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## **TOOLS FOR MANAGING STUDENT TEAMS**

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### **ABSTRACT**

*As a method for enhancing students' understanding of a subject, and developing interpersonal skills, team-based learning is often employed in the classroom. This article uses the stages of group development as a framework for investigating useful tools that promote student team effectiveness. Two tools, "team charter" and "peer evaluation" are described in operational detail, ready for faculty use. Student learning teams – a mainstay of cooperative learning – are increasingly the pedagogical innovation of choice, and a supportive literature is developing around this approach (Michaelsen, Knight, & Fink, 2004; Oakley, Felder, Brent, & Elhaji, 2004; Stein & Hurd, 2000; see Boatman, 2004, for a current annotated bibliography). Some of the literature is quite practical (Carr, Herman, Keldsen, Miller, & Wakefield, 2005; Strbiak & Paul, 1998), while some of the literature focuses on the theory behind student team learning (Harkins & Jackson, 1985). This article aims at contributing to this body of literature and supporting professors who are trying to launch and develop effective student teams.*

### **INTRODUCTION**

Exactly why some groups become highly effective teams and others do not has been a question examined in a number of contexts, including student groups. While research and theory provide general causal factors, it is unclear which are operative in any given situation. The complexity and context varies with each situation. The research on groups and teams (Hackman, 1990; McGrath, 1984) can be divided into two categories: those where the variables can be controlled (such as who will be on the team, the purpose of the team, and team "structure"), and those involving variables over which we have little or no direct control (such as team spirit, cohesion, motivation, commitment, and trust).

Unfortunately, most of what differentiates an effective team from a mere group of individuals seems to fall into the second category. The good news is that while teams are not predictable and mechanistic, there are basic building blocks which groups can use in their quest to improve performance and effectiveness. This paper discusses two of those methods – team chartering and peer evaluation – as tools that faculty can use to enhance as well as assess team performance.

### **Stages of Team Development**

The well-accepted model of team development proposes that teams evolve through five stages: forming, storming, norming, performing, and adjourning (Tuckman, 1965; Tuckman & Jensen, 1977). It has been proven by extensive research that the most productive teams go through a process of preparation and growth through several stages. The two tools discussed here are best employed at different stages of team development: team chartering at the forming and norming stages and peer evaluation at the performing and adjourning stages.

The team process starts with a forming stage when team members strive to gain mutual acceptance, and get to know other members' personal views and abilities (Booth-Butterfield, Booth-Butterfield, & Koester, 1988). Because members are generally anxious and uncertain, the mood tends to be both formal and congenial. In addition, team members may be unfamiliar with others in the group; consequently a good deal of time involves team members making inquiries about personal issues before addressing the task at hand.

Once members feel that they know the other members of the group and feel comfortable with their own group membership, the group evolves into the next stage of development, storming. As the name implies, this stage is typically characterized by conflict and confrontation (Luthans, 2005). While at this stage members are in general agreement as to the goal of the group, they struggle with one another in clarifying procedures and processes and in identifying members' roles. Characteristic behaviors experienced by teams at this stage include expressions of hostility, formation of cliques, challenges or criticisms of group members' ideas, and ignoring team norms (e.g., missing meetings or failing to complete assignments) (Stein & Hurd, 2000).

Team chartering provides a structure to facilitate and expedite the team's maturity through the forming and storming stages. Teams can

be more effective throughout all stages of development when goals, roles and procedures are in place from the beginning.

### **TEAM CHARTERS**

The idea of teams creating their own “charter” evolved in an introductory management course during the 1990’s. This team chartering process is based in part on theory and research findings about effective work teams (Forsyth, 1990) - including student work teams (Michaelsen, et. al., 2004; Oakley et. al., 2004; Stein & Hurd, 2000) and in part on practical experience with hundreds of student learning teams and on-the-job work teams since 1990. Student learning teams were used extensively in the management class, but it often took too long to get the teams fully operational. The typical team in a learning situation strives to deliver a product that has been assigned as a learning task. This focus often prevents the individuals on a team from recognizing that to move from a group which still tends to function on an individual level, to a team that is an effective work unit, requires the accomplishment of a process that considers every team member and the best contribution that each team member is able to make. Having teams develop a charter in the first few weeks solves this problem.

Besides serving as a launching pad, a team charter serves several other functions. First, it formally acknowledges the establishment of the team and defines shared responsibilities and guidelines for holding members mutually accountable. Second, it recognizes a certain delegation of authority from the professor to the students as a cooperative unit. In short, a charter is a structure for accomplishment that launches student groups into the work of the course in a timely and effective manner.

### **Theoretical Model of Team Chartering**

Team chartering is based on the theory that groups become effective teams through thoughtful design and conscious creation in building on a foundation of three key elements: Goals, Roles and Procedures (GRP) which in turn set the stage for Interpersonal relationships (I) and general group dynamics and effectiveness. The original idea of GRPI can be traced back to Beckhard (1972) and took pedagogical form a decade later in an organizational psychology textbook (Kolb, Rubin, & McIntyre, 1984).

The model could be symbolized as G->R->P->I to indicate its hierarchical nature in that each variable depends on the one preceding it. For example, the team must be clear about the task to be accomplished (a team goal) before deciding who should accomplish it (a team member's role). We use the simpler form of **GRP→I**, however, to emphasize the linear relationships between goals, roles, and procedures, and how they cumulatively contribute to, but do not directly determine, interpersonal issues. The **GRP→I** is not only a building block for developing an effective team, it is also a conceptual tool that can aid in explaining and solving interpersonal problems within a team. The model says that when there are problems with team performance, check first to see if goals are clear, roles are unconflicted and unambiguous, and procedures or ground rules are being followed. In other words, it considers that difficulties between people are often the result of poor infrastructure and not necessarily personality conflict or “bad chemistry.”

The charter format that was developed in the introductory management course is based on the **GRP→I** with a few modifications. It requires that the students, as a team, determine their identity, desired future, roles and procedures, and work plan by answering four questions: Who are we? Where do we want to go? How will we operate? What needs to be done by when? The last page of the charter is reserved for a commitment statement signed by each team member and then by the professor once the charter is found to meet specifications. These are described in detailed guidelines for creating the team charter which follows.

### **Developing a Team Charter**

Team identity is established by having the teams declare a name, motto, and mascot. Cohesion among team members is furthered by having each team present their identity to the class in the form of a jingle, skit, or commercial.

In defining their desired future the teams formulate a vision statement, a mission, and a set of goals. A vision statement answers questions such as: “To what do you aspire?” or “What larger values and ideals does your team seek to realize?” A vision, in contrast to mission, is an idealized future state that is never fully attained but is worth aiming for. For example, true excellence in quality, in marriage, or in friendship is something worth striving for, even if never actually reached. A vision provides focus, direction, and energy. It is expressed in a short, powerful

sentence or two. Within the context set by the vision, a mission addresses questions such as: "Who are you?" or "What are you here to do?" In short, to what overall purpose is the team aligned? A vision statement creates the context and overall energizing direction. The mission makes clear how one team differs in purpose from another team committed to the same vision. It creates the framework in which to set specific goals that tell a team how well it is doing in achieving its purpose.

Goals, based on the mission/purpose, tie down the future in operational terms. What specifically does the team want to achieve? What outcomes are important for the team? Besides defining specific objectives, the "what" of goals, an effective goal statement has two other parts. First, it should identify the operations or tasks that will be undertaken to produce the desired result. This is the "how" of goals. For example, if the objective is to learn about teamwork, one means for doing this might be to complete and discuss all assigned reading with a teammate before class. Second, the team needs a metric or some means of measuring "how well" it is performing, or how far along it is toward its goal. Remember that effective, usefully stated goals are "S.M.A.R.T." - specific, measurable, aligned, reachable, and time bound. A goal of "90% on 7 knowledge checks in the next 10 weeks" gives the team much more power and a better target than "do well on the knowledge checks."

Roles and procedures, or ground rules, may be suggested (meeting leader, scribe, time keeper, etc.) or may be required (administrative, social, and task ground rules), so there is room for students to invent their own mechanisms. A role is what members expect those in a particular position to do in achieving team goals. Student teams often waste time because roles are ambiguous and it is unclear who will complete the duties of certain roles. This is particularly evident at meetings - especially the early ones. Table 1 shows some of the critical roles for meetings. The charter should specify who will perform them.

**Table 1**  
**Team Roles**

ROLE	RESPONSIBILITIES
Coordinator	<ul style="list-style-type: none"><li>• Sets agenda in advance</li><li>• Manages the work tasks or "business" of the meeting</li><li>• Focuses on getting the job done; the "what" of teamwork</li></ul>
Scribe	<ul style="list-style-type: none"><li>• Records results of meetings</li></ul>
Timekeeper	<ul style="list-style-type: none"><li>• Tracks the time set for agenda items - helps team keep on schedule</li></ul>
Facilitator	<ul style="list-style-type: none"><li>• Helps people communicate and cooperate</li><li>• Checks to see that all points of view are expressed and everyone has a chance to participate</li><li>• Ideally the facilitator is not a member of the team, but a team member (or members) can temporarily assume this role if the team agrees</li><li>• Focuses on helping people work together smoothly; the "how" of teamwork</li></ul>
Team Member	<ul style="list-style-type: none"><li>• Includes everyone</li><li>• Contributes fair share</li><li>• Supports others</li><li>• Works for the best of the team, not just own opinion</li></ul>

Ground rules state how team members intend to work together. Although often viewed as superfluous and unnecessary, explicit ground rules are important as guidelines and as indicators. All teams develop ways of making decisions, holding meetings, and communicating, but effective teams have developed ways of working together that support goal achievement. It is more likely that teams will develop more effective procedures more quickly if they talk about them rather than waiting to see what evolves. As shown in Table 2, some ground rules will be administrative, others task-related, and still others indicate how team members want to relate to each other.



**Table 2**  
**Ground Rules for Working Together**

GROUND RULES
Administrative <ul style="list-style-type: none"><li>• Where will we meet? How often? What time will we start?</li><li>• How should we handle tardiness?</li><li>• How will we monitor our progress (on both task and process?)</li></ul>
Task Related <ul style="list-style-type: none"><li>• How will we make decisions? (majority rule, consensus, or combination?)</li><li>• How will we handle disagreement? (encourage differences to be expressed, try to learn from different opinions, etc.)</li><li>• What should be our guidelines regarding participation?</li><li>• How will we do problem solving? (follow brainstorming guidelines?)</li></ul>
Interpersonal <ul style="list-style-type: none"><li>• How do we want to relate to/treat each other?</li><li>• What are we doing to increase trust and work smoothly with each other?<ul style="list-style-type: none"><li>○ seek to understand, not judge</li><li>○ listen with respect</li><li>○ treat others as you wish to be treated</li></ul></li></ul>

The work plan forces students to think through the tasks and subtasks necessary to complete their projects successfully during the semester. Here the students get some experience with project planning and management. The idea is simple: start with the expected deliverables and work backwards, identifying what tasks, from large to small, need to be done and at what point in time they will be produced. This is called "task breakdown analysis" because tasks are broken into subtasks and these in turn into sub-subtasks, and so forth. Results are placed over a timeline, with milestones established to mark progress.

A charter and a work management plan allow a team to produce high quality products while monitoring its progress. With a clear charter

and work plan, the team can perform its own quality control, improving both what it produces and how well members work together to produce it. This translates to getting more done with less time and effort – in brief, a fair start on becoming a high performing team.

Ultimately the charter is a contract in two ways. First, and most important, it is a contract among team members which clarifies expectations and goals. Second, it is a contract between the team as a whole and the instructor and the other teams in the class. By signing the charter's commitment page, each team member contracts with his or her teammates, the instructor and the class to fulfill the obligations and duties required.

### **PEER EVALUATION**

Team chartering focuses on helping student teams manage their development through the forming and storming stages. Once teams have an established mutual acceptance among team members, they begin to feel cohesiveness with group members and identify with the group itself (norming stage), and are ready to carry out the tasks assigned (performing stage). In this latter stage, team members work toward accomplishing the goals of the team. As tasks are completed, teams should evaluate their results and take corrective actions if necessary (Moorhead & Griffin, 2001). A method of facilitating student team assessment in the performing stage is peer evaluation.

Peer ratings serve three important functions: (1) they allow teams as a whole to evaluate their performance and discover alternatives to improve their results; (2) they help students develop their individual teamwork skills; and (3) they provide a basis for the instructor's assessment of the team. The first and second points are relative to the performing stage of team development while the third item is important with respect to the team's adjournment and, ultimately, the grade-calculation process.

### **Enhancing Involvement and Contribution**

A basic assumption in the use of teams in the classroom is that team involvement and learning will produce results superior to individual efforts. Research suggests that student-student interactions are an essential influence on academic success because they enhance critical thinking, self-esteem, and positive social behavior (Stein & Hurd, 2000).

Students who work together to achieve a mutual objective tend to mentor and encourage each other, which promotes higher learning (Rusth & Revere, 2004). When students believe that as a group they can achieve an outcome, Walker and Angelo (1998) suggest that the individual members of the team will work harder, leading to higher levels of performance at the team level. A team's self-assessment of its performance can stimulate team effort as well as identify any internal conflicts or shortcomings that may have a detrimental effect on the team's performance. Assessment through the use of peer evaluation, then, is a useful tool to improve the output of the team.

Peer evaluation can also help students improve their contributions to the team by developing their individual teamwork skills. One of the most often-heard complaints among students working on teams is the social loafing phenomenon or free-rider effect. The existence of social loafing is well documented in group research and occurs because group members believe their lack of contributions will not be discerned in a group effort (George, 1992; Latane, 1974). As a result, some students perceive that they are performing a large part of the project while others contribute relatively little, yet all group members receive the same grade. According to research, a serious consequence of social loafing is the overall decrease in performance by the group (Kerr, 1983). Social loafing also results in an uneven participation among team members, decreasing the opportunity for group cohesion and effective learning (Michaelsen, et al., 2004).

Instructors can address this problem by incorporating the peer evaluation process in their use of class teams. Peer evaluation reduces the tendency for social loafing because it promotes individual accountability, encourages meaningful discussion among team members, and provides members with feedback on their individual efforts (Michaelsen, et al., 2004). Through an experiment involving university students, Harkins and Jackson (1985) determined that identity of individual contributions together with opportunity for comparison reduced the tendency for social loafing. Peer evaluation provides both these checks as it alerts students that their individual efforts are being observed and compared to that of others on the team. Team members can be made aware of their own role on the team and how their contributions affect other team members and the team project. As part of the team exercises, students are given an opportunity to comment on the effectiveness of each team member's contributions. Students share feedback with other team members on their

strengths and limitations as team members, and evaluations can be used to identify areas for improvement to help students function better on teams in the future.

### **Enhancing Evaluation**

The final stage of group development is adjourning or disbanding once the team's objective has been accomplished. In the classroom setting, adjournment will necessarily occur at the end of the semester when the group project is submitted for a grade. While the quality of the project generally determines the bulk of the grade, a student's grade will also depend on his or her participation in the group. Since teachers are not present in the groups to observe what takes place, they must rely on the peer evaluation process to judge the work product of each student (Strom & Strom, 1999). Oakley and her colleagues (Oakley, et al., 2004) suggest two alternatives for using peer evaluations as a basis for grading: the first requires students to rate the relative contribution of team members to the final outcome of the team and the second requires team members to assess each other member's "team citizenship." They recommend the latter approach as it considers teamwork skills over aptitude.

Several instruments have been developed as templates for team member evaluation, or instructors can develop their own questionnaire. For example Michaelsen and his colleagues (Michaelsen, et al., 2004) developed a forced ranking system where students are instructed to distribute 100 points among the other members of their team. Williams and others (Williams, Foster, Green, Lakey, Lakey, Mills & Williams, 2004) propose a variation on this technique where the evaluator is asked to assign an average of 10 points to each student, with at least one student receiving 11 or more points and one student receiving nine or fewer points. The authors acknowledge the problems associated with such a reward/punishment system, especially as it tends to disadvantage smaller teams. Other methods use a Likert scale asking students to rank each member on how often they contribute to a number of team performance dynamics. For example questions around team citizenship focus on issues regarding participation in discussions, timely completion of assignments, attendance at meetings, contributions, and cooperation (Felder & Brent, 2001). Stein and Hurd (2000) employ behaviorally anchored scales; for example, on the dimension of participation, team members would be ranked as fully participative if they consistently made

significant contributions to the process and content, mostly participative if they made contributions but only with respect to their area of responsibility, selectively participative if their contributions were narrow or of limited quality and weakly participative if their efforts were minimal or had little effect on the end-product. In addition to objective ratings, most instruments include a place for written comments for students to identify issues not otherwise covered by the questions and to clarify their responses, thereby providing better feedback to the instructor. Finally, the evaluation forms often include questions asking students to assess their own performance as well as the overall performance of the team (e.g., Walker & Angelo, 1998). In order to insure objectivity, ratings are generally completed anonymously. Based on our review of peer evaluation instruments, we identified several prevalent criteria, which are summarized in Table 3.

Peer evaluation is not only an opportunity for instructors to adjust individual grades for team participation, but it can also be used to gather information regarding student satisfaction with the team process, student perceptions of the team's performance, student view the evaluation's fairness, and overall student team experience. From this information, instructors can modify and adapt future team projects in an effort to enhance the team learning process.

**Table 3**  
**Peer Evaluation Questionnaire**

ASSESSMENT OF OTHER TEAM MEMBER'S PERFORMANCE
Overall Team Responsibility <ul style="list-style-type: none"><li>• Met work commitments</li><li>• Submitted assignments on time</li><li>• Regularly attended meetings</li><li>• Arrived on time for meetings</li><li>• Participated actively in team discussions</li></ul>
Contributions to Team Cohesiveness <ul style="list-style-type: none"><li>• Volunteered for team assignments</li><li>• Cooperated with other team members</li><li>• Acknowledged other team member contributions</li><li>• Avoided blaming others for problems</li><li>• Accepted compromise when disagreements arose</li></ul>
Contributions to Quality of Work Product

<b>ASSESSMENT OF OTHER TEAM MEMBER'S PERFORMANCE</b>
<ul style="list-style-type: none"><li>• Actively participated in team decision-making</li><li>• Carried his or her fair share of the work load</li><li>• Provided quality work to team effort</li></ul>
Communication to Other Team Members
<ul style="list-style-type: none"><li>• Kept team members advised of progress</li><li>• Informed team when problems arose regarding deadlines, meetings, etc.</li><li>• Listened to other team members without interrupting</li></ul>
<b>SELF-ASSESSMENT AND ASSESSMENT OF TEAM PERFORMANCE</b>
Self-Assessment
<ul style="list-style-type: none"><li>• I contributed to the overall quality of the team product</li><li>• I participated fully in team discussions</li><li>• Overall, I was satisfied with the team's performance</li><li>• I felt that I was an important part of the team</li><li>• I would work on this team again</li></ul>
Assessment of Team Performance
<ul style="list-style-type: none"><li>• The team performed well as a group</li><li>• The team achieved its objective(s)</li><li>• Each team member made a contribution to the work product</li><li>• The team became more cohesive over time</li></ul>

## **CONCLUSION**

The benefits of collaborative learning are well documented; however, the actual use of teams in the classroom and their effectiveness warrant further investigation. This paper advocates that instructors can improve team learning by actively managing team development.

We have argued that professors must manage the launching and development of student learning teams if they are to reach high levels of effectiveness. Different tools are needed at different stages of development for student learning teams. Practical examples with operational guidelines for two such tools were provided: one in the early "forming and storming" stages of development and one supporting the later, "performing and adjourning" stages. Our purpose here was to illustrate an approach for faculty to think about and more consciously

manage student learning teams. Other interventions are possible in each of the stages.

#### REFERENCES

Beckhard, R. (1972). Optimizing team building efforts. *Journal of Contemporary Business*, 1(3), 23-32.

Boatman, W. B. (2004). Selected bibliography for "Using student teams effectively". Presented at *Southwestern Business Administration Conference*. October.

Booth-Butterfield, A., Booth-Butterfield, S., & Koester, J. (1988). The function of uncertainty reduction in alleviating tension in small groups. *Communication Research Reports*, 5, 146-153.

Carr, S. D., Herman, E. D., Keldsen, S. Z., Miller, J. G., Wakefield, P. A. (2005). *The team learning assistant workbook*. Boston: McGraw-Hill Irwin.

Felder, R. M., & Brent, R. (2001). Effective strategies for cooperative learning. *Journal of Cooperation & Collaboration in College Teaching*, 10(2), 69-75.

Forsyth, D. R. (1990). *Group dynamics*. Pacific Grove, CA: Brooks/Cole.

George, J. M. (1992). Extrinsic and intrinsic origins of perceived social loafing in organizations. *Academy of Management Journal*, 35, 191-202.

Hackman, J. R., ed. (1990). *Groups that work (and those that don't)*. San Francisco: Jossey-Bass.

Harkins, S. G., & Jackson, J. M. (1985). The role of evaluation in eliminating social loafing. *Personality and Social Psychology Bulletin*, 11, 457-465.

Kerr, N. L. (1983). Motivation losses in small groups: A social dilemma analysis. *Journal of Personality and Social Psychology*, 45, 819-828.

Kolb, D., Rubin, I. & McIntyre, J. (1984). *Organizational psychology: an experimental approach to organizational behavior*, 4<sup>th</sup> ed. Englewood Cliffs, NJ: Prentice-Hall.

Latane, B., Williams, K., & Harkins, S. (1979). Many hands make light work: the causes and consequences of social loafing. *Journal of Personality and Social Psychology*, 37, 822-832.

Luthans, F. (2005). *Organizational behavior*. New York: McGraw-Hill Irwin.

McGrath, J. E. (1984). *Groups: interaction and performance*. Englewood Cliffs, NJ: Prentice-Hall.

Michaelsen, L. K., Knight, A. B., & Fink, L. D., (eds). (2004). *Team-based learning: A transformative use of small groups in college teaching*. Sterling, VA: Stylus Publishing, LLC.

