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The Influence of Effective Teaching in Accounting on Student Attitudes, Behavior, and Performance

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ABSTRACT: In 1993 the School of Business at a large midwestern university established a task force to redesign its introductory accounting/business course. The task force shared many goals of the contemporaneous Accounting Education Change Commission, which addressed desirable attitudes and behaviors for the profession. Although approaches to knowledge and skill development are well understood at universities, much less is known about the impact of effective accounting education on student attitudes and behavior.

After implementing instructional interventions, student attitudes and study skills improved significantly over one semester. The causal relationship of attitudes and behaviors was modeled using the Theory of Reasoned Action. Self-reported behaviors were validated by external ratings and course performance. Achievement attitudes were strongly and directly influenced by subjective norms. Our results reflect positively on the activities and procedures used to create normative influences within the class. In particular, the use of teaching assistants (TAs) as positive role models was substantiated.

Data Availability: Additional information regarding any aspects of the course, including teaching materials or the data described in this paper, is available from the authors.

INTRODUCTION

This paper investigates the impact of a course structure that was reviewed, evaluated, and redesigned with the goal of manipulating specific student attitudes and behaviors. The course chosen for this study was a beginning accounting course that had earned an excellent reputation over the five-year period since being restructured. The new course incorporated strategies designed to shape achievement attitudes and behaviors as well as student attitudes about business. These strategies are presented in the "Background" section under the heading "Course Structure," followed by a brief review of research on effective teaching techniques at the college level. The research methodology incorporates a robust

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and extensively studied approach to understanding how behaviors and attitudes relate, which is presented in "Linking Attitudes to Behavior" in the "Background" section. This research highlights pro-achievement student behaviors that classroom management and instructional strategies can enhance within a single semester.

BACKGROUND

In 1993 the School of Business at a large midwestern public university redefined its introductory accounting and business class, Business 240. At the time, enrollment in this gateway class had experienced a steady and undesirable decline. General dissatisfaction with the content of the class was similar to that addressed by the Accounting Education Change Commission (1990, 1992). The main complaint was not the teaching of knowledge capabilities, but rather the insufficient focus on specific skills and professional orientation.

A task force of faculty and external stakeholders was created to propose changes to Business 240. Modifying the large lecture format of Business 240 was not economically feasible as was creating an introductory business course separate from the introductory accounting course. The course had to cover prerequisites for the two-course intermediate financial accounting sequence taken in the junior year, serve as the first pre-business course, and function as a service course. The task force specified that the course should be assigned to a qualified senior faculty member and that sufficient economic resources must be made available. The course goals included development of content knowledge and skills. In addition, emphasis was put on improving student perceptions of business as a career, fostering good study habits, and developing a positive attitude toward the contributions of the field of business.

Course Structure

During the process of redefining Business 240, the need for a clear departure from existing practices was apparent. The original course had been assigned to a series of lecturers and adjunct professors who had made no substantial changes in many years. At that time the course included content-focused large lectures and one-hour homework review sessions handled by teaching assistants (TAs). Interactions among the instructors and students were minimal. Modifications to Business 240 began with the idea that TAs could be effectively integrated into the skill-development process. Consequently, we created a carefully orchestrated interaction between the large lecture sessions and the new two-hour laboratory sections. The goal was that by using a tightly defined course structure, specifically chosen and trained TAs, integrative and interactive activities, and clear overarching policies and procedures, the course would achieve the benefits of an expert-led large class lecture as well as the benefits of a small class environment. This "small class within a large class" structure provides a venue for the development of both specific content knowledge and integrative hands-on small group learning. It also combines the structure and consistency of a large class with the personal attention of a small class.

Lectures focus mainly, but not exclusively, on knowledge development. Lab sections support and reinforce lecture material and a significant amount of time is spent on skill-building activities. The two 90-minute large lecture sections each week include coverage of pertinent accounting topics and multiple activity segments that help teach the material and provide a contextual background for the course. These segments are used to help students understand specific business practices, motivate the study of business and accounting, encourage good study habits, and help students understand the economic realities they

face in everyday life. Several activity segments are briefly described and their purposes specified in Appendix A.

In order to attain some of the behavioral and attitude objectives of the redefined course, the instructors must maintain the value of a carefully managed small class environment. Consequently, students must sit in assigned areas of the classroom with their TAs, who are always in attendance. A floor camera allows all students to have a closer view of the instructor and other students and acts as a deterrent to inappropriate classroom behavior. Auditory and visual prompts, such as music that plays before class and is turned off to indicate the start of class, and instructions displayed on overhead slides, provide cueing throughout the class.

