taxes		-$15,006	-$13,528	-$10,434	-$7,217	-$3,869	
After-tax Cash Flow		$50,931	$54,675	$56,961	$59,285	$61,644	
Sale Price (Year 6 NOI/Capitalization Rate)				$1,854,839			
Less Selling Expenses				-$148,387			
Amount Realized				$1,706,451			
Less Mortgage Payoff				-$1,242,929			
Before-Tax Cash Flow from Reversion				$463,523			
Basis Calculation			Cost				$1,606,164
			Accumulated Depreciation Taken				$356,280
			Adjusted Basis				$1,249,884
Amount Realized				$1,706,451			
Less Adjusted Basis				$1,249,884			
Capital Gain				$456,567			
Less Exclusion (60%)				$273,940			
Taxable Gain				$182,627			
Less Unexpensed Loan Points				$19,274			
Taxable Income from Reversion				$163,353			
Tax on Reversion				$81,676			
Before-Tax Cash Flow from Reversion				$463,523			
Less Tax on Reversion				$81,676			
After-Tax Cash Flow from Reversion				$381,846			
Expected Holding Period Internal Rate of Return				16.42%			

APARTMENT INVESTMENT UNDER 1986 TRA							
Cost	$1,606,164		Operating Expenses		35%	V&C	4%
# of Units	Mo. Rent	Annual Rent	Rental Increases		3%		
30	550	$198,000		Land	15%	$240,925	
10	675	$81,000		Building		$1,365,239	
		$279,000		Owner's MTR		28%	
Holding Period		5	YRs	Depreciable Life		27.5	
				Month Placed in Service		1	
Capitalization Rate		10.9%		Selling Expenses		8.0%	
Term	10		Interest	10.25%		Points	3%
Amort. Period	30		Pay/Yr	12		DSCR	1.26
Principal	$1,284,931		Points	$38,548		ADS	$138,171
	Year	1	2	3	4	5	6
Gross Potential Income		$279,000	$287,370	$295,991	$304,871	$314,017	$323,437
Less Vacancy		$11,160	$11,495	$11,840	$12,195	$12,561	$12,937
Adjusted Gross		$267,840	$275,875	$284,151	$292,676	$301,456	$310,500
Less Expenses		$93,744	$96,556	$99,453	$102,437	$105,510	$108,675
Net Operating Income		$174,096	$179,319	$184,698	$190,239	$195,947	$201,825
Less Annual Debt Service		$138,171	$138,171	$138,171	$138,171	$138,171	
Before Tax Cash Flow		$35,925	$41,147	$46,527	$52,068	$57,775	
Less Mortgage Interest		$131,393	$130,664	$129,858	$128,964	$127,975	
Less Depreciation		$47,577	$49,645	$49,645	$49,645	$49,645	
Less Points Expensed		$3,855	$3,855	$3,855	$3,855	$3,855	
Tax Income		-$8,728	-$4,845	$1,341	$7,775	$14,472	
Taxes		-$2,444	-$1,357	$375	$2,177	$4,052	
Before Tax Cash Flow		$35,925	$41,147	$46,527	$52,068	$57,775	
Less Taxes		-$2,444	-$1,357	$375	$2,177	$4,052	
After-tax Cash Flow		$38,368	$42,504	$46,152	$49,891	$53,723	
Sale Price (Year 6 NOI/Capitalization Rate)				$1,854,839			
Less Selling Expenses				-$148,387			
Amount Realized				$1,706,451			
Less Mortgage Payoff				-$1,242,929			
Before-Tax Cash Flow from Reversion				$463,523			
Basis Calculation			Cost				$1,606,164
			Accumulated Depreciation Taken				$246,157
			Adjusted Basis				$1,360,007
Amount Realized				$1,706,451			
Less Adjusted Basis				$1,360,007			
Capital Gain				$346,444			
Less Unexpensed Loan Points				$19,274			
Taxable Income from Reversion				$327,170			
Tax on Reversion				$91,608			
Before-Tax Cash Flow from Reversion				$463,523			
Less Tax on Reversion				$91,608			
After-Tax Cash Flow from Reversion				$371,915			
Expected Holding Period Internal Rate of Return				13.08%			