Moorhead, G., & Griffin, R. W. (2001). *Organizational behavior*. Boston: Houghton Mifflin Co.

Oakley, B., Felder, R. M., Brent, R., & Elhajj, I. (2004). Turning student groups into effective teams. *Journal of Student Centered Learning*, 2, 9-34.

Rusth, D. & Revere, L. (2004). Student learning achievement improves with two-try tests and study teams. *Southwestern Business Administration Journal*, 4, 66-72.

Stein, R. F., & Hurd, S. (2000). *Using Student Teams in the Classroom*. Bolton, MA: Anker Publishing Co., Inc.

Strbiak, C. A. & Paul, J. (1998). *The team development fieldbook: a step-by-step approach for student teams*. New York: McGraw-Hill.

Strom, R. D. & Strom, P. S. (1999). Making students accountable for teamwork. *Community College Journal of Research and Practice*, 23, 171-182.



Tuckman, W. B. (1965). Developmental sequence in small groups. *Psychological Bulletin*, 63, 384-399.

Tuckman, W. B., & Jensen, M. A. C. (1977). Stages of small-group development revisited. *Group and Organization Studies*, 2, 419-442.

Walker, C., & Angelo, T. (1998). A collective effort classroom assessment technique: Promoting high performance in student teams. *New Directions for Teaching and Learning*, 75, 101-112.

Williams, D., Foster, D., Green, B., Lakey, P., Lakey, R., Mills, F., et al. (2004). Effective peer evaluation in learning teams. In C. M. Wehlburg & S. Chadwick-Blossey (Eds.). *To improve the academy*, 22. Bolton, MA: Anker Publishing Co., Inc.

**STUDENT ACADEMIC DISHONESTY:  
STRATEGIES FOR COPING AND CLASSROOM CASES**

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**ABSTRACT**

*The issue of academic integrity and ethical behavior is of extreme importance in light of the role both play in the shaping of our society. The educators must make efforts to define what constitutes academic integrity and unethical academic conduct, while providing students with the necessary knowledge and support to make informed, ethical choices. This paper discusses the role of AACSB, the institution, the educator, and the student in promoting ethical behavior. Furthermore, it also includes a questionnaire and potential cases designed to encourage student awareness and responsibility for academic integrity.*

**INTRODUCTION**

Corporate America has never experienced the deception that has occurred over the past few years. The discovery of Enron's accounting irregularities was soon followed by an unbelievable number of companies including Adelphia, Global Crossing, Tyco and WorldCom. Cases are still pending and investigations are continuing even today. The full impact of these corporate scandals may never be known. An element of trust has been lost, and many people have suffered great financial loss due to fraud, accounting irregularities, violations of governmental regulations, and falsification or destruction of company records. Dishonesty in the workplace seems to be at an all-time high.

Dishonesty is nothing new in the academic world. A number of studies show that academic dishonesty has become a significant problem among both high school and college students. According to Donald McCabe, founding president of the Center for Academic Integrity at Duke University, over 75 percent of students on most campuses admit to having cheated (McCabe, 2003). Another study in 2002 revealed that 74

percent of the 12,000 high school students surveyed had cheated at least once in the previous year (Current Events, 2004). Furthermore, technology has altered the ways in which cheating occurs in an academic environment. For example, the Internet provides a seemingly effortless way for students to cheat. Students can simply copy passages from Internet sites and paste them directly into their document (Heberling, 2002). This method is particularly attractive to students who procrastinate. In addition, the Internet provides a nesting ground for “digital paper mills,” allowing students the opportunity to purchase pre-written papers (Heberling, 2002).

With both corporate America and academia experiencing high rates of unethical behavior, one must consider whether a link might exist between the two. That is, does dishonesty in school lead to dishonesty in the work place? A study published in 2001 surveyed 1,051 business students at 6 AACSB-accredited universities. This study found that “students who engaged in dishonest behavior in their college classes were more likely to engage in dishonest behavior on the job” (Nonis and Swift, 2001:75).

McCabe, Trevino, and Butterfield (1996: 242) write that “college...often marks a crucial turning point in which adolescents abandon their own beliefs in favor of their fellow students’ opinions and values.” Considering this, academic institutions need to place emphasis on this important issue of student academic integrity by teaching and promoting ethical behavior amongst the student population. As corporate America and the government struggle to clean up the corporate scandal debacle, educators and administrators must make significant efforts to define, communicate, and enforce policies and guidelines designed to promote student academic integrity. The integrity of the present student population will impact the future work force of America.

### **THE ROLE OF AACSB INTERNATIONAL**

The Association to Advance Collegiate Schools of Business (AACSB) has given ethics and integrity a greater emphasis in recent years. It appointed an Ethics Education Task Force in 2002-2003 to “identify potential enhancements for business education and accreditation review of ethics education” (AACSB Expectations, 2005). This task force published a report in June of 2004 which can be found online at [http://www.aacsb.edu/resource\\_centers/EthicsEdu/eetf.asp](http://www.aacsb.edu/resource_centers/EthicsEdu/eetf.asp). It also established the Web-based Ethics Education Resource Center at

[http://www.aacsb.edu/resource\\_centers/EthicsEdu/default.asp](http://www.aacsb.edu/resource_centers/EthicsEdu/default.asp) to help schools in their ethics education endeavor.

Ethics education received a prominent position in the AACSB Standards adopted in 2005. Standard 15 mentions ethics education in the general knowledge and skills portion for undergraduates and in the management-specific portion for undergraduate and master's students (AACSB Standards, 2005). Rather than requiring schools to offer specific ethics courses, it allows them to determine the best means of integrating ethics education into the curriculum (AACSB Ethics Course, 2005).

The attention that AACSB is giving to ethics and integrity sends a clear message to institutions about the importance of promoting and encouraging student academic honesty and integrity.

### **THE ROLE OF THE INSTITUTION**

“Because academic dishonesty is not confined to the dynamics of the classrooms in which it occurs, educational institutions play a major role in fostering academic honesty” (Whitley and Keith-Spiegel, 2001:325). McCabe, a leading researcher on academic integrity, found that schools with honor codes experience lower levels of reported cheating than schools without codes. “They actively communicate to students that academic integrity is a core institutional value and that students have a major role to play in achieving this important institutional goal” (College, 2000:4). Also, David Hoekema stressed the importance of giving students some responsibility for self-regulation. “High expectations are self-fulfilling, as is evident in the relative success of student-controlled honor-code systems in limiting academic dishonesty” (Hoekema, 1993:143).

McCabe suggests the modified honor code for institutions who feel the traditional honor code would not work. (The primary difference between a traditional honor code and a modified one is that the traditional honor code includes unproctored exams, a pledge that students sign, and a no-tolerance provision.) The most important element for the modified honor code is significant student involvement in designing and enforcing campus-wide academic integrity policies, and in educating other students about the importance of academic integrity (McCabe and Pavela, 2000:32). The following are suggestions for implementing a modified honor code:

- **Ask students to explain the nature and extent of campus cheating.** This can be done by appointing an advisory council consisting primarily of students, but may include a few key faculty members.
- **Give interested students and faculty members a voice in setting campus policy.** Current policies should be reviewed and, after studying what other schools are doing, develop new policies.
- **Allow students to play a major role in the resolution of contested cases.** The delegation of authority to students to resolve contested cases is very important because they have practical insights that administrators and faculty lack.
- **Help student leaders educate their peers.** Communication with students about the importance of academic integrity from the student leadership before they arrive on campus can have a lasting impact. Thereafter, communication in orientation, in classroom presentations, and in course syllabi is especially important.
- **Develop fair, prompt, and efficient due process procedures.** Procedures should allow for matters to be resolved quickly and fairly.
- **Give student leaders support and guidance.** Protecting academic integrity is a shared community responsibility, and student should receive guidance and support from the faculty and campus leadership.
- **Keep faculty members and senior administrators informed.** Communication lines should always be open and information including hard data about the overall effectiveness of the program should be provided.
- **Encourage presidential leadership.** Keeping presidents informed is as important as educating other students or the

faculty because their support is widely dispersed through the campus.

- **Evaluate and benchmark.** Evaluation and benchmarking are especially important in this endeavor which requires significant investments in student energy, faculty time, and administrative resources. Participants must see tangible results if the program is to succeed (McCabe and Pavela, 2000).

Whitley and Keith-Spiegel suggest approaching the issue of academic integrity in three phases: establishing the program, implementing the program, and creating a campus environment that promotes academic integrity (Whitley and Keith-Spiegel, 2001).

Student input is essential for an effective academic integrity program. People are more likely to adhere to a policy when it comes from within rather than from above (Cummings and Huse, 1989). The policy should specify prohibited behavior; responsibilities of students, faculty members, and administrators; resolution procedures; penalties; education and remediation; record keeping; and prevention measures. An administrator should be appointed who will oversee important aspects of the implementation process such as communication, faculty training, assistance for students and faculty as well as create the momentum for the program (Whitley and Keith-Spiegel, 2001).

To ensure the success of the academic integrity program, a “campus environment must be created that conveys that academic integrity is something to revere, honor, and uphold” (Kibler, 1993:12). This requires complete support from institutional leaders; and it must encompass the entire institutional system—students, faculty, administrators, and staff—and all institutional activities such as teaching, business, and athletics. The change will not happen overnight and setbacks may occur (Whitley and Keith-Spiegel, 2001). Institutions must view the process from a long-term perspective, and consider it well worth the effort. “Students consistently indicate that when they feel part of a campus community, when they believe faculty is committed to their courses, and when they are aware of the policies of their institution concerning academic integrity, they are less likely to cheat. The social pressures not to cheat...are substantial” (McCabe and Trevino, 1996:30).

The Center for Academy Integrity (<http://www.academicintegrity.org>) provides resources for schools interested in adopting honor codes and promoting academic integrity. Also, looking at schools which have adopted honor codes will be of great help in starting the process. Some are listed below:

University of Maryland:

<http://www.studenthonorcouncil.umd.edu/index.html>

University of Virginia: <http://www.virginia.edu/honor/>

Vanderbilt University:

<http://www.vanderbilt.edu/HonorCouncil/>

Texas A & M University:

<http://www.tamu.edu/aggiehonor/>

Rutgers University:

<http://cat.rutgers.edu/integrity/policy.html>

Duke University:

<http://www.duke.edu/web/HonorCouncil/index.html>

Florida State University:

<http://www.fsu.edu/%7Eunion/honor.htm>

### **THE ROLE OF THE EDUCATOR**

No role is more important to the success of an academic integrity program than that of the educator. The educator controls the classroom environment where most cases of academic dishonesty occur (Stearns, 2001) and should, therefore, encourage ethical behavior among students in the classroom.

In addition, it is important for students to understand what constitutes ethical behavior and for educators to be consistent in their efforts to discipline students who “cheat” (Kidwell, Wozniak, and Phoenix, 2003). Faculty members are often reluctant to enforce academic honesty policies, choosing not to follow the procedural steps in reporting cases of student cheating (Turrens, Staik, Gilbert, Curtis, and Burling, 2001). A variety of reasons for faculty not reporting cheating exists including the fear of lack of support or potential litigation. They

may also think that the student is likely to cheat in other classes, and that another teacher will report the student. Instructors must realize that if every teacher reacted in this way, a student could potentially cheat his/her way through school! By not reporting cheating in their classes, the message is clear to the students that cheating is acceptable. Instructors should discuss the importance of academic integrity and clearly define dishonest behavior in course syllabi. They should also define plagiarism and explain the consequences for students who are caught cheating (Nonis and Swift, 2001). When students believe that instructors are committed to ethical standards, they are less likely to cheat (McCabe and Trevino, 1996).

Furthermore, communicating and enforcing honor codes or ethics policies is essential for the following reasons. An individual's moral and ethical values are a product of their family upbringing, religion, and/or cultural beliefs. Therefore, what is considered to be ethical to one individual may not be considered ethical by another in any given situation. For desired behavior to occur in an academic and/or organizational setting, students need to be aware of what is and what is not considered ethical behavior and understand the repercussions of inappropriate conduct.

A small private university in Tennessee encourages instructors to take these steps to minimize dishonesty in the classroom.

- Communicate with students about the importance of academic integrity, define classroom policies, and explain the roll of students in collaborative assignments.
  
- Remain in the classroom during testing and disallow cell phones, hats with bills, and programmable calculators during exams.
  
- Model personal integrity; be honest and fair in dealing with students; and employ impartial and appropriate assessment techniques. (Henry, 2004)

McCabe and Pavela developed ten principles of academic integrity for instructors and recently updated those principles:

1. Recognize and affirm academic integrity as a core institutional value.



2. Foster a lifelong commitment to learning.
3. Affirm the role of teacher as guide and mentor.
4. Help students understand the potential of the Internet and how that potential can be lost if online resources are used for fraud, theft, and deception.
5. Encourage student responsibility for academic integrity.
6. Clarify expectations for students.
7. Develop fair and creative forms of assessment.
8. Reduce opportunities to engage in academic dishonesty.
9. Respond to academic dishonesty when it occurs.
10. Help define and support campus-wide academic integrity standards. (McCabe and Pavela, 2004)

The importance of instructors as role models is undeniable. One study found that 92 percent of graduates believe business professors' actions to be the most important factor in their development of ethical standards and values (David, Anderson, and Lawrimore, 1990). Another study found that the personal behavior of the instructor taught students more about ethical behavior than any other method (Sauser, 1990). Instructors must remember that students are watching their behavior and will know if they are, in effect, practicing what they are preaching!

In addition, "integrity must be weaved into every course through lecture, class discussions, cases, role playing guest speakers, and outside readings. Students should be exposed to a wide variety of ethical situations, with discussions of right and wrong courses of action so that a strong ethical foundation is ingrained in them by the time they enter their first full-time positions" (Nonis and Swift, 2001:76).

#### **THE ROLE OF THE STUDENT**

Ultimately, students are responsible for their own behavior; however, all parties involved need to be sure that students understand

what that behavior should be. Considering the diverse backgrounds of students, educators must understand that all students should be exposed to “right and wrong” behavior. That behavior cannot be dictated. It has to evolve intrinsically. Strategies for building good behavior include the use of cases, group processes that involve peer opinions, questionnaires, etc. The following cases and questionnaire can be used for building an awareness and knowledge of academic honesty and for creating skills for coping with temptation. These educational tools can be used for individual or group assignments.

**Case 1. Teacher Responsibility:** At the beginning of the school year, teachers hand out syllabi and calendars informing students of the requirements and content of the course. Listings of tests and grading scales are also provided. Included on the syllabi and calendars are disclaimers saying that the assignments are subject to change. Dr. Jones, a Business 101 professor, decides at midsemester that the grading scale shown on the course syllabus needs to be altered. The professor did not say why the revisions were being made. Some students in the class see that the new grading scale will lower their grade in the course. They are dissatisfied.

Is the professor violating academic honesty principles? How? What can the students do? Write your opinion in an essay.

*Notes: This case is designed to show that teachers have a responsibility to be fair and honest with students. They must set a good example because students are looking to them as role models.*

**Case 2. Working Together:** You go into the microcomputer lab, and you see Jim, a fellow student, doing an assignment that is due for your computer class later today. Because a computer is not available for you to do your work, you go over and sit with him while he completes his assignment. When Jim finishes the work, he sends it to the printer and goes to pick it up. While he is gone, you quickly sit in his place, type your name in the document, and print a copy for yourself. At times, you help Jim read the instructions and perform tasks. You feel as though you could have done the work yourself; however, you had no time and place to do your own work. The teacher requires that assignments be handed in before class to get credit.

Is printing Jim’s work honest? Do you feel that the work is also yours? What could be done to improve the situation? Do you feel pressured to do this?

*Notes: Working together is a common practice. Some students feel that watching another work and discussing some of the work constitutes doing the work themselves. It can be a gray area that needs defining.*

**Case 3. Ownership of Creative Work:** Your teacher has assigned an e-commerce project in which you are to think of a new business you could start on the Web. While you were at a friend's house, you saw a project from a previous semester. You ask your friend to borrow it to use as an example. However, after looking at the project and the amount of work it required, you find yourself in a difficult situation. You like the idea. You feel you cannot think of anything better. You don't have time to do this much work on another project. Anyway, you don't want to do that amount of work. You decide to use your friend's idea, changing some of the wording in the body of the work and changing some of the pictures.

Are you doing the right thing? Are you violating any creative rights rules? Present Pros and Cons in a written report.

*Note: Some students lack creative confidence. Seeing the completed work of another can inhibit independent thinking. Attention should be given to the fact that the idea for the new business may be the most important part of the assignment. Some of these ideas may be good enough to be developed into business.*

**Case 4. Academic Dishonesty and White Collar Crime:** You overhear your parents talking about dishonesty in the business world, showing concern for all of the people losing money from retirement plans. They are talking about lack of honesty and integrity in people. They feel that if dishonest adults had been taught to be honest in school, they would have higher moral and ethical values as adults.

Do you feel that academic dishonesty leads to dishonesty later in life? Does it represent a trend? Can an individual's values and beliefs be influenced by education? In groups, discuss your opinions. Present the results of your discussion in a report.

*Notes: Students need to be aware that the tendency to be dishonest can carry over into adult life and could have serious consequences.*

**Case 5.** "Students cheat because they can—not because they have to." What do you think of this statement? Discuss the statement

with other students in your class. Give instances when students cheated. Did they have to? Or did they do it because they could?

*Notes: Students should be aware of the temptation to be dishonest. Sometimes it can be extremely easy. The results, however, can be disastrous.*

**Case 6.** Entrapment: You have just learned that your teacher has been leaving tests out, making it easy for students to take them. You also find out that these tests are being used to entrap students. They are not the “real” tests.

Is this fair? Why do you think a teacher would do this? Is the teacher or the students who take the tests at fault? Are they all being dishonest? Could entrapment occur in other situations in students’ lives? Does the teacher doing this prepare students to be trapped? Have a class discussion on the issues presented in this case.

*Notes: Students should not be trapped. On the other hand, they should not cheat. Entrapment occurs and students should always be aware of that fact. It could be a deterrent.*

**Case 7.** Lying: You have been absent from class for a week. Your teacher has an absence policy that states that after you miss 20 percent of the classes you will receive an F in the course. You know you were wrong in missing class, but you cannot afford to fail. You decide to tell the teacher that there was a death in your family. You hope the teacher will be sympathetic and not require proof. That is exactly what happened. The teacher was very nice to you and offered to help in any way possible.

How would you feel? Is this honest? Would you do it again since you were successful this time? What else could you have done to avoid this situation? Write about your feelings in a short essay.

*Notes: Student lying to escape penalty is prevalent in classes today. For a teacher to question a death in the family seems heartless. This causes a dilemma for the teacher who wants to be sympathetic if the situation is true. It also presents a dilemma for other students who may be in the same circumstance but do not want to say anyone has died.*

The following questionnaire can be used to stimulate discussions and help students think about their own experiences. Results can be tabulated by the teacher to report to the class, but individuals must not be identified. All identities should remain confidential; therefore, students should not sign the questionnaire.

**ACADEMIC HONESTY**

<b>Answer the following questions based on your own experiences. All information will remain confidential. Do not sign your name on this paper.</b>	Do you think this is honest?		Have you ever done this?		Do you know anyone who has done this?	
	Yes	No	Yes	No	Yes	No
1) You are taking a test in a classroom where everyone is seated very close together. You are not prepared. You are sitting next to a student who usually does well on tests. You can see his answers. You copy some of them.						
2) Jane, your best friend, asks you for your homework because she lost hers. Her disk was damaged, and she cannot retrieve her work. She insists that she did do the work. You let her have yours, just this time.						

<p>3) You are writing a term paper on changes in population in the United States. You find an article with a paragraph in it that quotes some statistics. It is very well written. It is much better than you can do, but you feel that it is something that anyone could say. You probably could have found those statistics yourself. You copy it without giving credit to the author.</p>						
<p>4) You have just enrolled in a computer class that requires a lot of hands-on work. John tells you that a student who does very good work is selling all of the assignments for \$100. You have so much to do—you are carrying 18 hours and have a job. You buy the assignments, but you read through the cases and try to understand the material. You feel you are learning.</p>						
<p>5) The night before an exam, you get a phone call from another student in the class who says she has obtained a copy of the exam. She knows you take good notes and are never absent. She will give you the questions if you find the answers in your notes. You do this.</p>						
<p>6) Your teacher has just shown a PowerPoint presentation that emphasizes copyright laws and</p>						

<p>creative rights. One of the slides shows that copying music from the Internet is illegal. She asks for opinions from the class. The class of freshmen strongly defends copying. They say it is sharing. If someone buys a CD, they can share it over the Internet.</p>						
<p>7) As you are taking a test, you notice someone using a cell phone to obtain formulas. You feel you should inform the teacher, but you do not.</p>						
<p><b>Answer the following questions based on your own experiences. All information will remain confidential. Do not sign your name on this paper.</b></p>	<p>Do you think this is honest?</p>		<p>Have you ever done this?</p>		<p>Do you know anyone who has done this?</p>	
	Yes	No	Yes	No	Yes	No
<p>8) Your teacher is trying to prevent plagiarism by showing all of the sites where term papers can be bought. She is trying to show that she knows about these sites and she can find out if you use them; however, you didn't know that there were such sites. You surf and find an appropriate paper that you could use for another class. You buy it, thinking the teacher should not have let you know about these sites.</p>						

<p>9) You have to take a distance learning course. You find out that exams are to be taken online from your home. You get help from a friend. Although you are told to do your own work, you feel that if you are allowed to take an exam at home, the instructor must know that you can get outside help.</p>						
<p>10) You are working in the computer lab when you notice you are alone. There are reams of paper stacked on the side of the room. You do most of your printing in your apartment, and you do not have much money for paper. You know that paper for use in the labs is bought with student's fees. You take a ream of paper.</p>						

Can you think of any other situation that involves academic dishonesty? Please write a brief summary.

All of the above situations are meant to be dishonest. A tabulation of results will show whether students recognize academic dishonesty, whether they have ever been dishonest, and whether they know anyone who has been dishonest.