More activities are incorporated into the small class environment of the two-hour lab sections taught by the TAs. The sequence of lab activities helps TAs to be successful early in the semester. For instance, the course uses a modified Monopoly game as an efficient way to teach the accounting cycle. The first lab for the semester includes a brief introduction emphasizing the interaction between the lab sections and the lecture. The remainder of the session is spent beginning the Monopoly activity. This time gives the TAs a chance to meet the students, act in an expert capacity by answering questions, and generally become more comfortable in the classroom. TAs are assigned more rigorous teaching duties each succeeding week until they reach a skill level where they can comfortably provide significant knowledge-based content lectures. Brief descriptions of the special activities used in lab are provided in Appendix B. Throughout the semester, lab activities are done in small, randomly assigned cooperative learning groups. During each lab, the TAs discuss good study habits, which include attending class, paying attention, reading the text, and doing homework. Additionally, TAs are encouraged to talk about their own studies, their preparation for the CPA exam, and their job searches. During both lectures and laboratory sections, the instructor and the TAs give a consistent message regarding student behaviors that increase the chance of success in Business 240 and in the future, such as attending class, doing homework, and not cheating. Each of these messages is reinforced by accountability for class attendance, extra credit, homework, and quizzes.

Effective Teaching

Studies show that periodically checking for understanding by soliciting feedback from class members, using cooperative learning strategies, cueing and managing transitions effectively, maintaining active participation of students, and ensuring learner accountability increase participation in learning in K-12 settings (e.g., Brophy and Good 1984; Jones and Jones 2001; Wang et al. 1993). Research on the application of effective instructional techniques in college classes has tended to focus on student and faculty perceptions of effective college teaching rather than empirical studies of the impact of instruction on student behavior and performance. Ballantyne et al. (1999) collected data from effective instructors in Australia, whose responses addressed themes such as enthusiasm for one's discipline, caring for students, and aiming instruction at the students' level, rather than specific instructional techniques. Hativa et al. (2001) conducted a qualitative study of exemplary college teachers in Israel and found four major elements of effective instruction: organization, lesson clarity, interest, and positive classroom climate. They found that specific teaching and management techniques varied widely from instructor to instructor. Two studies (Ross 1989; Young and Shaw 1999) explored student perceptions of quality college teaching. Ross (1989) concluded that clarity, organization, interest, concern for students, and student involvement were key elements of effective teaching. Young and Shaw (1999) found that

communication, positive learning atmosphere, concern for student learning, motivation, and organization were all predictors of teacher effectiveness.

The set of strategies collected under the rubric of cooperative learning has broad empirical support at younger ages and some studies have found it to be useful at the college level as well. Again, much of the literature showing positive effects, such as student involvement and increased motivation, is based on perceptions and is not linked to student outcomes (e.g., Clifford 1999; Rosenthal 1995; Van Voorhis 1992). In a quantitative analysis of student achievement, attitude, and instruction, George (1994) showed that several cooperative learning techniques led to improvements in course achievement and higher ratings of instructional quality and effectiveness for college undergraduates.

Linking Attitude to Behavior

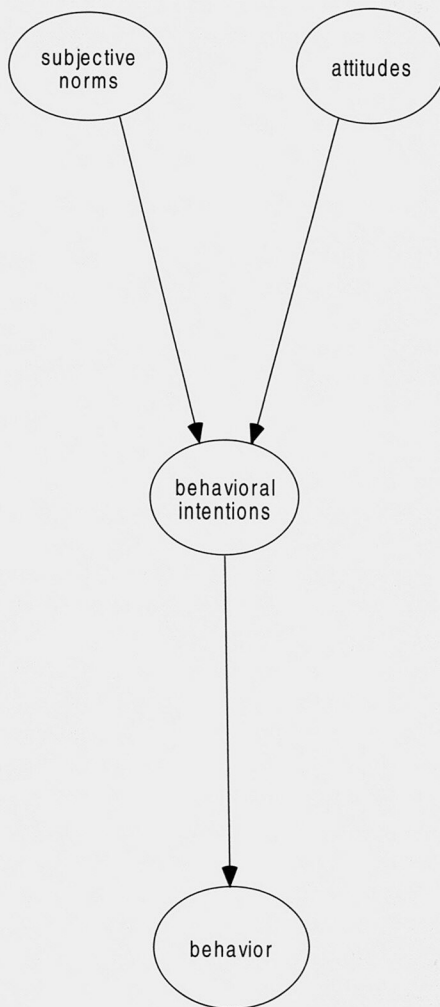
The Theory of Reasoned Action (TORA) of Fishbein and Ajzen (1975) and Ajzen and Fishbein (1980) incorporates two components to explain the relationship between attitude and behavior: subjective norms and behavioral intentions (Figure 1). The TORA maintains that the subjective perception of norms is an important antecedent of behavioral intentions, which in turn are the pivotal component in the attitude-behavior causal chain. The individual's subjective interpretations of a relevant reference group's opinions constitute subjective norms. Attitudes, or an individual's personal beliefs, also affect behavioral intentions. Attitudes are generally not formulated about specific behaviors but are more global in nature, such as an attitude about the importance of getting good grades. Behavioral intentions represent a plan of action that is arrived at through conscious, deliberative processing. The TORA is applicable in situations in which an individual consciously considers a decision to engage in volitional behavior, such as studying for a test or doing homework, that relates to a general attitude, such as getting good grades. For study skills, subjective norms ("My parents and teachers want me to get good grades") and attitude ("It's important to me to get good grades") lead to behavioral intentions to improve grades ("I plan to work hard to get good grades") and then to actual behaviors (studying for tests, doing homework) that advance that goal. Behaviors are the only part of the TORA model that can be observed and verified objectively.