PRE-1986 TRA OFFICE INVESTMENT							
Cost	$1,250,000		Operating Expenses		35%	V&C	6%
# of Sq. Ft.	Rent	Annual Rent	Rental Increases		3%		
8000	21	$168,000		Land	15%	$187,500	
4000	17	$68,000		Building		$1,062,500	
		$236,000		Owner's MTR		50%	
Holding Period		5	YRs	Depreciable Life		19	
				Month Placed in Service		1	
Capitalization Rate		10.9%		Selling Expenses		8.0%	
Term	10		Interest	10.25%		Points	3%
Amort. Period	30		Pay/Yr	12		DSCR	1.26
Principal	$1,284,931		Points	$38,548		ADS	$138,171
	Year	1	2	3	4	5	6
Gross Potential Income		$279,000	$287,370	$295,991	$304,871	$314,017	$323,437
Less Vacancy		$11,160	$11,495	$11,840	$12,195	$12,561	$12,937
Adjusted Gross		$267,840	$275,875	$284,151	$292,676	$301,456	$310,500
Less Expenses		$93,744	$96,556	$99,453	$102,437	$105,510	$108,675
Net Operating Income		$174,096	$179,319	$184,698	$190,239	$195,947	$201,825
Less Annual Debt Service		$138,171	$138,171	$138,171	$138,171	$138,171	
Before Tax Cash Flow		$35,925	$41,147	$46,527	$52,068	$57,775	
Less Mortgage Interest		$131,393	$130,664	$129,858	$128,964	$127,975	
Less Depreciation		$68,861	$71,855	$71,855	$71,855	$71,855	
Less Points Expensed		$3,855	$3,855	$3,855	$3,855	$3,855	
Tax Income		-$30,012	-$27,055	-$20,869	-$14,435	-$7,738	
Taxes		-$15,006	-$13,528	-$10,434	-$7,217	-$3,869	
Before Tax Cash Flow		$35,925	$41,147	$46,527	$52,068	$57,775	
Less Taxes		-$15,006	-$13,528	-$10,434	-$7,217	-$3,869	
After-tax Cash Flow		$50,931	$54,675	$56,961	$59,285	$61,644	
Sale Price (Year 6 NOI/Capitalization Rate)				$1,854,839			
Less Selling Expenses				-$148,387			
Amount Realized				$1,706,451			
Less Mortgage Payoff				-$1,242,929			
Before-Tax Cash Flow from Reversion				$463,523			
Basis Calculation			Cost				$1,250,000
			Accumulated Depreciation Taken				$356,280
			Adjusted Basis				$893,720
Amount Realized				$1,706,451			
Less Adjusted Basis				$893,720			
Capital Gain				$812,731			
Less Exclusion (60%)				$487,639			
Taxable Gain				$325,092			
Less Unexpensed Loan Points				$19,274			
Taxable Income from Reversion				$305,818			
Tax on Reversion				$152,909			
Before-Tax Cash Flow from Reversion				$463,523			
Less Tax on Reversion				$152,909			
After-Tax Cash Flow from Reversion				$310,613			
Expected Holding Period Internal Rate of Return				16.90%			

OFFICE INVESTMENT UNDER 1986 TRA							
Cost	$1,250,000		Operating Expenses		35%	V&C	6%
# of Sq. Ft.	Rent	Annual Rent	Rental Increases		3%		
8000	21	$168,000		Land	15%	$187,500	
4000	17	$68,000		Building		$1,062,500	
		$236,000		Owner's MTR		28%	
Holding Period		5	YRs	Depreciable Life		31.5	
				Month Placed in Service		1	
Capitalization Rate		10.9%		Selling Expenses		8.0%	
Term	10		Interest	10.25%		Points	3%
Amort. Period	30		Pay/Yr	12		DSCR	1.26
Principal	$1,284,931		Points	$38,548		ADS	$138,171
	Year	1	2	3	4	5	6
Gross Potential Income		$224,000	$230,720	$237,642	$244,771	$252,114	$259,677
Less Vacancy		$13,440	$13,843	$14,258	$14,686	$15,127	$15,581
Adjusted Gross		$210,560	$216,877	$223,383	$230,085	$236,987	$244,097
Less Expenses		$73,696	$75,907	$78,184	$80,530	$82,945	$85,434
Net Operating Income		$136,864	$140,970	$145,199	$149,555	$154,042	$158,663
Less Annual Debt Service		$106,925	$106,925	$106,925	$106,925	$106,925	
Before Tax Cash Flow		$29,939	$34,045	$38,274	$42,630	$47,117	
Less Mortgage Interest		$101,679	$101,116	$100,491	$99,800	$99,035	
Less Depreciation		$32,325	$33,730	$33,730	$33,730	$33,730	
Less Points Expensed		$2,983	$2,983	$2,983	$2,983	$2,983	
Tax Income		-$123	$3,141	$7,994	$13,042	$18,294	
Taxes		-$34	$879	$2,238	$3,652	$5,122	
Before Tax Cash Flow		$29,939	$34,045	$38,274	$42,630	$47,117	
Less Taxes		-$34	$879	$2,238	$3,652	$5,122	
After-tax Cash Flow		$29,973	$33,165	$36,036	$38,978	$41,994	
Sale Price (Year 6 NOI/Capitalization Rate)				$1,455,623			
Less Selling Expenses				-$116,450			
Amount Realized				$1,339,173			
Less Mortgage Payoff				-$961,850			
Before-Tax Cash Flow from Reversion				$377,323			
Basis Calculation			Cost				$1,250,000
			Accumulated Depreciation Taken				$167,245
			Adjusted Basis				$1,082,755
Amount Realized				$1,339,173			
Less Adjusted Basis				$1,082,755			
Capital Gain				$256,418			
Less Unexpensed Loan Points				$14,915			
Taxable Income from Reversion				$241,503			
Tax on Reversion				$67,621			
Before-Tax Cash Flow from Reversion				$377,323			
Less Tax on Reversion				$67,621			
After-Tax Cash Flow from Reversion				$309,702			
Expected Holding Period Internal Rate of Return				13.65%			

Key to Terms and Abbreviations Used in Example Investment Analysis

V&C: Vacancy and Collection Loss Percentage
MTR: Marginal Tax Rate of a typical investor
DSCR: Debt Service Coverage Ratio (Net Operating Income ÷ Annual Debt Service)
ADS: Annual Debt Service (Total of Mortgage payments during the year)
Reversion: The conclusion of the investment
Holding Period: That period of time the investment is owned by the investor
Capitalization Rate: The rate used to capitalize the expected net income of the year following the end of the investment. It is used to estimate the sales price of the property at the conclusion of the investment.

PENNSYLVANIA JOURNAL OF
BUSINESS AND ECONOMICS
Clarion University of Pennsylvania
College of Business Administration
Clarion, PA 16214