### **CONCLUSION**

The importance of academic integrity must be realized by students, faculty, and campus administrators alike. Furthermore, the development of honor codes, ethics policies, and/or task forces provide the foundation for promoting student academic integrity. Defining, communicating, and enforcing ethical standards is critical to the success of any efforts intended to reduce student ethical misconduct.



Minimizing incidences of student academic dishonesty should be the goal of every educator and every institution, not only because it improves the quality of education, but because it reduces the likelihood of dishonest behavior in the workplace. The benefits far outweigh the costs. The AACSB has revised standards and developed a task force dedicated to encourage and promote academic integrity and ethics education. And because of the recent corporate scandals, increasing importance is placed on integrity and ethical practices at both the organizational and educational levels. Efforts made by the AACSB, the institution, and the educator will pave the way for a better student and, ultimately, a better employee.

#### REFERENCES

AACSB International. (2005). Eligibility procedures and accreditation standards for business accreditation. Online <http://www.aacsb.edu/accreditation/standards.asp>.

AACSB International. (2005). Overview: AACSB expectations. Retrieved on January 28, 2005, from [http://www.aacsb.edu/resource\\_centers/EthicsEdu/overview-expectations.asp](http://www.aacsb.edu/resource_centers/EthicsEdu/overview-expectations.asp).

AACSB International. (2005). Overview: Why won't AACSB International require a course in ethics for all business programs? Retrieved on January 28, 2005, from [http://www.aacsb.edu/resource\\_centers/EthicsEdu/overview-notrequired.asp](http://www.aacsb.edu/resource_centers/EthicsEdu/overview-notrequired.asp).

AACSB International. (2005). Ethics resource center. Retrieved on January 28, 2005, from [http://www.aacsb.edu/resource\\_centers/EthicsEdu/about.asp](http://www.aacsb.edu/resource_centers/EthicsEdu/about.asp).

College Administration Publications. (2000). New research on academic integrity: The success of modified honor codes. On line <http://www.collegepubs.com/ref/SFX000515.shtml>

Cummings, T. and E. Huse. (1989). *Organization development and change*. St. Paul, MN: West.

David F., L. Anderson, and K. Lawrimore. (1990). Perspectives on business ethics in management education. *SAM Advanced Management Journal*, 9,26-32.

Heberling M. (2002). Maintaining academic integrity in online education. *Online Journal of Distance Learning Administration*, 5.

Henry R. (2004). Where is the honor? *Phi Kappa Phi Forum*, 84, 30-31.

Hoekema, D. (1993). *Campus rules and moral community*. Lanham, Md.: Rowman & Littlefield.

Kibler, W. (1993). A framework for addressing academic dishonesty from a student development perspective. *NASPA Journal*, 31, 8-18.

Kidwell, L. K. Wozniak, and J. Laurel. (2003). Student reports and faculty perceptions of academic dishonesty. *Teaching Business Ethics*, 7, 205-214.

McCabe, D. and G. Pavela. (2000). Some good news about academic integrity. *Change*, 33, 32-38.

McCabe D. and G. Pavela. (2004). Ten principles of academic integrity for faculty. *Change*, 36, 12-15.

McCabe, D. and L. Trevino. (1996). What we know about cheating in college. *Change*, 28, 28-33.

McCabe, D. L. Trevino, and K. Butterfield. (1996). The influence of collegiate and corporate codes of conduct on ethics-related behavior in the workplace. *Business Ethics Quarterly*, 6, 461-476.

Nonis, S. and C. Owens Swift. (2001). An examination of the relationship between academic dishonesty and workplace dishonesty: a multicampus investigation. *Journal of Education for Business*, 77, 69-77.

Saucer, J. (1990). The ethics of teaching business: toward a code for business professors. *SAM Advanced Management Journal*, 9, 33-37.

Stearns S. (2001). The student-instructor relationship's effect on academic integrity. *Ethics & Behavior*, 11, 275-285.

Turrens, J. I. Staik, D. Gilbert, W. Curtis, and J. Burling. (2001). Undergraduate academic cheating as a risk factor for future professional misconduct. *Proceedings: Investigating Research Integrity*, 49-53.

**ENHANCING TEACHING EFFECTIVENESS AND STUDENT PERFORMANCE IN FINANCE COURSES: EVALUATION OF RELEVANT FACTORS**

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**ABSTRACT**

*This study explores the enhancement of teaching effectiveness and student performance by considering various socio-psychological and socio-economic factors in different finance courses. Multiple sections of different undergraduate finance courses are analyzed and evaluated in the light of relevant factors at a regional university. Student performances are measured in terms of mid-term grades and their expectation of final grades for various courses. The results show that all students expect an 'A' or a 'B' grade in the final exam even if their mid-term grade is not an 'A' or a 'B'. Using multiple discriminant analysis and multinomial logit model, the analysis further shows that high academic goal and efforts towards high performance, academic motivation and availability of funds for education, marital status and the number of children, and the usefulness of the textbook are significant determinants in achieving high mid-term and expected final grades. Wide applications of the findings of this study are possible across campuses to enhance teaching effectiveness and student performance.*

**INTRODUCTION AND RATIONALE**

Extant educational literature is saturated with studies investigating teaching effectiveness and student performance. The prior research is broadly categorized in two directions. On one hand,

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researchers have identified and empirically analyzed various factors that could influence student and teacher performance. On the other hand, various teaching methodologies and techniques are discussed in studies that enhance the student performance.

Buckles and Freeman (1983), Rhine (1989), William (1991), Waldauer, Duggal, and Williams (1992), and Didia and Hasnat (1998) study the effect of gender in various accounting, economics, and finance courses and find that no significant gender differences exist. Park and Kerr (1990), Romer (1993), Durden and Ellis (1995), Devadoss and Foltz (1996), and Chan, Shum, and Wright (1997) observe the effect of class attendance on student performance and find strong evidence that attendance enhances performance. Siegfried and Fels (1979), Eskew and Faley (1988), Wetzel, O'Toole, and Millner (1991), and Paulsen and Gentry (1995) find a strong positive correlation between student's aptitude and motivation on one hand and academic performance on the other. Eskew and Faley (1988), Borde, Byrd, and Modani (1998), Didia and Hasnat (1998), and Nofsinger and Petry (1999) find that past academic performance (as measured by the students' cumulative GPA) and prior exposures to related subject matter significantly influence the performance. While Eskew and Faley (1988) and Wetzel, O'Toole, and Millner (1991) observe a strong positive influence of effort (the amount of study time) on student performance, the opposite is observed by Didia and Hasnat (1998). Wetzel, O'Toole, and Millner (1991), Didia and Hasnat (1998), and Guolla (1999) find a strong positive relationship between instructor enthusiasm and student's performance. On the other hand, Jaggia and Kelly Hawke (1999) fail to observe any relationship between institutional expenditure and student performance. Interestingly, Smith and Bradly (1994) find that climatic factors influence student and teacher performance.

Many studies have investigated the effect of technology on student performance. Gagne and Shepherd (2001) observe that student performance in a distance learning accounting course is similar to the performance of students in the on-campus course. On the other hand, Smith, Ferguson, and Caris (2001) find teacher-student interactive relationship is emphasized more in online classes than in traditional settings. Similarly, Stith (2000) and Sherry, Billig, Jesse, and Watson-Acosta (2001) conclude that technology addition to traditional instruction enhances student motivation.

Researchers have further investigated various teaching techniques and assessment processes that enhance student performance. In a management course, Orpen (1994) observe that the use of peer evaluation as a means of judging student performance is highly reliable and significant. Leidner and Fuller (1997) conclude that the inclusion of collaborative learning involving case analyses into the instructional process significantly enhance the student performance. Kellar, Jennings, Sink, and Mundy (1995) find that interactive learning techniques have significant advantages over traditional teaching methods in enhancing student performance. Loviscek and Cloutier (1997) observe that the intensity of instruction can be enhanced through supplemental instruction; a formal review session program and the results provide a demonstrable payoff in the form of increased student learning. Massingale and Dewhirst (1992) show that allowing feedback in both directions between students and instructors and by emphasizing comments and coaching in grading performances can significantly enhance the students' learning process.

The research objectives of this study are to measure the effect of socio-psychological and socio-economic factors on student's mid-term performance and final grade expectation in various finance courses. A successful analysis of these factors would enhance student learning and instructors' teaching effectiveness. It is accomplished through the identification of relevant factors and their significance associated with students' success in these courses.

This study is unique in two aspects. First, it comprehensively investigates the factors affecting the student performance. To this effect, the study investigates two classes, namely socio-psychological and socio-economical factors. Second, the study uses factor analysis to identify relevant explanatory variables and uses multiple discriminant analysis to test for their significance. As a complimentary procedure, multinomial logit model is used to search for the significant explanatory variables affecting student performance. The rest of the paper is organized as follows. Section two describes the data and methodology in formulating the research questions and the description of methodologies and survey data. The third section explains the research findings, while section four concludes the discussion.

## **DATA AND METHODOLOGY**

### **Data Description**

The students taking finance courses at a regional institution are requested to fill out a questionnaire. In total, three hundred sixty-five students have filled out the survey. The completed questionnaires are scrutinized for their accuracy and completeness. The student response is qualified for final inclusion in the analysis if information is available for both mid-term grade and the expected final grade. The response is further rejected if more than one question (used as a cut-off point) is left unanswered. Finally, two hundred eighty-seven survey responses have been used for the analysis. The surveys are administered on students enrolled in several finance courses over four semesters after the mid-term grades are announced. The finance courses consist of all graduate and undergraduate courses offered in the institution between Fall 1999 and Spring 2000. A majority of the students (about sixty percent) surveyed are from various sections of the principles of finance course. The survey was conducted by three finance instructors in their respective classes. A sample questionnaire containing the survey questions is provided in Appendix A.

Each questionnaire contains eight socio-psychological and ten socio-economic questions to search for the determinants of students' performance. Regarding the socio-psychological factors, students' self-esteem, motivation, the nature of the exams and the preparation time needed for them, the quality of the text book and its utilization, the course load during the semester, availability of sufficient educational funds, and current academic performance are evaluated for their impact on students' performance.

Under socio-economic factors, the study seeks to address whether the ethnicity, marital status, number of children, year (junior, senior etc.), status (full-time or part-time), and residence (on-campus or off-campus) classifications, prior business course experience, major field of study, economic means (including the availability and use of technology), and the gender of a student affect his/her mid-term grade and final grade expectations.

### **Methodology**

Enhancement of teaching effectiveness and student performance are evaluated by analyzing the following two research questions:

- What is the impact of various socio-psychological and socio-economic factors on students' mid-term grades in various finance courses?
- What is the impact of various socio-psychological and socio-economic factors on students' expectations of their final grades in those courses?

The study uses a multiple discriminant model and a multinomial logit model to evaluate both research questions. The mid-term and expected final grades are utilized as the dependent variables for the multiple discriminant analysis of common factors and multinomial logit model, while socio-psychological and socio-economic factors are used as independent variables in both instances. The generalized form of a multiple discriminant model is described as:

$$Y_i = \beta_0 + \sum_{j=1}^J \beta_{ij} F_j + \varepsilon_i \quad \forall j = 0, 1, 2, 3, \dots, J \quad (1)$$

Here,  $Y_i$  is the dependent variable (mid-term grades or expected final grades),  $F_j$  represents the array of relevant explanatory common factor variables,  $\beta_{ij}$  represents the regressor coefficients, while  $\varepsilon_i$  is the error term. The method expresses each dependent variable  $Y_i$  as the linear combination of  $J$  common factors,  $F_j$  and a unique factor score,  $\zeta_i$ . The factor analysis assumes that,  $E(F_j) = E(\zeta_i) = E(\zeta_i F_j) = 0$ . The orthogonal structure of the common factors further implies that,  $E[(F_j)(F'_j)] = E[(\zeta_i)(\zeta'_i)] = I$ , is an identity matrix. In order to search for the common factors, all the primary factors are subjected to orthogonal transformation to eliminate the multicollinearity problem. Factor analysis is used to model the relationships between objects by assuming that the interrelationships are due to latent variables called 'common factors'. The model further assumes that the variability within each item's responses can be divided into two parts; that is, variability due to the common factors and variability that is unique to the item (i.e., unexplained by the model). The model provides estimates of common factors with the assumption that the objects are fixed while the subjects



(across which correlations are obtained) are randomly sampled from a population.

Second, Varimax Rotated factor analysis is performed to obtain the orthogonal structure for the factors and to identify factor scores that represent relevant explanatory variables in the discriminant analysis. The Varimax method attempts to minimize the number of variables that have high loading on a factor to enhance their interpretability. Once the appropriate numbers of common factors are selected, the factor analysis produces a solution with those many numbers of interrelated axes or dimensions. To uncover interpretable scales of those axes, it is necessary to rotate the axes and produce a solution structure where each item is related to (or 'loads on') one and only one axis (scale) and the latent variables are uncorrelated. Varimax rotated procedure is often utilized to produce this uncorrelated structure.

The key to the rotational procedure is to produce uncorrelated common factors. To this effect, only the factors with minimum Eigen value of 1.0 and minimum factor loading of 0.7 are utilized for analysis. The eigenvalue represents the ratio of the between-groups sum of squares to the within-groups sum of squares or alternatively speaking, the amount of variance in the observed variables accounted for by each component or factor. Usually, eigenvalues less than one are not accepted. Since an eigenvalue represents the generalizability coefficient for the dimension, the eigenvalue of one indicates that there is nothing in common among the items. Under the criteria, factor loadings of 0.70 (absolute value) or higher are used to label the common factors. The criterion requires that the explained variation between a factor and a variable should be at least 0.70 (with a squared loading of 0.49). A factor loading represents the partial correlation between the item and the factor. A high loading factor (0.49 or higher) indicates that the variable is highly correlated with the factor. It is preferable that each variable included in the analysis load high on one of the retained factor and that every item correlated with the factor should be present in at least one dimension.

In contrast, the multinomial logit regression incorporates nominal response variables with more than two categories. A response variable with  $k$  categories will generate  $k - 1$  equations (logit) where each of these equations is a binary (bivariate) logistic regression comparing a group with the reference group. Multinomial logistic regression simultaneously estimates all possible combinations among the

$k$  groups and displays coefficients for the  $k-1$  comparisons. The generalized form of a multinomial logit model is described as:

$$Y_i^{P[\text{choice } k]} = \frac{e^{\beta_j X_i}}{\sum_{j=0}^J e^{\beta_j X_i}} \quad \forall k = 0, 1, 2, 3, \dots, K; \quad j = 0, 1, 2, 3, \dots, J \quad (2)$$

Where,  $Y_i^{P[\text{choice } k]} = 0, 1, 2, \dots, K$ .  $Y$  is the limited dependent variable and can assume any numerical value between 1 and  $K$  (the numerical values coded for the analysis are  $A = 1, B = 2, C = 3, D = 4,$  and  $F = 5$ ) and

$X_i = f(X_1, X_2, \dots, X_J)_i$ .  $X$  represents the array of explanatory variables and  $\beta_j = (\beta_1, \beta_2, \dots, \beta_j)$  represents the regressor coefficients.

The exponentiated coefficients in the regression represent the log odds of being in the target groups relative to the reference group. They can be interpreted as the Relative Risk Ratios (RRR) between any target group and the reference group. The relative risk ratios (log odds ratios) are

expressed as  $\log\left(\frac{P_j}{P_H}\right) = x_i(\beta_j - \beta_H)$ , where  $H$  represents the base

category. The independent variables are measured in two categories, namely, socio-psychological and socio-economic.

### RESULTS AND ANALYSIS

The study uses nine socio-psychological factors and nine socio-economic factors to evaluate their effect on mid-term grades and expected final grades of the students. In total, two hundred eighty-seven observations have been collected from various finance courses. The variables under consideration are described in Table 1.

The study hypothesizes that a list of socio-psychological and socio-economic factors are associated with high mid-term grades and high final grades expectations for various finance courses. The findings of the study offer faculty numerous ideas for effective teaching and enhanced students learning. In addition, the institutions benefit by knowing success factors that they can control. As the target group, the students benefit when faculty and administration, responsible for teaching effectiveness and students' success undertake necessary changes. Furthermore, the factors identified in this study could also be

used by faculty at large as control variables in enhancing the performance of the students. It also induces other researchers to see if the conclusion varies across campuses.

<b>Socio-Psychological Variables</b>	<b>Socio-Economic Variables</b>
Number of hours/week study for the course	Marital status of the student
Usefulness of the text book	Number of children the student has
Difficulty level of the course	Year classification of the student (sophomore, junior etc.)
Academic motivation of the student	Status classification of the student (full-time or part-time)
Number of hours/week spent on academic work	Residence status of the student (on-campus or off-campus)
Overall academic performance of the student	Prior business course experience of the student
Availability of sufficient funds for college	Area the student majoring in
Importance of receiving 'A' grade in the course	Gender of the student
Belief that effort influences performance	Ethnicity of the student

As a preliminary investigation of the data, the study provides a cross-tab analysis between the mid-term grades and the final grade expectation. The result shows that a significant majority of the students expect an 'A' or a 'B' grade in the final exam even if their mid-term grade is not an 'A' or 'B'. In the mid-term grade, about 45% students have received either an "A" or "B". In contrast, about 72.5% of the students expect to receive either a grade of "A" or "B" as their final grades, representing an inflated grade expectations. The observed behavior is highly significant even at 1% level of significance. The

analysis further reflects an inflated expectation regarding the students' performance unless the students produce significant additional effort to earn a higher final grade. Table 2 provides the details of the cross-tab analysis between mid-term and expected final grades.

<b>Table 2</b>						
<b>Cross-tab Analysis of Mid-term Grade and Final Grade Expectation</b>						
<b>Mid-term Grade</b>	<b>Final Grade Expectation</b>					
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>	<b>Total</b>
<b>A</b>	20 (6.97%)	3 (1.05%)	7 (2.44%)	0 (0%)	0 (0%)	30 (10.45%)
<b>B</b>	46 (16.03%)	53 (18.47%)	0 (0%)	0 (0%)	0 (0%)	99 (34.49%)
<b>C</b>	3 (1.05%)	66 (23.01%)	43 (14.98%)	0 (0%)	0 (0%)	112 (39.02%)
<b>D</b>	0 (0%)	10 (3.48%)	20 (6.97%)	6 (2.09%)	3 (1.05%)	39 (13.59%)
<b>F</b>	0 (0%)	7 (2.44%)	0 (0%)	0 (0%)	0 (0%)	7 (2.44%)
<b>Total</b>	69 (24.04%)	139 (48.43%)	70 (24.39%)	6 (2.09%)	3 (1.05%)	287 (100%)
<b>Pearson Chi-Square</b>	<b>63.991***</b>					
<b>Note:</b> *** indicates significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level. The numbers in parentheses represent percentages of mid-term grade outcomes and final grade expectations related to the total number of respondents in the sample.						

The mid-term and expected final grades are further analyzed

using the ethnicity and gender of the students. It has been done to evaluate the importance of demographic information of the students. The cross-tab analysis is performed for both mid-term grade and expected final grade against the ethnicity and gender of the students. The results clearly show that no gender and ethnic effects are present in final grade expectations. A weak ethnic effect (chi-square significant at 10% level) is present in the mid-term grade distribution, while no gender effect is observed in the distribution. The absence of gender effect on student performance conforms to previous studies by Buckles and Freeman (1983), Rhine (1989), William (1991), Waldauer, Duggal, and Williams (1992), and Didia and Hasnat (1998). It further shows that the students have an inflated final grade expectation irrespective of their gender or ethnic background. Table 3 provides the details of this analysis.

<b>Table 3</b>						
<b>Cross-tab Analyses of Mid-term and Expected Final Grade by Gender and Ethnicity</b>						
<b>Analysis of Mid-term Grade by Gender</b>						
<b>Gender</b>	<b>Mid-term Grade</b>					
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>	<b>Total</b>
<b>Male</b>	13 (4.53%)	33 (11.5%)	39 (13.59%)	20 (6.97%)	0 (0%)	105 (36.59%)
<b>Female</b>	20 (6.97%)	63 (21.95%)	76 (26.48%)	20 (6.97%)	3 (1.05%)	182 (63.41%)
<b>Total</b>	33 (11.5%)	96 (33.45%)	115 (40.07%)	40 (13.94%)	3 (1.05%)	287 (100%)
<b>Pearson Chi-Square</b>	<b>2.752</b>					
<b>Analysis of Mid-term Grade by Ethnicity</b>						

**Table 3**  
**Cross-tab Analyses of Mid-term and Expected Final Grade**  
**by Gender and Ethnicity**

Ethnicity	Mid-term Grade					
	A	B	C	D	F	Total
<b>African - American</b>	13 (4.53%)	63 (21.95%)	82 (28.57%)	36 (12.54%)	4 (1.39%)	198 (68.99%)
<b>White</b>	7 (2.44%)	33 (11.5%)	26 (9.06%)	4 (1.39%)	0 (0%)	70 (24.39%)
<b>Other</b>	6 (2.09%)	13 (4.53%)	0 (0%)	0 (0%)	0 (0%)	19 (6.62%)
<b>Total</b>	26 (9.06%)	109 (37.98%)	108 (37.63%)	40 (13.94%)	4 (1.39%)	287 (100%)
<b>Pearson Chi-Square</b>	<b>13.923*</b>					
<b>Analysis of Final Grade Expectations by Gender</b>						
Gender	Final Grade Expectation					
	A	B	C	D	F	Total
<b>Male</b>	23 (8.01%)	40 (13.94%)	36 (12.54%)	3 (1.05%)	3 (1.05%)	105 (36.59%)
<b>Female</b>	46 (16.03%)	99 (34.49%)	33 (11.5%)	4 (1.39%)	0 (0%)	182 (63.41%)
<b>Total</b>	69 (24.04%)	139 (48.43%)	69 (24.04%)	7 (2.44%)	3 (1.05%)	287 (100%)
<b>Pearson Chi-Square</b>	<b>6.302</b>					

<b>Table 3</b>						
<b>Cross-tab Analyses of Mid-term and Expected Final Grade by Gender and Ethnicity</b>						
<b>Analysis of Expected Final Grade by Ethnicity</b>						
<b>Ethnicity</b>	<b>Final Grade Expectation</b>					
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>F</b>	<b>Total</b>
<b>African - American</b>	49 (17.07)	89 (31.01%)	50 (17.42%)	7 (2.44%)	3 (1.05%)	198 (68.99%)
<b>White</b>	13 (4.53%)	40 (13.94%)	16 (5.57%)	0 (0%)	0 (0%)	69 (24.39%)
<b>Other</b>	14 (4.88%)	3 (1.05%)	3 (1.05%)	0 (0%)	0 (0%)	20 (6.62%)
<b>Total</b>	76 (26.48%)	132 (45.99%)	69 (24.04%)	7 (2.44%)	3 (1.05%)	287 (100%)
<b>Pearson Chi-Square</b>	<b>4.267</b>					
<b>Note:</b> *** indicates significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level. The numbers in parentheses represent percentages of mid-term grade outcomes and final grade expectations related to the total number of respondents in the sample.						

The data set is subjected to factor analysis for two important reasons. First, the analysis is utilized to reduce the number of independent variables and to concentrate on the relevant variables. Second, the factor scores are further utilized as independent variables in the ensuing multiple discriminant analysis for their significance. Using the Varimax Rotated Factor procedure, the data set is subjected to orthogonal transformation to solve for the multicollinearity problem. The Varimax method attempts to minimize the number of variables that have high loading on a factor to enhance their interpretability. Factor analysis is performed independently on both socio-psychological and socio-economical factors. Table 4 shows the results of the factor

analysis.

<b>Table 4</b>				
<b>Varimax Rotated Factor Pattern for Socio-Psychological and Socio Economic Factors</b>				
<b>Factor Pattern for Socio-Psychological Variables</b>				
<b>Socio-Psychological Variables</b>	<b>Factor 1</b>	<b>Factor 2</b>	<b>Factor 3</b>	<b>Factor 4</b>
Number of hours/week study for the course	-0.051	0.128	<b>0.870</b>	0.144
Usefulness of the text book	0.156	-0.262	0.191	<b>0.801</b>
Difficulty level of the course	0.163	-0.179	0.571	-0.605
Academic motivation of the student	0.257	<b>0.782</b>	0.184	-0.038
Number of hours/week spent on academic work	0.265	0.406	0.575	-0.006
Overall academic performance of the student	0.522	0.402	0.049	0.245
Availability of sufficient funds for college	-0.093	<b>0.760</b>	0.051	-0.124
Importance of receiving 'A' grade in the course	<b>0.784</b>	-0.013	0.028	-0.264
Belief that effort influences performance	<b>0.741</b>	0.045	0.113	0.361
<b>Variance Explained by Each Factor</b> (Minimum Eigenvalue of 1)	1.635	1.633	1.503	1.305
<b>Percentage of Variance Explained</b>	18.166	18.146	16.696	14.505
<b>Factor Labels:</b>				
<b>Factor 1</b>	High academic goal and effort towards high performance			
<b>Factor 2</b>	Academic motivation and availability of funds for education			
<b>Factor 3</b>	Time spent on studying for the course			
<b>Factor 4</b>	Usefulness of the textbook			



<b>Table 4</b>			
<b>Varimax Rotated Factor Pattern for Socio-Psychological and Socio Economic Factors</b>			
<b>Factor Pattern for Socio-Economic Variables</b>			
<b>Socio-Economic Variables</b>	<b>Factor 5</b>	<b>Factor 6</b>	<b>Factor 7</b>
Marital status of the student	0.147	<b>0.788</b>	-0.092
Number of children the student has	0.128	<b>0.715</b>	0.192
Year classification of the student (sophomore, junior etc.)	<b>0.798</b>	0.200	0.081
Status classification of the student (full-time or part-time)	<b>-0.834</b>	-0.095	-0.062
Residence status of the student (on-campus or off-campus)	-0.435	-0.491	-0.044
Prior business course experience of the student	0.066	-0.342	<b>-0.737</b>
Area the student majoring in	0.382	-0.406	0.408
Gender of the student	0.192	0.108	0.584
Ethnicity of the student	0.011	-0.242	0.626
<b>Variance Explained by Each Factor</b> (Minimum Eigenvalue of 1)	1.747	1.733	1.500
<b>Percentage of Variance Explained</b>	19.410	19.257	16.661
<b>Factor Labels:</b>			
<b>Factor 5</b>	Year and status classification of the student		
<b>Factor 6</b>	Marital status and the number of children of the student		
<b>Factor 7</b>	Prior business course experience		
<u>Note:</u> Factor loadings of 0.7 or above are highlighted and used in naming the factors.			

The analysis of the socio-psychological factors reveals that four factors have emerged as the relevant factors with a minimum Eigen value of one. The factors are namely, 1) high academic goal and effort towards high performance of a student, 2) academic motivation of a student and the availability of funds for education, 3) the amount of time spent on studying for the course, and 4) the usefulness of the textbook. The

factors are labeled using the Varimax rotation criteria of significant factor loading. Under the criteria, factor loadings of 0.70 (absolute value) or higher are used to label the factors. The criterion requires that the explained variation between a factor and a variable should be at least 0.70 (with a squared loading of 0.49).

Using similar procedure, three factors are selected from the socio-economical factors with a minimum Eigenvalue of one. The relevant socio-economical factors are namely, 1) the year (sophomore, junior etc.) and status (full-time or part-time) classification of the student, 2) marital status and the number of children of the student, and 3) the prior business course experience of the student.

To test the significance of the relevant factors, multiple discriminant analysis is performed on both mid-term grade and expected final grade. A total of seven relevant factors (as indicated by the factor analysis) are used as independent variables to determine their significance. The factor coefficients and their respective F-statistics are reported in Table 5.

**Table 5**  
**Multiple Discriminant Analysis of Mid-term and Expected Final Grades**

<b>Factors</b>	<b>Mid-term Grade</b>		<b>Expected Final Grade</b>	
	Wilks' Lambda (Factor Coefficients)	F-Statistic	Wilks' Lambda (Factor Coefficients)	F-Statistic
<b>Factor 1</b>	0.839	5.125***	0.658	10.394***
<b>Factor 2</b>	0.872	3.911**	0.916	1.842
<b>Factor 3</b>	0.992	0.208	0.967	0.677
<b>Factor 4</b>	0.995	0.143	0.881	2.694**
<b>Factor 5</b>	0.968	0.869	0.976	0.493
<b>Factor 6</b>	0.917	2.427*	0.984	0.324

**Table 5**  
**Multiple Discriminant Analysis of Mid-term and Expected Final Grades**

<b>Factor 7</b>	0.933	1.922	0.912	1.927
<u>Note:</u> *** indicates significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level.				
<b>Factor Labels:</b>				
<b>Factor 1</b>	High academic goal and effort towards high performance			
<b>Factor 2</b>	Academic motivation and availability of funds for education			
<b>Factor 3</b>	Time spent on studying for the course			
<b>Factor 4</b>	Usefulness of the textbook			
<b>Factor 5</b>	Year and status classification of the student			
<b>Factor 6</b>	Marital status and the number of children of the student			
<b>Factor 7</b>	Prior business course experience			

The analysis reveals that the student achievement in receiving a high mid-term grade is significantly affected by factors 1 (at 1 percent level) and 2 (at 5 percent level). At 10 percent level of significance, factor 6 also contributes towards achieving a high mid-term grade. Overall, high academic goal and effort towards high performance (Factor 1) and academic motivation and availability of funds for education (Factor 2) are significant determinants of the mid-term grade of the student. On the other hand, expected final grade is mainly determined by factors 1 (at 1 percent level) and 4 (at 5 percent level). In other words, high academic goal and effort towards high performance (Factor 1) and the usefulness of the textbook (Factor 4) are main determinants of the expectation of a high final grade. Surprising exclusion of Factor 2 (academic motivation and availability of funds) and inclusion of Factor 4 (textbook usefulness) in determining the expected final grade can be attributed to the fact that the students have inflated final grade expectations. Further studies could be directed to investigate if any of the socio-psychological or socio-economic factors tend to correlate to unrealistic expectations (improving a student's grade dramatically between mid-term and final).

The multinomial logit model is employed to complement the findings of multiple discriminant analysis. In addition, the model framework allows investigating the significance of individual explanatory variables in influencing mid-term and expected final grades. Table 6 provides respective coefficient values and their corresponding significance.

Under socio-psychological variables, only the amounts of time utilized to study for the course and for overall academic work are observed as significant determinants of mid-term grades. In contrast, the expected final grade is significantly affected by the amount of time utilized to study for the course, availability of funds, importance of receiving an ‘A’, and the belief that efforts influence performance. The analyses of socio-economic variables reveal that the marital status and area (major/concentration) of study significantly affect the outcome of mid-term grades, while number of children and gender significantly influence the expectation of final grades. The Wald  $\chi^2$ -statistic shows the overall significance of explanatory variables in determining mid-term and expected final grades.

<b>Table 6</b>				
<b>Multinomial Logit Analysis of Mid-term and Expected Final Grades</b>				
<b>Explanatory Variables</b>	<b>Mid-term Grade</b>		<b>Expected Grade</b>	<b>Final</b>
	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Coefficient</b>	<b>t-Statistic</b>
<b>Socio-Psychological Variables</b>				
Number of hours/week study for the course	0.1637	1.716*	0.2452	2.383**
Usefulness of the text book	-0.0686	-0.469	-0.0377	-0.242
Difficulty level of the course	0.0457	0.237	0.0882	0.469
Academic motivation of the student	-0.1851	-1.097	0.0238	0.185
Number of hours/week spent on	-0.0567	-1.787*	-0.0346	-0.835

<b>Table 6</b>				
<b>Multinomial Logit Analysis of Mid-term and Expected Final Grades</b>				
academic work				
Overall academic performance of the student	0.0393	0.198	-0.1291	-0.495
Availability of sufficient funds for college	-0.0382	-0.443	-0.1816	-1.915*
Importance of receiving 'A' grade in the course	0.1133	0.557	-0.4187	-2.01**
Belief that effort influences performance	-0.2689	-1.519	-0.4862	-2.595***
<b>Socio-Economic Variables</b>				
Marital status of the student	-1.0911	-1.668*	-0.6033	-1.147
Number of children the student has	0.5301	1.013	0.8482	1.889*
Year classification of the student (sophomore, junior etc.)	-0.4996	-0.931	-0.0631	-0.115
Status classification of the student (full-time or part-time)	0.7687	0.698	1.4514	1.382
Residence status of the student (on-campus or off-campus)	-0.0689	-0.068	0.4372	0.481
Prior business course experience of the student	1.7709	1.215	1.6801	0.969
Area the student majoring in	0.4816	2.745***	0.2688	1.092

<b>Table 6</b>				
<b>Multinomial Logit Analysis of Mid-term and Expected Final Grades</b>				
Gender of the student	0.7449	0.963	1.6019	2.094**
Ethnicity of the student	-0.4253	-1.221	-0.2298	-0.956
<b>Wald <math>\chi^2</math> Statistic</b>	<b>78.03***</b>		<b>61.61***</b>	
<u>Note:</u> *** indicates significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level.				

As a final investigation, multinomial logit model is further utilized to test the significance of seven relevant factors (identified by the factor analysis) in determining mid-term and expected final grades. The coefficients of explanatory variables and their corresponding t-statistics are reported in Table 7.

<b>Table 7</b>				
<b>Multinomial Logit Analysis of Mid-term and Expected Final Grades Using Relevant Socio-Psychological and Socio Economic Factors</b>				
<b>Factors</b>	<b>Mid-term Grade</b>		<b>Expected Final Grade</b>	
	<b>Coefficient</b>	<b>t-Statistic</b>	<b>Coefficient</b>	<b>t-Statistic</b>
<b>Factor 1</b>	-0.7196	-2.783***	-1.3599	-5.121***
<b>Factor 2</b>	-0.5879	-3.708***	-0.6504	-2.969***
<b>Factor 3</b>	-0.1742	-0.767	0.1221	0.541
<b>Factor 4</b>	-0.1247	-0.504	0.0216	0.075
<b>Factor 5</b>	-0.0884	-0.315	-0.1216	-0.436
<b>Factor 6</b>	-0.5044	-2.802***	-0.3278	-1.552
<b>Factor 7</b>	-0.0239	-0.093	0.3727	1.348
<b>Wald <math>\chi^2</math> Statistic</b>	<b>51.39***</b>		<b>45.54***</b>	
<u>Note:</u> *** indicates significance at 1% level, ** indicates significance at 5% level, and * indicates significance at 10% level.				
<b>Factor Labels:</b>				

<b>Table 7</b> <b>Multinomial Logit Analysis of Mid-term and Expected Final Grades</b> <b>Using Relevant Socio-Psychological and Socio Economic</b> <b>Factors</b>	
<b>Factor 1</b>	High academic goal and effort towards high performance
<b>Factor 2</b>	Academic motivation and availability of funds for education
<b>Factor 3</b>	Time spent on studying for the course
<b>Factor 4</b>	Usefulness of the textbook
<b>Factor 5</b>	Year and status classification of the student
<b>Factor 6</b>	Marital status and the number of children of the student
<b>Factor 7</b>	Prior business course experience

The analyses reveal that factors 1, 2, and 6 (high academic goal and efforts towards high performance, academic motivation and availability of funds for education, and marital status and number of children of the student respectively) are highly significant (at 1 percent level) determinants of mid-term grades. In a similar fashion, factors 1 and 2 significantly (at 1 percent level) determine the expectation of final grades. Taken together with the findings of multiple discriminant analysis, high academic goal and effort towards high performance emerges as the undisputed driving force towards achieving a high mid-term grade and a high final grade expectation. Similar importance of student academic aptitude towards high performance is found in Siegfried and Fels (1979), Eskew and Faley (1988), Wetzell, O'Toole, and Millner (1991), and Paulsen and Gentry (1995). In contrast, both multiple discriminant and multinomial logit analyses show the significance of marital status and the number of children in determining students' mid-term grades. A high concentration of non-traditional students in the sample warrants further investigation of these factors since they tend to affect a student's motivation and the amount of time available for study significantly.

### **CONCLUSION AND EVALUATION**

The effectiveness of the project is evaluated by identifying relevant variables that are associated with mid-term grades in each

course as well as the final grade expectation for each course. These variables are then analyzed in terms of their significance. The analysis sheds some light on what control the students' performance that professors and an institution can evaluate for a greater success of students in business programs in general and finance program in particular.

In addition, further thoughts are devoted to the long-term and short-term aspect of each success factor as well as the financial aspect of these factors for student achievement in a business school. In summary, the study observes the following findings:

- A significant majority of the students expect an 'A' or a 'B' grade in the final exam even if their mid-term grade is not an 'A' or 'B'. The observed behavior is highly significant even at 1% level of significance.
- The cross-tab analysis results clearly show that no gender and ethnic effects are present in final grade expectation. A weak ethnic effect is present in the mid-term grade distribution, while no gender effect is observed in the distribution. It further shows that the students have an inflated final grade expectation irrespective of their gender or ethnic background.
- Varimax Rotated Factor analysis reveals that four socio-psychological factors namely, 1) high academic goal and effort towards high performance of a student, 2) academic motivation of a student and the availability of funds for education, 3) the amount of time spent on studying for the course, and 4) the usefulness of the textbook are relevant. Similarly three socio-economical factors namely, 1) the year (sophomore, junior etc.) and status (full-time or part-time) classification of the student, 2) marital status and the number of children of the student, and 3) the prior business course experience of the student are relevant in determining mid-term and expected final grades.
- Multiple discriminant analysis reveals that 1) high academic goal and effort towards high performance and 2) academic motivation and availability of funds for education are significant determinants of the mid-term grade of the student. On the other hand, expected final grade is mainly determined by 1) high academic goal and effort towards high performance and 2) the usefulness of the textbook.
- Multinomial logit analysis shows that four explanatory variables



(two socio-psychological and two socio-economic) maintain significance towards determining mid-term grades, while six variables (four socio-psychological and two socio-economic) are significant determinants of expected final grades. Similar analysis of factors, generated by the factor analysis reveals that 1) high academic goal and effort towards high performance of a student, and 2) academic motivation of a student and the availability of funds for education significantly determine both mid-term and expected final grade. Marital status and the number of children are also found significant towards determining mid-term grades.

In conclusion, the study reinforces previous findings that effort, motivation and aptitude are the cornerstones of high academic performance. Consequently, teaching effectiveness can be measured in terms of the boosting these qualities among students that will culminate into enhancing their performance. The results could further help faculty and advisors to zero in on students that are expecting magic in the final (not supported by their mid-term performance), but need to focus on planning and effort.

#### **REFERENCES**

- Borde, S. F., A. K. Byrd, and N. K. Modani, (1998). Determinants of student performance in introductory corporate finance course. *Journal of Financial Education*, 24, 23-30.
- Brightman, H. J. (1987). Toward teaching excellence in the decision sciences. *Decision Sciences*, 18 (4), 646-661.
- Buckles, S. G., and V. Freeman, (1983). Male-female differences in the stock and flow of economic knowledge. *Review of Economics and Statistics*, 65, 355-358.
- Chan, K. C., C. Shum, and D. J. Wright, (1997). Class attendance and student performance in principles of finance. *Financial Practice and Education*, 7 (2), 58-65.

Devadoss, S., and J. Foltz, (1996). Evaluation of factors influencing student class attendance and performance. *American Journal of Agricultural Economics*, 78 (3), 499-507.

Didia, D., and B. Hasnat, (1998). The determinants of performance in the university introductory finance course. *Financial Practice and Education*, 8 (1), 102-107.

Durden, G. C., and L. V. Ellis, (1995). The effects of attendance on student learning in principles of economics. *The American Economic Review*, 85 (2), 343-346.

Eskew, R. K., and R. H. Faley, 1988. "Some Determinants of Student Performance in the First College-Level Financial Accounting Course." *The Accounting Review*, 63 (1): 137-147.

Gagne, M., and M. Shepherd, (2001). A comparison between a distance and a traditional graduate accounting class. *T. H. E. Journal*, 28 (9), 15-22.

Guolla, M., (1999). Assessing the teaching quality to student satisfaction relationship: Applied customer satisfaction research in the classroom. *Journal of Marketing Theory and Practice*, 7 (3), 87-97.

Jaggia, S., and A. Kelly-Hawke, (1999). An analysis of the factors that influence student performance: A fresh approach to an old debate. *Contemporary Economic Policy*, 17 (2), 189-198.

Kellar, G. M., B. E. Jennings, H. L. Sink, and R. A. Mundy, (1995). Teaching transportation with an interactive method. *Journal of Business Logistics*, 16 (1), 251-279.

Leidner, D. E., and M. Fuller, (1997). Improving student learning of conceptual information: GSS supported collaborative learning vs. individual constructive learning. *Decision Support Systems*, 20 (2), 149-163.

Loviscek, A. L., and N. R. Cloutier, (1997). Supplemental instruction and the enhancement of student performance in economics principles. *The American Economist*, 41 (2), 70-76.

Massingale, C., and D. Dewhirst, (1992). Delivery of the new MBA curriculum. *Survey of Business*, 28 (1), 10-13.

Mehlenbacher, B., C. R. Miller, D. Covington, and J. S. Larsen, (2000). Active and inactive learning online: A comparison of web-based and conventional writing classes. *IEEE Transactions on Professional Communication*, 43 (2), 166-184.

Nofsinger, J. R., and G. Petry, (1999). Student study behavior and performance in principles of finance. *Journal of Financial Education*, 25, 33-41.

Orpen, C., (1994). Perceived similarity: Its effect on the accuracy of peer evaluations. *The International Journal of Educational Management*, 8 (3), 4-6.

Park, K. H., and P. M. Kerr, (1990). Determinants of academic performance: A multinomial logit approach. *Journal of Economic Education*, 21 (2), 101-111.

Paulsen, M. B., and J. A. Gentry, (1995). Motivation, learning strategies, and academic performance: A study of the college finance classroom. *Financial Practice and Education*, 5 (1), 78-89.

Rhine, S. L. W., (1989). The effect of state mandates on student performance. *American Economic Review*, 79, 231-235.

Romer, D., (1993). Do students go to class? Should they? *Journal of Economic Perspectives*, 7 (2), 167-174.

Saint-Germain, M. A., (1998). Does new media software improve MPA student performance? *Public Productivity & Management Review*, 21 (3), 309-323.

Sherry, L., S. Billig, D. Jesse, and D. Watson-Acosta, (2001). Assessing the impact of instructional technology on student achievement. *T. H. E. Journal*, 28 (7), 40-43.

Siegfried, J.J., and R. Fels, (1979). Research on teaching college economics: A survey. *Journal of Economic Literature*, 17, 923-969.

Smith, G. G., D. Ferguson, and M. Caris, (2001). Teaching college courses online vs. face-to-face. *T. H. E. Journal*, 28 (9), 1-7.

Smith, R., and G. Bradley, (1994). The influence of thermal conditions on teacher's work and student performance. *Journal of Educational Administration*, 32 (1), 34-42.

Stith, B., (2000). Web-enhanced lecture course scores big with students and faculty. *T. H. E. Journal*, 27 (8), 20-25.

Waldauer, C., V. G. Duggal, and M. L. Williams, (1992). Gender differences in economic knowledge: A further extension of the analysis. *Quarterly Review of Economics and Finance*, 32 (4), 138-143.

Wetzel, J. N., D. M. O'Toole, and E. L. Millner, (1991). A qualitative response model of student performance on a standardized test. *Atlantic Economic Journal*, 19 (3), 18-25.

Williams, L. K., (1991). A synthesis of research studies on the performance of male and female accounting students. *The Woman CPA*, 53 (2), 12-13.

**FINDING THE RELATIONSHIP BETWEEN LEARNING STYLE AND  
COURSE ACHIEVEMENT OF UNDERGRADUATE STUDENTS IN  
SELECTED ACCOUNTING COURSES**

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**ABSTRACT**

*This study investigated the relationship between undergraduate students' learning style and course achievement in accounting courses. A chi-square Goodness-of-Fit table was used on a sample of 297 undergraduate students enrolled in Accounting Principles I & II and Intermediate Accounting I & II courses in 9 U.S. colleges and universities. Using Kolb's Learning Style Theory, results indicate there is no significant relationship between cognitive learning style and course achievement. Also, there may be a relationship between students' perception of whether their instructors' teaching style is congruent with the students' preferred learning style and the outcome of this interaction on student performance.*

**INTRODUCTION**

The purpose of this study is to determine whether course achievement in selected accounting courses vary based on differences in cognitive learning style. A similar, earlier study was done by Carthey (1993) who sought to provide answers to the question of whether post-secondary accounting students' learning styles are related to grade performance in the specific courses of Principles of Management, Business Law, Intermediate Accounting, and Principles of Economics.

Accounting educators have heard many warnings that accounting education must change if it is to be relevant and add value to our students and community (Albrecht and Sack, 2000). Accounting programs have long suffered from criticisms of their curricula, decreases in student enrollments and high failure rates. Accounting faculty, in addition to being frustrated by the high failure rates, are not clear whether any learning is taking place in the classroom as the list of students who "just don't get it" grows.

Although there has been a current increase in enrollment in accounting programs, partly attributable to student interest in the Enron Corp. scandal, the 50,000 accounting degrees awarded by all U.S. schools in spring 2003 is short of the peak of more than 60,000 degrees awarded in the 1994-95 academic year

(<http://online.wsj.com/article/0,,SB109104541327776698,00.html>, 4/18/05).

Despite the recent upsurge in undergraduate accounting program enrollment, however, educators perceive that accounting students are decreasing in quality. Approximately forty-three percent of educators surveyed in an Albrecht and Sack (2000) study indicated that they perceived the quality of the students choosing accounting as a major is down. In addition, an AICPA sponsored market survey of 1,000 high school and 1,000 college students geared toward improving the effectiveness of market approaches to ensure the “best and brightest” continue to enter the profession found that high-achieving students had less interest in an accounting career than low or average achievers (Gallup as cited in Garner & Dombrowski, 1997).

Wooldridge believes that “university and college education would be enhanced by an understanding of how the relative effectiveness of different teaching methods, optimal for a specified set of learning objectives, needs to be modified to take into account differences in learning styles of individual students” (Sims & Sims, 1995, pp. 64 – 65).

“Students’ perception of accounting as difficult, unpalatable or unrealizable, has created a great challenge for the accounting educators in their attempt to increase the passing rates of accounting students” (Shotwell, 1999). In 1986, the American Accounting Association’s (AAA’s) “Bedford Committee” issued a report that was critical of traditional lecture-based classrooms where only content is conveyed, self-contained textbook problems are assigned, with the focus on memorizing facts to be given back on examinations. The accounting curriculum has remained basically the same since the 1960s until the American Education Change Commission (AECC - created and funded by a \$4 million contribution from the then eight largest CPA firms) recommended the redesign of the accounting curricula at the university level. One particular focus of the AECC has been the first accounting principles course. In stressing the importance of the course, the AECC has noted:

*The course shapes...perceptions of (1) the profession, (2) the aptitudes and skills needed for successful careers in accounting, and (3) the nature of career opportunities in accounting. These perceptions affect whether the supply of talent will be sufficient for the profession to thrive. For those who decide to major in accounting or other aspects of business, the course is an important building block for success in future academic work (Wilson & Baldwin, 1995).*

With the current trend of increased interest in accounting programs, it is therefore critical that the structure of accounting courses and the methods for evaluating accounting students not discourage students from pursuing a career in accounting. According to Ken Dunn of the *Learning Style Institute*, “learning styles is the missing link to individualizing or personalizing learning for each student. If students don’t learn the way we teach them, then we must teach them in the way they learn best” (Cornell, 1993).

## LITERATURE REVIEW

### **Experiential Learning Theory**

As Kolb (1984), originator of the *Kolb Learning Styles Inventory* [LSI], explains experiential learning theory:

This perspective on learning is called “experiential” for two reasons. The first is to tie it clearly to its intellectual origins in the work of Dewey, Lewin, and Piaget. The second reason is to emphasize the central role that experience plays in the learning process...[the aim is to suggest] through experiential learning theory a holistic integrative perspective on learning that combines experience, perception, cognition, and behavior (pp. 20-21).

### *Kolb’s Learning Styles Theory*

Each of us develops learning styles that have some weak and strong points. Learners, Kolb (1984) contends, if they are to be effective, need four different kinds of abilities - *concrete experience* abilities (CE), *reflective observation* abilities (RO), *abstract conceptualization* abilities (AC), and *active experimentation* (AE) abilities (p. 30). Yet, this ideal is difficult to achieve. As Kolb (1984) asks: “How can one act and reflect at the same time? How can one be concrete and immediate and still be

theoretical?" (p. 30). "This dialectic tension in the creative process has been recognized by Bruner (1966a), Wallas (1926) and Jungian theory (1923) as it describes the emergence of basic life orientations as a function of dialectic tensions between basic modes of relating to the world" (as cited in Kolb, 1984, p. 31).

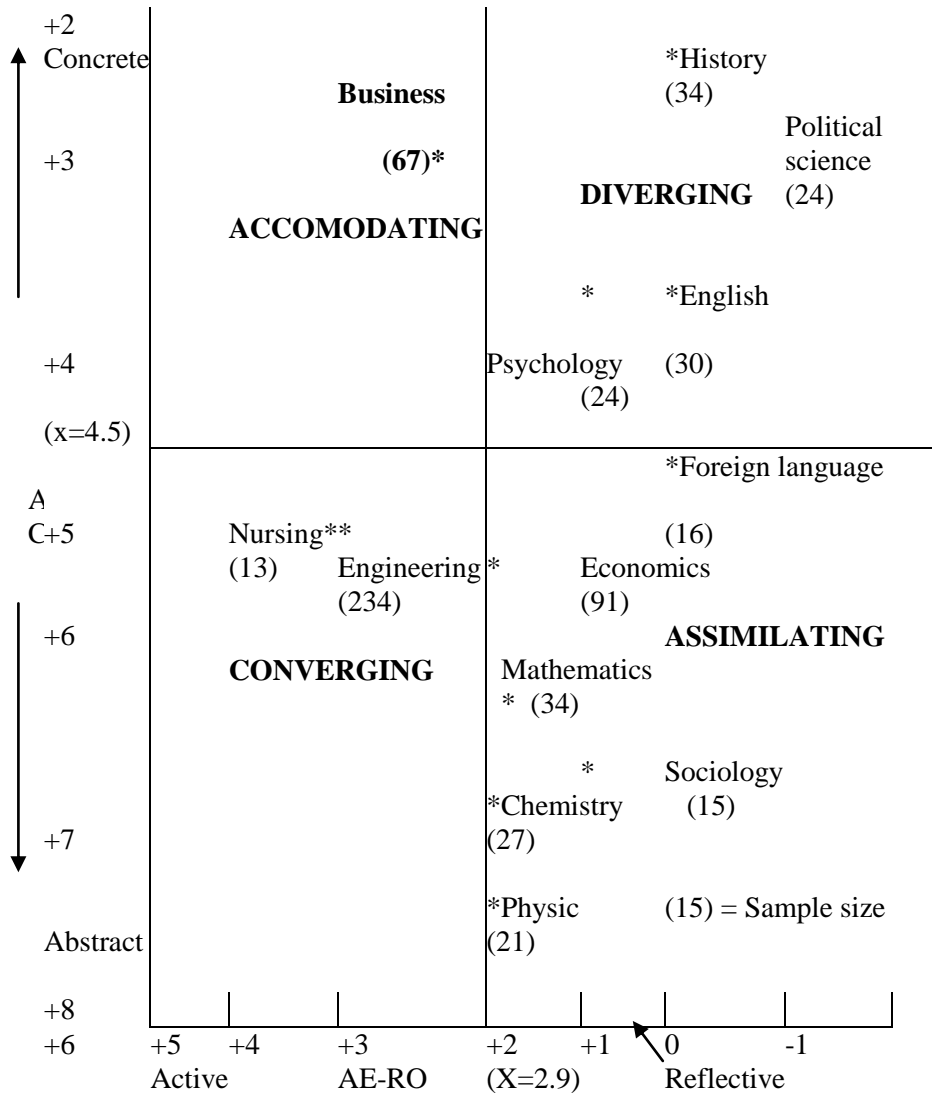
Kolb (1976) identified four statistically prevalent types of learning styles that he has called Converging, Diverging, Assimilating, and Accommodating (Figure I). The knowledge of the learner who prefers the Converging learning style (AC/AE dimension) is organized in such a way that, through hypothetical-deductive reasoning, he can focus it on specific problems. The learner who prefers the Diverging learning style (CE/RO) has learning strengths opposite to those of the Converging style. This style performs better in situations that call for generation of ideas, such as "brainstorming".

The greatest strength of the learner who prefers the Assimilating style (AC/RO) lies in his ability to create theoretical models. For him it is more important that the theory be logically sound and precise. The learner who prefers the Accommodating learning style (CE/AE) has strengths opposite to those of the Assimilating style. His greatest strength lies in doing things, in carrying out plans and experiments and involving himself in new experiences. His educational background is often in technical or practical fields such as business.



**FIGURE I**

**(AC-CE) by Undergraduate College Major**



Source: Kolb (1984, p. 86)

### **Learning Styles and Academic Achievement**

Research findings on individual differences in learning styles and performance in learning settings have been mixed. The results of an earlier study by Carthey (1993), which sought to relate 62 accounting students' learning styles to course grades at a northeast Iowa community college using the Kolb LSI, showed that students who preferred the "Converging" style (30% of the students tested) possessed a grade performance advantage in all courses under study, scoring mostly A's. Those preferring the "Diverging" learning style consistently tested lowest in grade performance in all the courses under study.

Those students who preferred the "Accommodating" style had the second highest percentage of A's in the courses under study. In particular, those students who preferred the "Assimilating" and "Converging" styles possessed the highest percentage of A's in the Intermediate Accounting course and students preferring the "Diverging" style experienced the lowest percentage of A's and the highest percentage in the B to F grade ranges. The results of this study support Kolb's (1976) research results that showed that accountants tended to prefer the "Converging" learning style and also support Kolb's (1976) theory that learning styles converge as students progress through their major.

The results of Carthey's (1993) study also support Lawrence and Taylor's (2000) theory that grades in upper division accounting courses may be "friendlier" to certain personality types and accounting (like many other disciplines) filters out students with learning styles that are different from the dominant learning style demanded by the profession. Therefore, students who probably can succeed are not given an opportunity to do so.

In other words, do some personality types receive more positive feedback and thus continue to pursue an accounting degree? The researchers believe it is important to determine if grading procedures in accounting courses are filtering students according to personality, because such filtering would have significant ramifications for the future success of the accounting profession in general.

The results of the study suggested the possibility that grading schemes for intermediate accounting courses do not favor particular personality types. ESTJ and ISTJ (sensing-judging) were among the top three individual personality types. This supports the most common stereotype associated with the personality of members of the accounting

profession and the sensing-judging type has also been the most prevalent preference combination in upper division accounting courses over the past 2 decades (Lawrence and Taylor, 2000).

However, Lawrence and Taylor (2000) believe that “individuals can consciously learn to use their less preferred psychological functions, and thus a prevalence of selected personality types in accounting classes does not imply that other personality types are doomed to failure”. This lends support to the need for accounting faculty to make a conscious effort to make the learning of accounting concepts inclusive to all personality types and learning styles to increase the number of students entering the profession.

The results of Carthey’s (1993) study indicated that relationships appeared to exist between personality characteristics and student performance on grade-influencing activities (such as homework assignment, examinations, absences, in-class participation, and computer assignments). In particular, multiple-choice examinations (of which the CPA exam is one) appeared to be a personality-biased filter.

College accounting examinations tend to have a heavy quantitative emphasis and a predominantly multiple-choice format. As a result, personalities that do not perform well on these types of examinations may be filtered out by their failure to pass these types of examinations since students’ initial experiences with accounting were a primary determinant of whether or not they selected it as a major (Cohen & Hanno, as cited in Saudagaran, 2001, p. 85).

Though Carthey’s (1993) results indicate different relationships between learning styles and performance on various exam formats, the researchers acknowledge that other potential explanatory factors may impact this relationship, including subject matter of the course, classification of student, and selection of the questions. A limitation of Carthey’s (1993) study is its relatively small sample size that limits the generalizability of the results of the study; a criticism that Loo (2002) has made, in general, regarding previous research in learning styles. The problem, Loo (2002) explains, with such small sample sizes is that “findings from such small samples do not give us confidence in the generalizability of results to the greater population of business students” (p. 353).

Financial accounting, most would agree, is one of the most difficult courses for college students to pass. Friedlan (1995) examined the effects that the teaching approach used in introductory financial

accounting courses has on students' perceptions of the skills and abilities important for success in accounting courses and for success by accounting practitioners.

The results of Friedlan's (1995) study showed that the approach teachers use in accounting courses has significant effects on students' perceptions. Students who were exposed to a non-traditional introductory financial accounting course that placed less emphasis on technical material and instead, stressed critical thinking skills tended to have perceptions about the skills and abilities that were more consistent with those identified as necessary by the accounting profession than students exposed to a traditional course. In contrast, the perceptions of students exposed to the traditional teaching approach were either unchanged or adversely affected by the course. The findings in the paper are important because students base their career choice on the stereotypes they form about different perceptions they have regarding a particular profession.

#### **LSI VALIDITY AND RELIABILITY**

Kolb's LSI is arguably the most researched, critiqued and replicated of the myriad of LSIs being utilized in learning style research. Kolb's response to concerns regarding the validity and reliability of the original 1976 version of the LSI was to publish a revised version LSI II (1985) for which he claimed improved reliability. Research on the LSI II indicated an improvement in the internal consistency of the instrument over the original version. In 1993 a further revised version of the LSI was published which proved to have high test-retest reliability in recent studies. The instrument is called the LSI 3.

The predictive value of the LSI is that "those who chose to pursue a given discipline further through graduate training should show accentuation of the learning style characteristic of that discipline.... Thus, the interaction among career, high level of education, and undergraduate major may produce distinctive learning styles" (Kolb, 1976). However, Kolb (1984) cautions regarding making between individual comparisons of learning styles since "a business major at one school can be quite different from one at another" (p. 86).

The ability to use the LSI to measure the learning styles of accounting students has been supported by Kolb's research in developing group norms for responses to the LSI. The norms for scores on the LSI 3 were developed from a sample of 1,446 (638 males and 801 females)

ethnically diverse adults ranging in age from 18-60 years old and with educational levels attained varying from high school diplomas to more than a college degree. These results suggest that “LSI scores show sufficient variability across different populations to be useful in assessing the learning styles that characterize occupations and groups other than managers” (Kolb, 1976, p. 23). Normative profiles for the LSI were achieved from a sample of 1,446 adults ranging in age from 18-60 years old and with educational levels attained varying from high school diplomas to more than a college degree (Elfant, 2002, p. 49).

### **IMPORTANCE OF THE STUDY**

The benefits of the outcome of this study include the fact that the research adds to the body of knowledge as it relates to student learning styles in higher education and also adds to the body of knowledge needed to support the use of experiential learning theory in the accounting curriculum. Only limited current research on cognitive learning styles in the field of accounting is evidenced.

Identifying the learning skills of students can provide educators with valuable information to aid accounting departments in designing their accounting curriculum to facilitate and utilize the learning skills of their students with the aim of improving enrollment and retention in accounting programs.

Accounting educators question the benefit of utilizing experiential learning theory as a possible alternative teaching strategy for improvement of student grades. This exploratory study can add to the body of experiential research that strives to take into consideration how students learn.

The evidence to support a changed curriculum and method of presentation in accounting curriculum comes primarily from larger firms in the public practice community and associated organizations. The Association to Advance Collegiate Schools of Business International (AACSB) is the principal accrediting body of business programs. Under recent rules changes, greater emphasis is being placed on curriculum innovations, feedback from alumni, employers, peers and current students regarding the effectiveness of business instruction. Research in student learning styles enables instructors to take a proactive role in making much-needed changes to the accounting curriculum to not only make it student-friendly but also to maintain the viability of the profession.

As Cross (2001) informs us, there are four major developments driving the call for focusing attention on student learning:

- Rising demand from stakeholders—students, parents, employers, and policymakers—for accountability and evidence of student learning.
  - Significant advances in research on cognition and learning, suggesting that students, rather than teachers, are the active locus for learning.
  - The arrival in higher education of thousands of students who are unprepared to do college-level work. Teachers faced day-by-day with students who are not “getting it” are increasingly interested in knowing how to produce learning.
  - The growing tendency of students to accumulate their education from multiple colleges and other sources. The convergence of these pressures on higher education has stimulated wide interest and discussion... that the purpose of colleges and universities, as Robert Barr and John Tagg write, is not simply to “provide instruction” but to “produce learning” (Cross, 2001).
- Continued high failure rates in accounting courses and decreasing numbers of accounting majors signal a crisis that requires accounting educators to look at all possible means of stemming or reversing this trend.

## **METHODOLOGY**

### **Research Design**

This study investigates the relationship between the learning styles of undergraduate students and course achievement in selected accounting courses. Course achievement in this study is measured by students' final grades earned in the accounting courses.

The following research question and hypothesis is posed for the study. The hypothesis stated in the null form, were tested at an .05 alpha level.

Research Question: Is there any relationship between students' cognitive learning style and course achievement?

Hypothesis: There will be no significant difference in population mean course achievement among groups of students with different cognitive learning styles.

(a.) A chi-square Goodness-of-Fit table was used to compare the proportions of final course grades of undergraduate students within the

major programs of study grouped by Kolb's theory of specialization enrolled in the ACCT 211 and ACCT 212 courses in all institutions.

(b.) A chi-square Goodness-of-Fit table was used to compare the proportions of course grades of accounting majors enrolled in the ACCT 311 and ACCT 312 courses in all institutions.

**Selection of Subjects**

Two hundred and twenty-one undergraduate students (including 26 accounting students) who self-enrolled in Accounting Principles I (ACCT 211) and Accounting Principles II (ACCT 212) and seventy-six students (65 accounting and 11 other majors) who self-enrolled in Intermediate Accounting I (ACCT 311) and Intermediate Accounting II (ACCT 312) courses during the Spring 2003 semester attending 4 colleges and 5 universities were selected for participation in this study. Accounting Principles I was coded as ACCT 211; Accounting Principles II was coded as ACCT 212; Intermediate Accounting I was coded as ACCT 311; and Intermediate Accounting II was coded as ACCT 312.

Any surveys that were not completed correctly were excluded from the analysis. Surveys were excluded if students did not rank order their learning preferences but, instead, made ties in their selection of sentence endings. Fifty-eight (16%) of the total surveys completed (355) were excluded from the analysis (Table I).

**Table I**  
**Student Sample by School and Course**

School	School Code	Course ACCT 211	Course ACCT 212	Course ACCT 311	Course ACCT 312	Total Sample	%
U Cola	01	47				47	15.8
FSU	02		53	10	26	90	30.3
HowardU	03	5		21		26	8.8
JCSmith	04		26			26	8.8
LaneC	05	18				18	6.1
MeredithC	06		39			39	13.1
MobileU	07				19	19	6.4
PaineC	08		7			7	2.4
VaInter	09		26			26	8.4
	<b>Surveys</b>	<b>70</b>	<b>151</b>	<b>31</b>	<b>45</b>	<b>297</b>	<b>100</b>

<b>Total Useable</b>	<b>%age</b>	23.6	50.8	10.4	15.2	100
<b>Unusable Surveys</b>						<u>58</u>
<b>Total Surveys</b>						<u>355</u>

### **Student Demographic Information**

Students were provided with a statement of informed consent and were asked to complete a demographic information form after completion of the LSI 3. Items on the survey include age, gender, race, declared major, class classification (Freshman, Sophomore, Junior or Senior) overall GPA, accounting GPA if applicable, declared major, full-time/part-time status and expected grade in the course. Student identifying information was required and obtained during the collection of the data by asking students to provide their student identification number so that all the students' individual learning style preference and course grade could be matched appropriately. Once the data was coded and matched, all identifying information was deleted. None of the personal identifiable information was needed for the data analysis, nor was it included in this study.

### **Instructor Information**

The accounting courses in the 9 colleges and universities were taught by 12 instructors who were known to the researcher. The most popular methods of student assessment were exams (100% of respondents, n = 8) and homework (75%, n = 6). The least common assessment methods used were projects (25%, n = 2) and oral presentations (37.5%, n = 3). No instructor used case studies as an assessment tool.

### **Instrumentation**

The learning styles of the students were measured by the students' scores on the Kolb Learning Style Inventory (LSI 3), student course achievement was measured by the students' course grade in the four accounting courses. The Kolb Learning Style Inventory (LSI 3) was selected for use in this study because of its common use in research, ease of administration and strong and extensive theoretical framework. Use of



the Kolb LSI meets three pertinent design objectives for this survey that are:

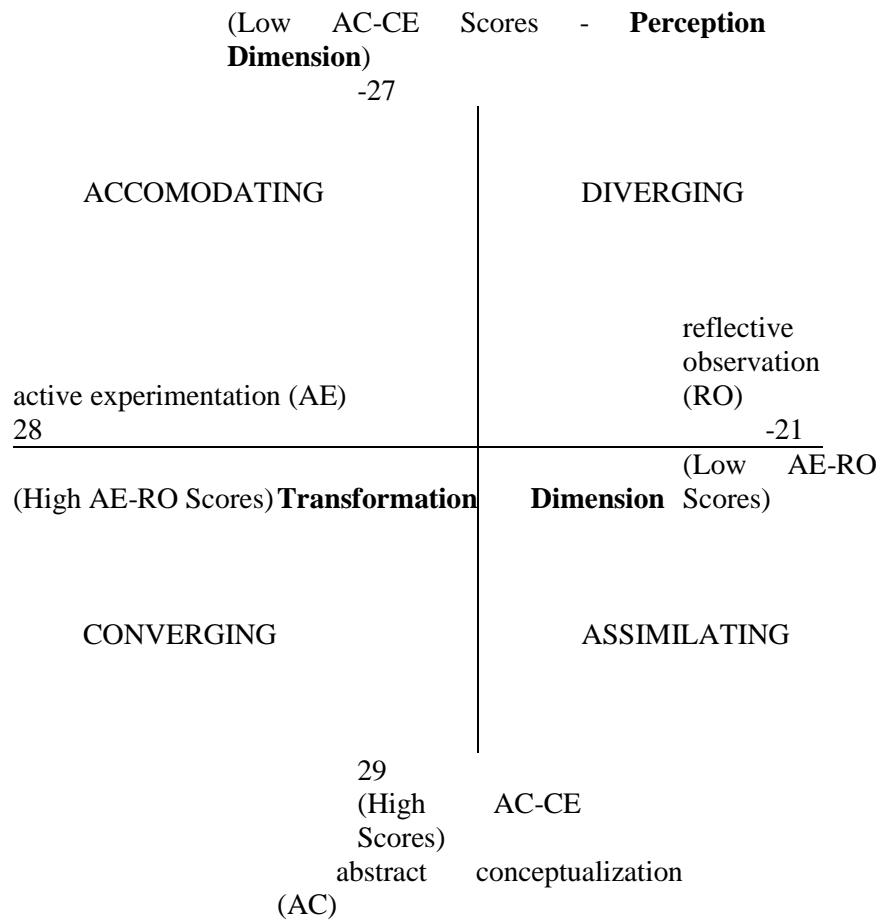
1. The test is brief and straightforward so that in addition to research uses it could be used as a means of discussing with and giving feedback to the survey respondents.
2. The test is constructed in such a way that an individual would respond to it in somewhat the same way as he would a real-life situation (i.e. a learning situation).
3. The test has high face validity.

The LSI 3 is a self-administered survey instrument which students were asked to complete. The LSI measures students' relative emphasis on the four learning modes, CE, RO, AC and AE, which form the learning styles *concrete experience* abilities (CE), *reflective observation* abilities (RO), *abstract conceptualization* abilities (AC), and *active experimentation* (AE) abilities. The survey items are arranged in four columns on one page with items for each learning mode randomly positioned in each column to avoid response bias.

It is a short inventory that consists of 12 sentence-completion items with each response item representing each of the four learning modes. Within each block, individuals are asked to rank the items from 1 to 4 with "4" indicating the best description of their "preferred" learning style. The LSI yields six scores: CE, RO, AC, AE and two combination scores. The LSI is scored by adding up the scores in each of the four columns to produce the scores for each of the four learning modes (CE, RO, AC and AE). The column total scores correspond to the relative strength of the four learning modes of the individual. Therefore, raw scores for each learning mode range from 12 to 48.

The four raw scores are then combined to form the two learning dimensions as follows: Perception (AC-CE) and Transformation (AE-RO). Each learning style is characterized by two combined scores that represent the unique way the individual, or groups of individuals, prefer to perceive (AE-CE) and process (AE-RO) information. The raw scores for both of these combinations range from 36 to -36. These two-dimensional scores are then placed on the *Learning Style Type Grid* (Figure II). The further a subject's point is from the intersection of the horizontal and vertical axes, the more that subject relies on that particular style. The closer a subject's "point" is to the intersection, the more balanced their learning approach.

**Figure 2**  
**Learning Style Grid**



Source: Adapted from Kolb, 1984  
 Lower Case Letters: Learning Modes  
 UPPER CASE LETTERS – LEARNING STYLES

Depending on the magnitude of the scores, the individual is categorized within one of the four quadrants that represent an individual's preferred learning style as either Diverging, Accommodating, Assimilating, or Converging. To reduce the tendency

of individuals to label themselves based on the outcome of cognitive tests, Kolb changed the descriptions of the learning styles in the revised LSI to the descriptive adjectives as follows: Diverging, Accommodating, Assimilating and Converging.

Diverging styles have an AC-CE dimension score less than 4.28 and an AE-RO dimension score less than 5.42; Assimilating styles have an AC-CE score greater than 4.28 and an AE-RO score less than 5.42; Converging styles have an AC-CE dimension score greater than 4.28 and an AE-RO score greater than 5.42; and Accommodating styles have an AC-CE score less than 4.2 and an AE-RO score greater than 5.42 (Table II).

**Table 2**  
**Criterion Scores for Establishing the Learning Styles**

<u>Learning Style</u>	<u>Learning Dimensions</u>	
	<u>AC-CE</u>	<u>AE-RO</u>
Diverging <5.42	<4.28	
Assimilating <5.42	>4.28	
Converging >5.42	>4.28	
Accommodating >5.42	<4.28	

Source: Joerger, 1992, p. 101

### **PROCEDURES**

The researcher obtained data on the college and university demographics by reviewing public information from various sources including the Internet, school websites, school catalogs and reference books of profiles of American colleges. Student course grades were obtained directly from the instructors who taught the courses. Faculty members known to the researcher at the sample universities and colleges administered the LSIs to students enrolled in their accounting courses during the Spring 2003 semester.

### **Data Processing and Analysis**

The personal computer version of the Statistical Program for the Social Sciences (*SPSS-PC+*, *vers. 11*) was used to perform the data analyses at an alpha level of 0.05.

### **Variables in the Study**

The dependent variables for the study include:

- The student's course grade in Accounting Principles I, Accounting Principles II, Intermediate I or II. Course grades are reported on a 10-point scale (A: 90+; B: 80-89; C:70-79; D:60-69; F: <60).

The independent variable for the study is:

- The student's learning style as categorized along Kolb's learning dimensions (i.e. Converging, Diverging, Assimilating, Accommodating);
- The student's learning modes as measured by the individual's four scores on the Kolb LSI (AC, CE, AE and RO);
- The student's two learning style scores as measured on the AC-CE and AE-RO dimensions;
- The student's learning style as categorized along Kolb's learning dimensions (i.e. Converging, Diverging, Assimilating, Accommodating).

### **Demographic Characteristics of Student Sample**

Descriptive statistics were derived from the data obtained from the student demographic forms and other public information. Descriptive statistics were used to describe the learning styles of students when grouped as a single group, by institution, by programs of study and within the four accounting courses.

### **Programs of Study**

Approximately 94% (94.28%, n=280) of the students sampled were enrolled in the following 8 programs of study: Business Management (36.7%, n=109), Accounting (30.6%, n=91), Marketing (8.8%, n=26), Computer/Management Information Systems (6.4%, n=20), Finance (4.7%, n=11), Banking and Finance (3.7%, n=11), Sports Management (2.0%, n=6) and International Business (1.7%, n=5). The remaining 5.05% (n=15) of students sampled were enrolled in the following programs of study: International Business, Human Resource Management, Mathematics, Biology, Chemistry, Advertising, Communications, Economics, Education, Engineering, Nutrition and Sociology.

### **Selected Accounting Courses**

Approximately 23% (23.6%, n=70) of the student sample were students who had self-enrolled in Accounting Principles I, 50.8% (n=151) of the students were enrolled in Accounting Principles II, 10.4% (n=31) were enrolled in Intermediate I and 15.2% (n=45) were enrolled in Intermediate II.

### **Grade Point Averages**

Generally, accounting programs consider a “B-” (the equivalent of a 2.50 overall grade point average [GPA] on a 4.0 scale) or better as a “passing” grade for graduation as an accounting major. Business schools usually require accounting majors to maintain an overall “passing” grade of “B” or better (the equivalent of a 3.0 GPA on a 4.0 scale) in the core accounting courses. Non-accounting majors are generally required to maintain an overall “passing” grade of “C” or better (the equivalent of a 2.0 GPA on a 4.0 scale) in Accounting Principles I and II.

Students were asked to indicate their cumulative GPA and accounting majors were also asked to indicate their accounting GPA on the demographic information sheet. GPA was reported on a 4.0 scale as follows: A, 4.0; A-, 3.67; B+, 3.33; B, 3.0; B-, 2.67; C+, 2.33; C, 2.0; D, 1.0; and F, 0.0.

### **Course Grades**

Grades in all institutions ranged from an “A” to an “F”. The mean final grade in ACCT 211 was 2.70 (SD 1.147) or a “B-”, the mean course grade in ACCT 212 was 3.09 (SD 1.447) or a “B”, the mean final grade in ACCT 311 was 2.52 (SD .890) or a “C+” and the mean final grade in ACCT 312 was also a “C+” (2.53, SD .968).

## **FINDINGS**

### **Learning Styles by Course Grade**

When the student sample was clustered according to course grade, no learning style appeared to perform significantly better or worse than any other learning style. All learning styles were represented in all the grade categories (A through F). Students with Diverging and Assimilating learning styles earned the highest number of A’s (n=17, 18.28% and 17, 14.91%) and B’s (n=16, 17.20% and n=26, 22.81%, respectively). Students with Diverging and Converging learning styles

earned the highest number of C's (n=34, 36.56% and 16, 31.37%, respectively) and D's (n=19, 16.67% and 7, 13.73%, respectively). Students with Assimilating and Diverging learning styles earned the highest number of F's (n=17, 14.91% and n=16, 17.2%, respectively) (Table 3).

The students with the learning style expected to be accounting majors' preferred learning style, Converging, did not perform any better than any other learning style category in the accounting courses, with Converging learning styles earning mostly C's (n=16, 31.37%). However, the Assimilating learning style, which the actual accounting student sample preferred was highly represented in the "A" and "B" grade categories, earning the highest number of A's and B's as described above. This could be attributed to many demographic and social factors, one of them being the requirement that accounting students earn no less than a "B" average in their concentration courses (Table III).

**Table 3**  
**Frequency of Student Sample Course Grades by Learning Style – All Students**

Learning Style	n	%	Learning Style	n	%		
Diverging	CourseLtrGradeA	17	18.28	Assimilating	CourseLtrGradeA	17	14.91
	B	16	17.20		B	26	22.81
	C	34	36.56		C	35	30.70
	D	10	10.75		D	19	16.67
	F	16	17.20		F	17	14.91
	Total	93	100.0		Total	114	100.0
Converging	CourseLtrGradeA	11	21.57	Accommodating	CourseLtrGradeA	8	20.51
	B	12	23.53		B	12	30.77
	C	16	31.37		C	9	23.08
	D	7	13.73		D	4	10.26
	F	5	9.80		F	6	15.38
	Total	51	100.0		Total	39	100.0

### **ACCT 211 & 212.**

Research Question: Is there any relationship between students' cognitive learning style in selected accounting courses (ACCT 211 and 212) and course achievement?

a. A chi-square Goodness-of-Fit table was used to compare the proportions of course grades of undergraduate students within the major programs of study grouped by Kolb's theory of specialization enrolled in the ACCT 211 and ACCT 212 courses in all institutions. Since the significance level of the chi-square statistic (8.237, 3.634, 3.437, 3.129, .829) in all cases was more than the stated alpha (.221, .726, .944, .793, .842) we failed to reject the null hypothesis and conclude that there is no significant difference between student course achievement based on differences in learning style. Therefore, it appears that no significant relationship exists between student learning style and course achievement.

The frequency of course grade of all students when clustered by learning style and course reflects that in ACCT 211, the students who preferred the Diverging learning style earned the most A's (n=5, 6.9%), with the Assimilating style earning the most B's (n=8, 9.8%), the Diverging style earning the most C's (n=10, 13.9%) and the Assimilating style earning the most Ds (n=5, 6.1%) and Fs (n=4, 5.6%). In ACCT 212, the Assimilating and Diverging learning styles earned the most A's (n=9, 11%) and in addition, the Assimilating style earned the most B's (n=12, 14.6%). Students who preferred the Diverging learning style earned the most C's (n=13, 18.1%), Converging styles earned the most D's (n=6, 17.6%) and the Diverging learning style received the most F's (n=12, 16.7%) (Table IV).

From these results, it again appears that no one learning style performs significantly better than another learning style in the Accounting Principles courses. It is also interesting to note again that students with the Converging learning style (i.e. the style attributed to Accounting majors under Kolb's theory) neither performed significantly better or worse than any other groups of students in the Accounting Principles courses.

### **ACCT 311 & 312.**

Research Question: Is there any relationship between students' cognitive learning style and course achievement in selected accounting

courses (ACCT 311 and 312)?

b. A chi-square Goodness-of-Fit table was used to compare the proportions of final course grades of accounting majors enrolled in ACCT 311 and ACCT 312 courses in all institutions based on differences in learning styles. Since the significance level (.222) of the chi-square statistic (11.844) was more than the stated alpha, we failed to reject the null hypothesis and conclude that there is no significant difference between student course achievement based on differences in learning style. Further, it appears that no significant relationship exists between student learning style and course achievement.

In ACCT 311, students categorized in all four learning styles earned similar frequencies of A's (n=1, n=2) and B's (n=1, n=2). The Assimilating learning style earned the most C's (n=12, 37.5%) and only students who preferred the Diverging learning style earned D's (n=2, 9.5%). In ACCT 312, the Assimilating and Converging learning styles earned the most A's (n=4, 12.5% and n=3, 17.6%, respectively). The Assimilating learning style also earned the most B's (n=4, 12.5%), Diverging learning styles earned the most C's (n=10, 47.6%) and the Assimilating learning styles earned the most D's (n=3, 9.4%) (Table 4). As in the lower level accounting courses, no one learning style seemed to perform significantly better than another learning style with all four learning styles represented in all course grade categories.



**Table 4**  
**Frequency of Course Grades by Learning Style and Course**

		ACCT211	ACCT 211	ACCT 212	ACCT 311&312	ACCT 311	ACCT 312
Diverging	A	14/19.4	5/6.9	9/12.5	3/14.3	2/9.5	1/4.8
	B	13/18.1	6/8.3	7/9.7	3/14.3	1/4.8	2/9.5
	C	23/31.9	10/13.9	13/18.1	11/52.4	1/4.8	10/47.6
	D	6/8.3	2/2.8	4/5.6	4/19.0	2/9.5	2/9.5
	F	16/22.2	4/5.6	12/16.7	0/0	0/0	0/0
	Total	72/100	27/37.5	45/62.5	21/100	6/28.6	15/71.4
Assimilating	A	12/14.6	3/3.7	9/11.0	5/15.6	1/3.1	4/12.5
	B	20/24.4	8/9.8	12/14.6	6/18.8	2/6.3	4/12.5
	C	17/20.7	8/9.8	9/11.0	18/56.3	12/37.5	6/33.3
	D	16/19.5	5/6.1	11/13.4	3/9.4	0/0	3/9.4
	F	17/20.7	0/0	17/20.7	0/0	0/0	0/0
	Total	82/100	24/29.3	58/70.7	32/100	15/46.9	17/53.1
Converging	A	6/17.6	1/2.9	5/14.7	5/29.4	2/11.8	3/17.6
	B	10/29.4	4/11.8	6/17.6	2/11.8	1/5.9	1/5.9
	C	7/20.6	3/8.8	4/11.8	9/52.9	5/29.4	1/5.9
	D	6/17.6	0/0	6/17.6	1/5.9	0/0	1/5.9
	F	5/14.7	1/2.9	4/11.8	0/0	0/0	0/0
	Total	34/100	9/26.5	25/73.5	17/100	8/47.1	9/52.9
Accommodating	A	6/18.2	2/6.1	4/12.1	2/33.3	1/16.7	1/16.7
	B	9/27.3	2/6.1	7/21.2	3/50.0	1/16.7	2/33.3
	C	8/24.2	3/9.1	5/15.2	1/16.7	0/0	1/16.7
	D	4/12.1	2/6.1	2/6.1	0/0	0/0	0/0
	F	6/18.2	1/3.0	5/15.2	0/0	0/0	0/0
	N	33/100	10/30.3	23/69.7	6/100	2/33.3	4/66.7
Total	297	221/100	70/31.7	151/68.3	76/100	31/40.8	45/59.2

### **Other Analysis**

III. On the student demographic information sheet, students were asked to indicate whether the course for which they had enrolled was taught in the way that they preferred to learn. Approximately 64% (64.4%,  $n = 206$ ) of the students indicated that the course was taught in the way in which they preferred to learn; 35.6% ( $n = 91$ ) indicated the course was not taught in the way in which they preferred to learn. Interestingly, of those students who indicated that the course was taught in the way in which they preferred to learn, 67.5% ( $n = 95$ ) received grades of B or better while, of those students who indicated that the course was not taught in the way in which they preferred to learn, 36.3% ( $n = 24$ ) received grades of B or better. Approximately 32% (31.9%,  $n = 29$ ) of those students who indicated that the course was not taught in the way in which they preferred to learn received grades of D or F while 26.7% ( $n = 55$ ) of the students who did feel the course was taught in the way they preferred to learn received a grade of D or F in the course.

It appears that there may be some relationship between students' perception of whether their instructors' teaching style is congruent with the students' preferred learning style and the outcome of this interaction on student performance. Further research is clearly needed to address this interesting interaction (Table 5).

**Table 5**  
**Frequency of Course Grades by Students' Perception of Congruence**  
**of Class Instruction with Their Preferred Learning Style**

Taught as Learning Preference:	Grade	Frequency	Valid Cumulative		
			Percent	Percent	Percent
Taught as Learning Preference:	A	44	21.4	21.4	21.4
	B	51	24.8	24.8	46.1
	C	56	27.2	27.2	73.3
	D	26	12.6	12.6	85.9
	F	29	14.1	14.1	100.0
	Total	206	100.0	100.0	100.0
Not Taught as Learning Preference:	A	9	9.9	9.9	9.9
	B	15	16.5	16.5	26.4
	C	38	41.8	41.8	68.1
	D	14	15.4	15.4	83.5
	F	15	16.5	16.5	100.0
	Total	91	100.0	100.0	100.0

### CONCLUSIONS

The results of this study indicated that there is no significant relationship between cognitive learning style and course achievement. Therefore, it is still undetermined whether learning style has an impact on course achievement. This is probably because so many other variables (personality, genetics, prior experience, social and cultural variables) impact course achievement, making it difficult to determine which variable is a significant influence on course achievement at a given point in time.

The results of the study also showed that no one learning style performed significantly better than another learning style in all four accounting courses. In addition, students with the Converging learning style (i.e. the style attributed to Accounting majors under Kolb's theory)

neither performed significantly better or worse than any other groups of students in these courses; with Converging learning styles earning mostly C's in all four of the accounting courses.

The heavy emphasis the instructors in this study placed on examinations as a student assessment tool may signal 1) that specific thinking and learning styles may be favored by the educational system and 2) this heavy reliance on exams may be a personality-biased filter. College accounting examinations tend to have a heavy quantitative emphasis and a predominantly multiple-choice format. As a result, personalities that do not perform well on these types of examinations may be filtered out by their failure to pass these types of examinations since students' initial experiences with accounting were a primary determinant of whether or not they selected it as a major (Cohen and Hanno, as cited in Saudagaran, 2001, p. 85). The consequences of this bias as O'Connor (1997) observes are that "when learning experiences are limited to [selected modes], students who rely on other styles are bound to be less successful." In addition, with limited classrooms, students with differing styles may not be given opportunities to use their preferred learning style and this problem may be wrongly attributed to lower ability or motivation.

Student Perceptions of Match/Mismatch of their Learning Style and their Instructor's Teaching Style may have an Impact on Student Course Achievement. Students who do not perceive that an accounting course is taught in the way in which they prefer to learn, earn lower grades on average than students who perceive the course is taught in the way in which they prefer to learn. A higher proportion of students (67.5%, n = 95) who indicated that the course was taught in the way in which they preferred to learn, received grades of B or better compared to those students who indicated that the course was not taught in the way in which they preferred to learn (36.3%, n = 24). In addition, a higher proportion of students (31.9%, n = 29) who indicated that the course was not taught in the way in which they preferred to learn received grades of D or F compared to those students (26.7%, n = 55) who did feel the course was taught in the way they preferred to learn.

It appears that there may be some relationship between students' perception of whether their instructors' teaching style is congruent with

the students' preferred learning style and the outcome of this interaction on student performance.

### **IMPLICATIONS FOR PRACTICE**

The accounting instructors in this sample relied heavily on examinations as their primary assessment method. This supports Nourayi's (1993) position that too large a percentage of the final grade in accounting is based on quantitative exams which helps certain types of individuals to succeed in school but which may not stress the new skills needed by the accounting professional (problem identification and problem solving skills). It is interesting to note that none of the sample instructors used case analysis as an assessment tool; a tool that reinforces problem identification and problem solving skills. Accounting instructors need to create different learning environments for their students in the classroom in order to meet the changing demands of the profession.

The finding that students who perceived that the accounting course was taught in the way in which they preferred to learn earned higher grades than students who did not, supports the findings of Cohen and Hanno who found that students perceived success in the introductory course as a signal to choose accounting as a major and perceived poor performance as a signal that they may not have the required aptitude for accounting and should pursue another major. (Saudagaran, 2001). This is important to the well being of the profession since Paolillo and Estes found that "accountants tended to make their career-choice decisions primarily during the first two years in college and that teacher influence was among the factors that had a greater impact on them than for other professional groups" (Saudagaran, 2001).

The researcher, like others (Lizzio, Wilson & Simons, 2002), believes that elements of the learning environment that are under teacher control may positively influence both the way students approach their study, and the learning outcomes they can achieve. Thus, accounting educators should be encouraged to make appropriate interventions in the classroom environment to improve the learning experiences of their study.

### **IMPLICATIONS FOR RESEARCH**

Since the results of this study showed that there is no significant difference in course achievement based on differences in learning style,

these results do not support Lawrence and Taylor's (2000) theory that grades in upper division accounting courses may be "friendlier" to certain personality types (and as a result, accounting filters out students with learning styles that are different from the dominant learning style demanded by the profession).

It appears that all learning styles can succeed in accounting, despite any professional stereotyping that may exist. However, a limitation of the findings of this study is the small student sample (65 students) enrolled in the Intermediate Accounting courses (ACCT 311 and 312) that limits the generalizability of this finding as it relates to students in Intermediate Accounting courses.

This study's findings showed that students who preferred the Converging learning style (the style proposed to be the preferred learning style for accountants by Kolb) did not perform significantly better than any other learning style and conflicts with the results of Togo and Baldwin's study using the original LSI which indicated that Converging styles performed better than Accommodating styles (Stout & Ruble, 1991). The findings do support, however, Togo and Baldwin's results that showed that there was no significant difference between the Converging learning style and the remaining three learning styles (Stout & Ruble, 1991).

These findings using the LSI3, which was revised to improve its psychometric properties, appear to support Stout & Ruble's (1991) call for a reexamination of earlier research findings using the LSI and also a re-examination of the instrument (original LSI) upon which these findings were based.

### **LIMITATIONS**

The schools included in the study were selected based on convenience sampling, therefore, the sample may not be representative of the population. In this study, the population is undergraduate students in selected colleges and universities located primarily in the eastern region of the United States. One can expect, therefore, that the results of the study can be generalized to undergraduate students at universities similar to the universities represented by the student participants in the study.

The research will be based on data obtained from 9 universities in 9 places. The undergraduate students in the 9 universities will not be perfectly matched. Because the undergraduate students in the 9

universities will not be perfectly matched, environmental factors specific to each university may shape students' learning styles.

Though faculty teaching and assessment styles will likely affect the learning styles and course achievements of their students, the students in the study will have been exposed to a variety of instructors in different accounting departments. On the other hand, I would have no reason to believe that members of the faculties at the 9 universities will not be representative of those at other universities.

The data utilizing all undergraduate students were limited to students who self-enrolled in Accounting Principles I (ACCT 211) and Accounting Principles II (ACCT 212). The research utilizing all accounting students included accounting students who self-enrolled in Accounting Principles I and Accounting Principles II and upper class accounting students who self-enrolled in Intermediate Accounting I (ACCT 311) and II (ACCT 312).

Course achievement in this study is measured by students' final course grades. In higher education, the academic success of students is most commonly quantified by course grade, which is typically conducted at the end of a semester or year (Boyer Commission, 1998; Devlin, 1996; Gass, 1990 as cited in Elfant, 2002).

### **RECOMMENDATIONS**

Additional research with a larger sample size is needed to test the theory that upper level accounting courses filter out students with learning style different from the one demanded by the profession. It is critical to the profession to know that all students are given an opportunity to succeed in a profession whose numbers are declining.

The schools included in the study were selected based on convenience sampling; therefore, the sample may not be representative of the population. Future research should strive to obtain a more random sample of undergraduate students to improve the generalizability of the results of the study.

Further research is needed to determine the practical benefits of experiential learning theory to higher education. In particular, the link between learning style and course achievement. The implications of finding such a link can aid in predicting success in accounting, student retention and success in the accounting profession.

Further research is needed to confirm the results of Lawrence and Taylor's (2000) study that suggested the possibility that grading

schemes for intermediate accounting courses do not favor particular personality types. Lawrence and Taylor's (2000) research results indicated that relationships appeared to exist between personality characteristics and student performance on grade-influencing activities (such as homework assignment, examinations, absences, in-class participation, and computer assignments). In particular, multiple-choice examinations (of which the CPA exam is one) appeared to be a personality-biased filter.

Additional research with a larger sample size is needed to test the theory that upper level accounting courses filter out students with learning style different from the one demanded by the profession. It is critical to the profession to know that all students are given an opportunity to succeed in a profession whose numbers are declining.

The Albrecht and Sack (2000) study indicated that forty-three percent of educators surveyed perceived the quality of the students choosing accounting as a major is down. In addition, from the response of accounting instructors in this survey, it appears that perceptions regarding the quality of accounting students are also quite varied. This presents an opportunity for a future longitudinal study to determine if the perceptions of a significant number of accounting instructors are supported by empirical research.

Further research is needed to determine whether the matching or mis-matching of students learning styles with instructors learning styles has an impact on student course achievement. Like students and learning styles, teachers teach in accordance with their preferred learning styles. Research in this area can encourage teachers to learn to teach utilizing different styles in order to improve the learning environment for the students in their classrooms.



### REFERENCES

Albrecht, S. W. & Sack R. J. (2000). *Accounting education: Charting the course through a perilous future*. Sarasota, FL: American Accounting Association

AICPA (2001). *The supply of accounting graduates and the demand for public accounting recruits- 2001, for academic year 1999-2000*. Retrieved December 8, 2002  
from <http://www.aicpa.org/members/div/career/edu/sagdpar.htm>

Carthey, J. H. (1993, November). *Relationships between learning styles and academic achievement and brain hemispheric dominance and academic performance in business and accounting courses*. Unpublished master's thesis, Winona State University, Iowa.

Cross, K. P. (2001). Leading-edge efforts to improve teaching and learning – the Hesburgh Awards, *Change*, Vol. 33, i4. Retrieved May 12, 2002 from Infotrac

Elfant, B. A. (2002). *A study of the relationship between integrative studies freshmen learning styles and their instructor's learning styles represented by students' course achievement*. Unpublished doctoral dissertation, George Mason University, Virginia.

Friedlan, M. J. (1995). The effects of different teaching approaches on students' perceptions of the skills needed for success in accounting courses and by practicing accountants, *Issues in Accounting Education*, Vol. 10.

Garner, R. M., & Dombrowski, F. R. (1997). Recruiting the 'Best and the Brightest': The role of university accounting programs and state CPA societies, *Issues in Accounting Education*, Vol. 12, Issue 2, 299.

Gullapalli, D. (2004). *Accounting in College Lures More Students*, Retrieved on April 18, 2005  
from <http://online.wsj.com/article/0,,SB109104541327776698,00.html>

Kolb, A. D. (1976). *Learning style inventory*. Boston: McBer and Company.

Kolb, A. D. (1984). *Experiential learning – Experience as the source of learning and development*. New Jersey: Prentice Hall.

Lawrence, R., & Taylor, W. L. (2000). Student personality type versus grading procedures in Intermediate accounting courses, *Journal of education for business*, Vol. 76, Issue 1, 28.

Lizzio, A., Wilson, K., & Simons R. (2002). University students' perceptions of the learning environment and academic outcomes: Implications for theory and practice, *Studies in Higher Education*, Vol. 27, No.1, 27-52.

Loo, R. (2002). The distribution of learning styles and types for hard and soft business majors. *Educational Psychology*, Vol. 22, No.3. 349-360.

Nourayi, M. M., & Cherry, A. A. (1993). Accounting students' performance and personality types, *Journal of Education for Business*, Vol. 69, Issue 2, 111.

O'Connor, Terry (1997, February 21). *Using learning styles to adapt technology for higher education*. Retrieved October 8, 2002 from <http://web.indstate.edu/ctl/styles/learning.html>

Saudagaran, M. S. (2001) *International accounting – A user perspective*. Ohio: South-Western College Publishing.

Shotwell, A. T. (1999). Comparative analysis of business and non-business students' performance in financial accounting: Passing rates, interest and motivation in accounting, and attitudes toward reading and math, *College Student Journal*, Vol. 33, Issue 2.

Sims, R. R., & Sims, J. (Eds.). (1995). *The importance of learning styles, understanding the implications for learning, course design, and education*. CT: Greenwood Press.

Stout, D. E. & Ruble, T. L. (1991). The learning style inventory and accounting education research: A cautionary view and suggestions for future research. *Issues in Accounting Education*, Vol. 6, Issue 1.

Wilson, E. T., & Baldwin, F. E. (1995). The Accounting Education Change Commission and Accounting Principles Courses: A Survey of Accounting Programs, *Journal of Education for Business*, Vol. 70, Issue 3.

**THE IMPENDING SOCIAL SECURITY CRISIS: A LESSON FOR STUDENTS OF BUSINESS**

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**ABSTRACT**

*Social Security affects all Americans. Far more workers pay social security taxes than income taxes. It is an important business topic shaped by political science, public policy, economics, and law. It illustrates an important issue in diversity, since acknowledgment of a social security problem often splits along age, racial, ethnic, and socioeconomic lines. It shows how to obtain public information, much from official government sources, freely available on the Internet. Finally, it can serve as a basis for a lesson on critical thinking since this is a topic that generates considerable passion and involves a high level of misinformation.*

**INTRODUCTION**

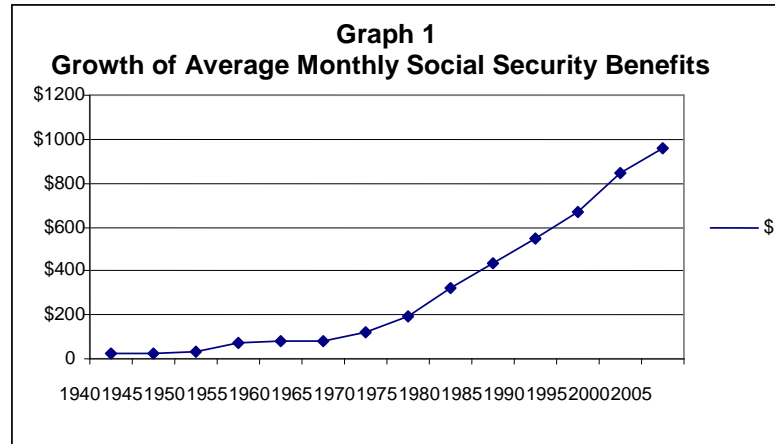
Social Security affects everyone, directly or indirectly. Social Security's Old Age Survivor and Disability Insurance (OASDI) covers approximately nine out of ten American workers (Cheeseman, 2000: 478). In 2003, the federal government paid out approximately \$479 billion to about 47 million people, of whom 29.5 million were retired workers, 5.9 million disabled workers, and 11.6 million family members of retired, disabled, or deceased workers (Congressional Budget Office, 2004: 1). The "Social Security Amendments of 1965," which added Medicare coverage, was amended last year when Congress passed the Medicare Prescription Drug, Improvement, and Modernization Act of 2003. Social Security, augmented by Medicare and the Prescription Drug Act, is by far the biggest and most expensive program run by the federal government, and its biggest budgetary problem, because almost everyone who looks at the current situation agrees that the system will eventually run out of money.

Despite the overarching importance of social security, it is a topic that receives scant attention in business textbooks. According to Gaumnitz, "the most serious problem facing Social Security is not the financial uncertainty of the future but rather lack of understanding of the

system and how it works" (1984: xiii). A review of leading textbooks in the areas of business and society and the legal environment of business shows that very little attention is devoted to the topic of social security. This paper attempts to correct this omission by addressing a number of important issues that can be used in crafting a useful classroom exercise, starting with the original intent of social security, its history, including original coverage and historical add-on coverage of benefits. It looks into the various problems besetting Social Security, discusses options for fixing the system, with implications for the future of our nominally free market capitalist economy. Finally, it presents a comprehensive bibliography of Internet-based resources on these topics.

### **SOCIAL SECURITY, THEN AND NOW**

When the social security tax was first collected in 1937, the most that could be deducted from a worker's paycheck was \$30 a year, based on the original formula of one percent of the worker's first \$3,000.00 of income. The first recipient of monthly social security benefits was Ida Mae Fuller who began receiving benefits in 1940 having paid in a grand total of \$24.75, receiving a total of \$22,888.92. It has been estimated that from inception through 1998 unwarranted benefits paid to beneficiaries in excess of their contributions (including employer contributions) surpassed \$11 Trillion. (Schieber, 1999: 8) No rational person argues that such largesse can be counted upon in the future, especially since, according to the social security Web site, there were 159 workers contributing taxes for each original recipient, a number that had decreased to 3.2 to 1 in 1970. Today there are 3.3 workers to recipient, but that number is expected to decrease to 2.2 to 1 by 2030 under the Social Security Trustees' intermediate set of assumptions (Social Security Trustees, 2004: 9).



**Sources:** Social Security Administration and The U.S. House Ways and Means Committee

The event precipitating the most angst is the impending retirement of the huge post World War II “baby boom” generation, those people born between the years 1946 to 1964. The Congressional Budget Office recently acknowledged that due to the pressure to be placed on the system from the retiring of the baby boomers, the system would begin paying out more than it takes in by 2019 (Congressional Budget Office, 2004:1). Since social security payments come from the taxes collected from current workers, the retirement of so many workers will cause a severe strain on the system and its much watched worker to beneficiary ratio. According to the government’s own estimates, the present value of the unfunded obligations for OASDI through 2078 amounts to \$3.7 Trillion (Board of Trustees, 2004). When Medicare’s unfunded obligations are added in, the estimates balloon to staggering proportions, with some seeing the Medicare gap being as much as five times that of OASDI (Bernasek, 2003: 114). President Bill Clinton stated in a speech at Georgetown University: "This fiscal crisis in social security affects every generation" (Schieber, 1999: 3). Our politicians acknowledge the problem, but few are willing to offer serious fixes. Social Security is often called the third rail of American politics, that is, like the electrified third rail of metropolitan railway systems, "touch it and you die" (Gramlich, 1998: 2).

### **THE HISTORY AND ORIGINAL INTENT OF THE PROGRAM**

Few younger people realize the paralyzing impact of the Great Depression. Economic safety nets such as national unemployment insurance, social security checks, and FDIC protection did not yet exist. America had recently moved from an agrarian economy to one based on manufacturing centered in urban societies, and the effect of massive unemployment on urban communities was devastating (Schieber, 1999). One of the architects of Social Security, J. Douglas Brown, a member of President Roosevelt's Committee on Economic Security, in a speech available at the Social Security Web site, wrote that he and other intellectuals sought an opportunity to improve society, to solve "the problem of human want and distress arising out of the free play of business activity under a laissez faire system" [<http://www.socialsecurity.gov/history/brown2.html>, 3/25/2005]. Into this environment rode potential saviors who offered to rectify the situation by dramatically changing the terms of the American social contract.

Louisiana Senator Huey Long authored a book titled, "Every Man a King" that set forth his ideas for transforming America into a better society based on wealth redistribution. Among his proposals was an old-age pension for those above sixty years of age, heavy progressive taxation, a \$5,000 bonus for every family, reduced working hours, and a \$2,000 guaranteed annual income (Mitchell, 2000: 65).

Twenty-five million people signed petitions supporting a 1934 proposal from retired California doctor named Francis E. Townsend that would have had the federal government pay nonworking citizens above sixty years of age the then princely sum of \$200 per month on the condition that they spend this money within thirty days. The "Townsend Plan," funded by a national two percent sales tax would have cost an estimated \$24 Billion annually at a time when the U.S. domestic output amounted to only \$61 Billion (Schieber, 1999)

On June 29, 1934 President Franklin Delano Roosevelt signed Executive Order 6757 creating the Committee on Economic Security, which ultimately recommended national unemployment compensation, contributory and noncontributory old age pensions, assistance for the support of dependent children, and federal grants to states to expand national public health programs (Altmeyer, 1966). With Depression unemployment standing at approximately twenty-five percent of the non-farm labor force, the President and his Committee agreed that the item

that deserved the top priority was unemployment insurance (Altmeyer, 1966).

The architects of the Social Security program copied German Chancellor Otto von Bismark's social insurance model, where benefits were earned rather than given as an entitlement under welfare-based social assistance model (Midgley, 1997: 4). They, along with President Roosevelt, believed that pursuant to American values the system must preserve financial incentives for people to work and be rewarded for doing so (Schieber, 1999). That original intent is still part of the system. Those who earn more, pay more (the maximum tax base is currently \$84,900), and receive more in retirement benefits, though not necessarily in proportion to their greater contribution. Social Security benefits are based on AIME (average indexed monthly earnings), which, despite returning higher benefits to those who earn more, also provide a degree of progressivity into the system by returning a greater percentage of pre-retirement earnings to low wage earners than to high wage earners, even though this progressivity is offset by the regressive nature of the social security tax, which takes a greater percentage of the income of lower wage earners (Hendley, 1999).

### **1939, A TURNING POINT**

In 1939 the U.S. economy seemed to be weakening and unemployment was again on the rise. Critics on both the right and left assailed the social security system. Chief among their complaints was the funding concept underlying the program. The original 1935 enactment envisioned an interest bearing trust fund invested in government obligations that would amount to some \$47 Billion by 1980 (Schieber, 1999). Such a huge sum of money, it was feared, could vastly distort the economy, tempting politicians to expand the scope of government programs, as well as being deflationary during a depression (Mitchell, 2000: 93).

Originally, the social security system was to be based on sound pension principles; individual accounts would be set up to receive long-term contributions by employees and employers, and the sums would expand over time due to the miracle of compound interest. The 1939 amendments moved toward the Townsend Plan's pay-as-you-go model (Mitchell, 2000: 93). The program originally provided that the estates of beneficiaries who died prior to receiving benefits were to receive a lump-sum settlement to repay their contributions plus interest. This feature



was eliminated in 1939, a move the Republican minority called "confiscatory" (Altmeyer, 1966). Additionally, scheduled tax rate increases were postponed, benefits were increased by changing the formula for determining benefits, and benefits were added for workers' spouses, enabling them to receive fifty percent of the working spouse's benefit upon attaining 65 years of age (Schieber, 1999). Republicans took credit for eliminating "the staggering and illusory \$47 billion reserve fund for old age insurance" (Altmeyer, 1966: 106).

### **UPS AND DOWNS OF SOCIAL SECURITY SINCE 1939**

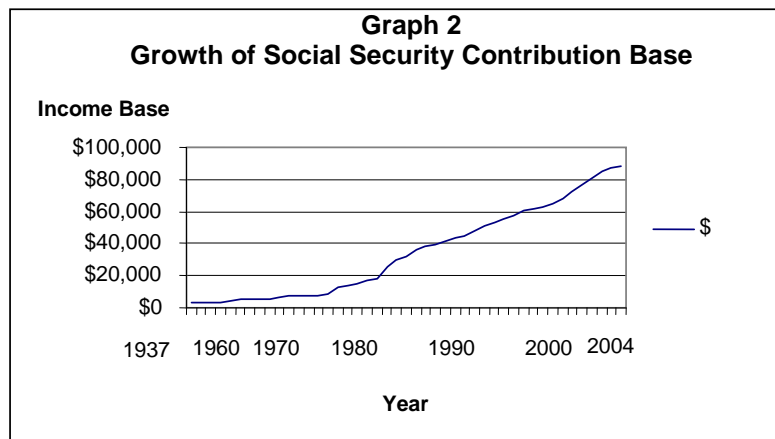
As set out at the Chronology page of the Social Security Administration Web site [[www.socialsecurity.gov/](http://www.socialsecurity.gov/), 3/25/2005], for approximately thirty-seven years the program expanded with little concern being shown for the potential funding problems that might arise. In 1956, benefits became payable to disabled workers fifty years of age and over. In 1960 benefits became payable to the disabled of any age. The Social Security Amendments of 1961 permitted male workers to elect early retirement age 62. On January 8, 1964, President Johnson, in his State of the Union address, declared "unconditional war on poverty in America." On March 6, 1966 President Johnson signed a proclamation designating March 1966 as "National Medicare Enrollment Month." The 1967 Amendments to the Social Security Act increased retirement benefits by 13%. The Tax Reform Act of 1969 provided a 15% increase in monthly benefits. On July 1, 1972 P.L. 92-336 authorized a 20% cost-of-living allowance (COLA), and established the procedures for issuing automatic COLAs each year, beginning in 1975. This was closely followed on October 30, 1972 by Public Law 92-603, which established a new Federal security income program for the needy aged, blind and disabled (the SSI program).

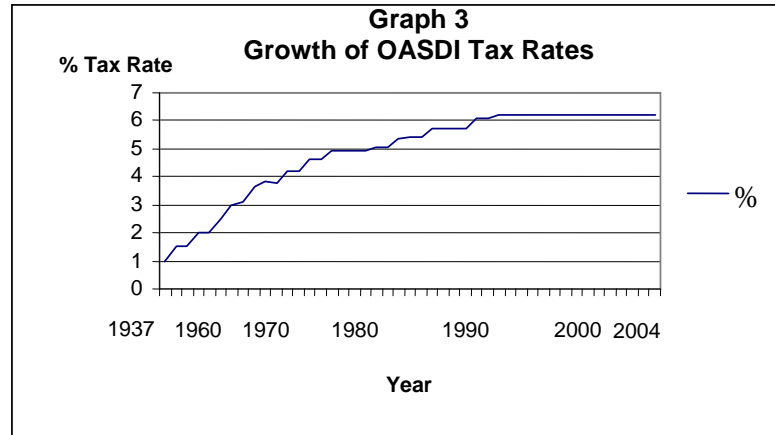
The decade of the 1970s provided a wake-up call to Americans. The promises of endless future bounty were belied by Arab Oil embargoes and a new era of high prices and high unemployment, which became known as "stagflation," a condition that bedeviled social security's rosy projections (Mitchell, 2000: 155). By 1975, many in power acknowledged that the party was over, and that the system was verging on a crisis situation. On December 20, 1977, President Carter signed the Social Security Amendments of 1977, which was designed to restore the financial soundness of the system into the 21st century. This was supposedly accomplished by amending the 1972 COLA rules,

setting up a new class of disgruntled citizens called the "notch babies" who were born after 1916 and who were denied the generosity ladled out in 1972 (Mitchell, 2000: 156). The Amendments also ramped up social security taxes to a considerable degree. President Carter and other leading politicians announced that social security was safe for the next fifty years.

Within a few years, rosy projections had once again proved wrong. As Ferrara wrote at the time: "the time for this Pollyanna approach to social security is over" (Ferrara, 1980: 3). After some further belt tightening in the Omnibus Budget Reconciliation Act of 1981, President Reagan proposed more drastic changes including severe reduction in benefits for those retiring at age 62. This prompted such harsh response from both parties that he quickly scrapped the idea and the "third rail" concept was born (Schieber, 1999). Again fearing that social security was liable to run out of money very shortly, Congress passed the Social Security Amendments of 1983. This bill raised taxes, reduced some benefits, delayed the COLA for six months, made up to fifty percent of retirement benefits taxable for higher earners, and raised the full retirement age to 66 in 2009 and 67 in 2027. With these changes, it finally seemed that social security would be on firm footing for many years, and as the baby boom generation moved into their peak earning years, the system began running many continuous years of surpluses.

The expansions of social security benefits and tax burdens are illustrated in Graphs 2 and 3.





**Source:** Social Security Administration

The following table sets out a brief timeline for Social Security. A much more extensive chronology is available at the Social Security Web site [<http://www.ssa.gov/history/chrono.html>, 3/25/2005].

#### **SOCIAL SECURITY TIMELINE**

1935 The Social Security Act becomes law.  
1937 First Social Security benefits paid.  
1939 The Social Security program revamped to include dependents and survivors of workers who retire, are disabled, or die prematurely.  
1940 Monthly Social Security payments begin.  
1950 The first cost-of-living adjustment (COLA) is made by Congress. Social Security payments are increased by 77 percent.  
1956 The Social Security program is expanded to cover the disabled children of workers. 1961 Social Security Amendments lowers the retirement age to 62.  
1975 Automatic cost-of-living adjustments to Social Security are approved.  
1983 Because of a funding crisis, Social Security benefits are reduced. Benefits are taxed as income for the first time, full retirement age raised to 66 beginning in 2009 and 67 in 2027.  
2004 President Bush proposes partial privatization option.

**Source:** Social Security Administration

### **THE CURRENT CLIMATE OF CRISIS**

That the Social Security system is in crisis has become a cliché, but is it actually just an urban myth? According to one school of thought, this is really a "phony crisis," because the "program will take in enough revenue to keep all of its promises for over 30 years, without any changes at all" (Baker, 1999: 1). The bipartisan Congressional Budget Office seems to agree because on June 14, 2004 it released a report saying that the program would not become insolvent until 2052, ten years later than they had originally estimated (Congressional Budget Office, 2004). Despite the rosier forecast, they acknowledged that due to the pressure to be placed on the system from the retiring of the baby boom generation, the system would begin paying out more than it took in by 2019.

Crisis proponents are adamant, however. As noted above, President Bill Clinton referred to a social security crisis. In a 2004 speech on the Federal Reserve Web site, Chairman Alan Greenspan has warned of the possibility that, "as a nation, we may have already made promises to coming generations of retirees that we will be unable to fulfill"

[<http://www.federalreserve.gov/boarddocs/testimony/2004/200409082/default.htm>, 3/25/2005].

Prior to the 1983 changes designed to make social security financially secure, Ferrara wrote that "the schizophrenic nature of the program has resulted in its fatal flaw - the social security taxes paid into the system are not saved and invested through a trust fund as in private insurance, savings, or pension plans, but instead are paid out immediately to current recipients on a pay-as-you-go basis, like a welfare program" (1980: 6-7). Since the 1983 changes, however, the system has taken in far more money than it has paid out. In essence, since those changes has reverted from a pay-as-you-go system to one that is closer to the original intent of its architects. The system as of the end of 2003 reported assets in the OASI and DI trust funds valued at \$1.53 Trillion dollars, which are invested in special federal government securities (Board of Trustees, 2004: 24).

Investing the surpluses in U.S. government securities, however, is perceived by many as a fraudulent pyramid or "Ponzi" scheme (Ferrara, 1980: 342). All the system has is a worthless bunch of IOUs according to this view, because the government spent it all during

seemingly endless rounds of deficit spending. President Clinton expressed a similar view:

*Today, we're actually taking in a lot more money from Social Security taxes enacted in 1983 than we're spending out. Because we've run deficits, none of that money has been saved for Social Security (Schieber, 1999: 3).*

The Congressional Budget Office Report of June 2004 put the trust fund issue into perspective:

*The trust funds serve mainly as an accounting mechanism to track revenues and outlays for Social Security.... Although the Social Security system is authorized to spend certain amounts, the resources to finance those outlays derive from the budget as a whole—and ultimately from the economy. (Congressional Budget Office, 2004: 2)*

### **SOCIAL SECURITY IN THE BUSINESS CLASSROOM**

The prestigious John F. Kennedy School of Government at Harvard University considers this topic so important that it offers cases on Social Security as part of its Case Studies in Public Policy and Management series. Harvard uses these Social Security cases to demonstrate the uses of the history of an issue in thinking about policy objectives and in testing initial presumptions. In addition, Harvard uses Social Security to illustrate the limits of demographic data in guiding social policy, to sharpen students' predictive capabilities, and to illustrate the dangers of predictions. Free access to these extensive and informative case studies is available to faculty teaching at degree-granting institutions of higher education. The Kennedy School of Government Web site,

[[http://www.ksgcase.harvard.edu/content/review\\_copy\\_service.html](http://www.ksgcase.harvard.edu/content/review_copy_service.html), 3/25/2005] specifies that the cases and teaching notes available through this service are for the personal use of the instructor for course adoption review purposes only, with no copying of these materials being permitted. Other Web sites that offer lesson plans and other materials that can be helpful to instructors wishing to use social security as a teaching case in the business classroom include: 1. Understanding Taxes, from the Internal Revenue Service

[<http://www.irs.gov/app/understandingTaxes/jsp/whys/lp/IWT2L4lp.jsp>, 3/25/2005]; 2. How Secure is Social Security? A lesson plan by Greg Timmons, from PBS

[[http://www.pbs.org/newshour/extra/teachers/lessonplans/socialstudies/social\\_security.html](http://www.pbs.org/newshour/extra/teachers/lessonplans/socialstudies/social_security.html),3/25/2005]; and 3. a concise and colorful PowerPoint presentation titled, Social Security Reform: The Tough Choices, offered by the General Accounting Office (GAO)

[<http://www.gao.gov/cghome/ssr>, 3/25/2005]. These materials, along with the information contained in this paper, and the Web sites listed in Appendix A, can assist the busy instructor by providing insight into the purposes of social security, by raising questions that trigger classroom discussion and critical thinking, by helping students to understand the pros and cons of the complicated issues surrounding the social security reform debate, and by guiding students to develop well informed decisions based on facts rather than emotions.

The PBS lesson plan, for instance, has objectives that parallel those of this paper, namely that students: 1. understand the history and evolution of Social Security, 2. understand how the program benefits retirees, 3. examine the changing demographics and the related problems for future generations and possible need for changes in the system, 4. understand the concept of trust funds and determine how solvent this funding is, 5. examine and evaluate the effectiveness of proposals being considered to help ensure future funding of the program, including President Bush's "personal account" proposal, and 6. understand that the debate surrounding Social Security reform is highly politicized with rhetoric and political posturing accompanying all sides of the debates.

A starting point for stimulating thinking and discussion about social security is to survey students' current views on the subject. A copy of the instrument is contained in Appendix B. The value of the survey instrument is purely as an entrée for class discussion. Several of the questions deal with the economics of social security - whether it will be there for today's young people. Two other controversial issues confronting social security that are sure to stimulate classroom discussion and, hopefully, critical thinking, are also addressed in the survey, namely privatization of a portion of social security tax payments and the impact of social security on minority group workers. The remainder of this paper addresses those and several other issues that should stimulate critical thinking in the business classroom.

### **THE PRIVATIZATION DEBATE**

Discussions about Social Security often degenerate into ideological battles, akin to political or religious debates. There are partisan adherents for every side of every issue. This is particularly true about the privatization debate. Fans of market capitalism like the idea of individual retirement accounts funded by real assets, such as stocks and bonds issued by private sector companies. In 2002, Olivia Mitchell, a member of President Bush's Commission to Strengthen Social Security, Mitchell, O. gave testimony before the Senate Finance Committee where she stated that privatization offers many advantages: a permanently sustainable social security system, higher benefits, greater national savings, greater individual control, inheritance rights, new protections for divorced women, and the first opportunity for millions of Americas to accumulate wealth [http://finance.senate.gov/hearings/testimony/100302omtest.pdf, 3/25/2005]. According to this view, an individual should have the right to direct a portion of his or her Social Security tax into a private account with a private sector trustee. This is seen as especially beneficial to minority group workers and divorced women who typically have fewer pension plans and leave fewer assets to their descendants.

Other groups, such as the AFL-CIO see private accounts as detrimental to the health of the system. Private companies will eat up twelve to fourteen percent as administrative costs compared to less than one percent currently consumed by the SSA (The Century Foundation, 2003). Opponents to privatization assert that private accounts will result in a widening gender gap, smaller benefits for women, who live longer than men, less return for those who suffer work interruptions (for raising children, for instance), and less benefits for divorced spouses (The Century Foundation, 2003).

### **TAX FAIRNESS ISSUES**

Social Security is beset with numerous tax fairness issues. According to Campbell, "the consistent use of 'contribution' rather than 'tax' by the Social Security Administration over the years has created a false image in the public's mind, especially when the word 'insurance' is used in conjunction with it (Campbell, 1977: 6). Ferrara goes further, claiming that this mandatory tax is immoral because it is premised on coercion and compulsion and results in "serious restrictions on the

freedom of American citizens to run their own lives and enjoy the fruits of their own labor" (1980: 268).

Looking at the particulars of the programs points out many additional fairness issues, such as the fact that paying into Social Security for many years does not guarantee one a pension. The U.S. Supreme Court in the case of *Flemming v. Nestor*, 363, U.S. 603 (1960) established this principle when the Court rejected the argument that entitlement to Social Security benefits is a contractual right. Additionally, as mentioned above, a worker who dies without heirs can leave tens of thousands of dollars in the system. Additionally, workers subject to the income tax do not have their taxable income diminished by the Social Security tax deducted from their paychecks. In essence, they pay income tax on the social security taxes deducted from their paychecks. For many years such double taxation was justifiable under the notion that Social Security payments were to be received free from the federal income tax. That notion was modified for higher income retirees when, during the Reagan Administration, up to fifty percent of their benefits were declared taxable, a figure that was later increased during the Clinton Administration to up to eighty-five percent. To make matters worse, if a worker dies without ever receiving a single check, his or her estate is not entitled to a credit or deduction against either the income or estate tax for all the income tax paid on the withheld Social Security taxes.

#### **POOR AND MINORITY GROUP WORKER ISSUES**

Ferrara notes that some argue that Social Security is an ideal way to pursue welfare goals without requiring a degrading means test; but it is an extremely expensive and inefficient way (1980: 189-90). In essence, Social Security is a gamble, a lottery system that rewards longevity and punishes those who do not live long. Since poorer people include a disproportionate share of minority group members who have shorter life expectancies, does Social Security unfairly discriminate against them in favor of the richest segments of society? Some believe it does. Others point out that this situation is ameliorated by the greater utilization of survivor and disability benefits by the poor and African-American males (Wasow, 2002). While African Americans comprise approximately twelve percent of the population, they make up eighteen percent of those receiving disability awards and twenty-five percent of the children who receive survivor benefits (Baker, 1999).



Some argue that differences in life expectancy are more a function of income and occupation than of race (Baker, 1999). In essence, the rich not only get richer, they live longer, which under social security means, they get richer still. The federal government has been particularly sensitive to charges that social security has a racial bias. The General Accounting Office (GAO) has concluded that differences in return for whites and non-whites are based on differences in earnings, disability incidence, and mortality, rather than racial discrimination (GAO Report, 2003).

Since minorities have fewer private pensions and personal assets than whites, they rely on social security for most of their retirement income, and social security keeps a larger proportion of non-whites out of poverty in their old age (Hendley, 1999). Additionally, Social Security's progressivity replaces a higher proportion of preretirement income (known as social security's "replacement rate") to poorer workers than it does for wealthier workers.

The inability to transfer benefits to adult children as discussed above hurts the poor, because it perpetuates poverty. For an increasing number of people, the biggest investment of their lives is their investment in social security. It has been estimated that a new college graduate can be expected to invest (counting interest) over \$1 Million over her work life (Scheiber, 1999). For a poorer worker, that can still amount to an investment in social security amounting to several hundred thousand dollars.

### **SAVINGS ISSUES**

As discussed above, Social Security was not intended to be a welfare program. President Roosevelt's sense of frugality and ideas about earning one's way argued for a program where those who contribute more, receive more. One of the proposals for fixing the system is particularly harmful to that concept - means testing beneficiaries. Means testing reduces benefits to beneficiaries who do not "need" the money due to their accumulation of other assets. Means testing has the advantage of hurting those most that need the funds from a strapped system least, while preserving assets for those least able to do without their benefits. Unfortunately, it sends a bad message to those who do what we are all told is the right thing, that is, to save for the future. Those who have denied themselves immediate gratification are penalized while their less thrifty neighbors get their benefits unabated.

Politicians who propose this idea should be ready to reap a whirlwind of resentment from voters who will feel betrayed by such a late inning rule change.

### **DEMOGRAPHIC ISSUES**

According to famous poll results published by USA Today in 1995, "more young Americans thought they would at some point see a UFO than would ever collect their Social Security benefits" (Gramlich, 1998: 5). According to Olivia Mitchell, over time, Social Security has resulted in worsening treatment of younger workers, which, she says, is borne out by perpetually plummeting rates of return over time [<http://finance.senate.gov/hearings/testimony/100302omtest.pdf>, 3/25/2005]. Given the changes that took place in 1939 discussed above, the initial beneficiaries, such as Ida Mae Fuller, got back much more than they put in. It was not until the late 1970s that the first group of workers arrived who would pay into the system for their whole working lives (Baker, 1999). Additionally, the tax rate and base have steadily risen. Rather than being an unfair surprise, it is argued by proponents of the current system that this is the result of an intergenerational pact where future generations pay progressively higher taxes in exchange for ever-increasing standards of living made possible by the hard work and sacrifices of their predecessors (Baker, 1999). The increasing tax burden is partially offset by the fact that family size is steadily decreasing resulting in a lessening of a so-called "total dependency ratio" comprised of children and retirees relative to the number of workers (Baker, 1999).

Many have acknowledged that demographics are putting a strain on the system. President George W. Bush addressed the problem in a 2001 Press Release:

*Social Security was designed for an era when few Americans lived much past the age of 65, and when families of three or four children were more than the exception. When Social Security was created there was [sic] about 40 workers paying Social Security taxes for every one retiree receiving benefits. Today, there are three workers for every retiree; soon, there will be two. Long life is a blessing. Smaller families are an individual choice. But the consequence of this blessing and this choice is that the Social Security payroll tax, which was once 2 percent, has now passed 12 percent.*

*Economists calculate that it will have to rise past 18 percent if the baby boomers are to receive the same benefits that Social Security has promised, unless we take steps soon to reform the way Social Security is financed [http://www.csss.gov/press/press050201.html, 3/25/2005]*

### **CONCLUSION**

This paper was not meant to offer solutions to the problems plaguing the Social Security system; rather it has been concerned with understanding the history and issues surrounding social security so that it can be used as a learning experience. The facts presented should give a business teacher a starting point from which to begin a lesson or assign a project. The references and Internet resources provide a tremendous amount of information on all sides of the issues. The cover of the October 18, 2004 faculty desk copy of *Business Week* attempted to distinguish between good and great educators. Great educators, it stated, inspire thought, command attention, ignite discussion, promote comprehension, harness innovation, deliver insight, and strengthen curriculums. A case study based on social security can accomplish most, if not all, of these goals

### **REFERENCES**

- Altmeyer, A. (1966). *The formative years of social security*. Madison, WI: University of Wisconsin Press.
- Baker, D. & Weisbrot, M. (1999). *Social security: The phony crisis*. Chicago, IL: University of Chicago Press.
- Bernasek, A. (2003). The \$44 trillion abyss. *Fortune*, November 24, 148(11), 113-116.
- Board of Trustees. (2004). *The 2004 annual report of the board of trustees of the federal old-age and survivors insurance and disability insurance trust funds*. Online:  
<http://www.socialsecurity.gov/OACT/TR/TR04/tr04.pdf>

Campbell, R. (1977). *Social security: Promise and reality*. Stanford, CA. Hoover Institution Press.

The Century Foundation. (2004). *Social security privatization: Eleven myths*. On line:  
<http://www.tcf.org/Publications/RetirementSecurity/socsecmyths.pdf>.

Cheeseman, H. (2000). *The legal and regulatory environment*. Upper Saddle River, NJ: Prentice Hall.

Congressional Budget Office. (2004). *The outlook for social security*. On line:  
<http://www.cbo.gov/ftpdocs/55xx/doc5530/06-14-SocialSecurity.pdf>.

Ferrara, P. (1980). *Social security: The inherent contradiction*. San Francisco, CA. The Cato Institute.

GAO Report to the Ranking Minority Member, Subcommittee on Social Security, Committee on Ways and Means, House of Representatives. (2003). *Social security and minorities: Earnings, disability incidence, and mortality are key factors that influence taxes paid and benefits received*. On line: <http://www.gao.gov/new.items/d03387.pdf>.

Gaumnitz, J. & Gaumnitz, E. (1984). *The social security book*. New York, N.Y. Arco Publishing, Inc.

Gramlich, E. (1998). *Is it time to reform social security?* Ann Arbor, MI. The University of Michigan Press.

Hendley, A. & Bilimoria, N. (1999). *Minorities and social security: An analysis of racial and ethnic differences in the current program*. Online:  
<http://www.ssa.gov/policy/docs/ssb/v62n2/v62n2p59.pdf>.

Midgley, J. & Shekraden, M. (1997). *Alternatives to social security*. Westport, CN. Auburn House.

Mitchell, J. (2000). *Pensions, politics, and the elderly*. Armonk, N.Y. M.E. Sharpe, Inc.

Schieber, S. & Shoven, J. (1999). *The real deal: The history and future of social security*. New Haven, CT: Yale University Press.

Social Security Trustees. (2004). *Annual report of the board of trustees of the federal old-age and survivors insurance and disability insurance trust funds*. On line:

<http://www.socialsecurity.gov/OACT/TR/TR04/tr04.pdf>.

Tanner, M. (2001). *Disparate impact: Social security and African Americans*. On line: <http://www.cato.org/pubs/briefs/bp-061es.html>.

Wasow, B. (2002). *Setting the record straight: Two false claims about African Americans and social security*. On line:

[http://www.socsec.org/facts/Record\\_Straight/African\\_Americans.pdf](http://www.socsec.org/facts/Record_Straight/African_Americans.pdf).

## Appendix A

### I. Government Resources

- a. The Social Security Administration at [www.ssa.gov](http://www.ssa.gov)
- b. The Congressional Budget Office at [www.cbo.gov](http://www.cbo.gov)
- c. The Census Bureau at [www.census.gov](http://www.census.gov)
- d. The Centers for Disease Control and Prevention at [www.cdc.gov](http://www.cdc.gov)
- e. President's Commission to Strengthen Social Security at [www.csss.gov](http://www.csss.gov)
- f. The Bureau of Labor Statistics at [www.bls.gov](http://www.bls.gov)
- g. Medicare at [www.medicare.gov](http://www.medicare.gov)
- h. The General Accounting Office at [www.gao.gov](http://www.gao.gov)
- i. The Library of Congress at <http://thomas.loc.gov>.
- j. The National Institute on Aging at <http://www.nia.nih.gov/>
- k. The Department of Health and Human Services at <http://www.hhs.gov/>

### II. Pro-Privatization Resources

- l. Social Security Choice at [www.socialsecuritychoice.org](http://www.socialsecuritychoice.org).
- m. National Center for Policy Analysis at [www.teamncpa.org](http://www.teamncpa.org)
- n. The Cato Institute at [www.cato.org](http://www.cato.org) and [www.socialsecurity.org](http://www.socialsecurity.org)



7. I expect full retirement age to climb beyond 67 before I retire.  
1 2 3 4 5
8. I expect retirement benefits to be cut before I retire.  
1 2 3 4 5
9. Social security is unfair to minority group members.  
1 2 3 4 5
10. Social security is unfair to women.  
1 2 3 4 5

## **MANUSCRIPT GUIDELINES FOR PROSPECTIVE AUTHORS**

### **SUBMISSION FORMAT:**

- Manuscripts should be in English
- Manuscripts should be typed on a standard size paper (8.5" by 11") and must not exceed 25 pages, including references, appendixes, tables, and figures.
- The manuscript must use Microsoft Word or rich text format and should be typed in a 12-point font. It must be double-spaced (excluding references, appendixes, tables, and figures). All margins are one inch.
- The title page should include the title of the manuscript and appropriate contact information (authors' names, affiliations, complete address, contact numbers, and e-mail addresses).
- The second page should repeat the title of the manuscript and a brief (not to exceed 100 words) abstract. Excluding title page, the manuscript should not contain the name of the author or any affiliation that would allow the reviewer to determine authorship
- Main headings should be centered and typed in all capitals. Example: INTRODUCTION.
- Secondary headings should be typed, flush with the left margin and in small letters, with major words beginning with capitals. Example: Learning Models.
- Tables, figures, and graphs should be included where they are discussed. Do not include notations like "Insert Table 1 About Here".
- Do not paginate within the manuscript. Pencil in page numbers on the bottom of the hard copy.
- Do not use footnotes in your manuscript.
- Citations should be made in the text by inclosing the cited author's name and the year of the work cited in parentheses. Example: Several studies (Johnson, 1999; Smith, 1998; Green, 1997) support this finding, OR, Results reported by Ball (1985) suggest .....
- Direct quotations must give a page number(s); these follow the date of publication and are separated from it by a colon.



Example: Johnson indicated that writing is a difficult process (1995: 6).

- Periodical reference example:
  - Johnson, C. L. (1994). The art of writing. *Academy of Management Journal*, 32, 112-125.
- Periodical reference example:
  - Jacobs, B., & Gurley, M.A., (1990). When writing works. *Studies in Management*, 33, 75-87.
- Book reference example:
  - Johnson, C. L. (1994). *The art of writing*. New York, Macmillan.
- Working paper reference example:
  - Becker, K.L. & Kepler, H.R., (2004). How to finance a budget deficit. NBER Working Paper No. 398. Retrieved September 23, 2004 from the National Bureau of Economic Research database.
- References to materials on the internet must be given in brackets in the text such as:
  - [www.tsu.edu/businesspaper.html](http://www.tsu.edu/businesspaper.html) (with download date indicated)

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