The social psychology literature contains a robust research history of support for the TORA, including the differentiation of subjective norms and attitude as influences on behavioral intentions and the value of behavioral intentions as the link between attitude and behavior (Trafimow and Fishbein 1994, 1995; Sheppard et al. 1988). However, subjective norms and attitude have sometimes been found to be correlated rather than independent as hypothesized in the TORA (Albrecht and Carpenter 1976; Fredricks and Dossett 1983).

Few TORA studies have addressed college student achievement behavior. In research on college student studying, Bentler and Speckart (1979) confirmed that subjective norms were highly predictive of behavioral intentions. In a study contrasting different types of attitudes, cognitively oriented (value-based) attitudes were better than affectively oriented (emotion-based) attitudes at predicting study behavior for college students, and cognitive and affective attitudes can be relatively independent of one another (Trafimow and Sheeran 1998). Fredricks and Dossett (1983) discovered a strong correlation between subjective norms and attitudes in their study of class attendance, contrary to the TORA model of independence.

From a measurement perspective, past research on the TORA has led to the recommendation that an overall goal (e.g., getting good grades) should be viewed as a construct operationally defined by a group of related actions (studying for tests, doing homework). Evaluating a number of actions for each component of the TORA model is necessary to

FIGURE 1
Original Model of the Theory of Reasoned Action



measure attitude about that goal (Ajzen and Fishbein 1977; Fishbein and Ajzen 1975). Sixteen specific achievement-oriented actions were selected as the behavioral targets for this research (see Appendix C for list of behaviors). The researchers did not know beforehand which behaviors would define students' general attitudes toward study skills, so the researchers developed a list of actions specifically encouraged in Business 240. Since only a subset of the individual behaviors would ultimately be selected, more potential candidate behaviors were included in the survey instrument than would become part of the final model.

Research questions addressed by this study regard the application of the TORA to this population and domain:

- 1) Does the TORA describe the relationship between attitude and behavior for these achievement-oriented study skill behaviors?
- 2) Do subjective norms influence behavioral intentions independently of attitudinal beliefs or do they affect attitude directly?
- 3) Do behavioral intentions for study skills predict future behavior over the time lag of a semester?

The next question concerns the validity and confirmation of self-report of attitudes and behaviors:

- 4) Are self-ratings of behavior corroborated by external measures such as grades and TA perceptions of attitude and effort?

The final question addresses the changes that occurred during the semester:

- 5) Are effective teaching practices as executed in Business 240 related to changes in students' self-reported attitudes and behaviors about study skills?

METHOD

Sample

Participants were 363 undergraduates out of approximately 500 students enrolled in Business 240 who completed pre- and post-surveys. Students were asked to complete their surveys during the first 15 minutes on the first day of class and again in their final lab sections. Because of the large enrollment, many students who attend on the first day do not complete the course, and an equivalent number of students add the course after the first day of class. Students who were not in class on both occasions, who elected not to complete a survey at one data collection point or the other, or who did not identify their surveys with ID numbers, were not included in the sample. The professor made no major changes to the course since restructuring the course several years earlier, and student performance and course evaluations were comparable to other semesters.

While most of the students were sophomores (249), seven were first-year students, 77 were juniors and 26 were seniors, and four students did not report their year in school. Business was the intended major for 290 students, journalism for 34, and "other" for 39. Males outnumbered females 193 to 170; 13 were African-Americans, one American Indian, 17 Asians, seven Hispanics, 321 Caucasians, and four students of unreported ethnicity.

Instruments

Participants completed a 94-item survey at the beginning and end of the semester. The first ten items of the student survey instrument (not discussed in this paper) asked students to rate their general attitudes about business study. Each of the next five sections of the student survey listed the 16 specific study skills behaviors, some negatively worded, to be rated on a scale of 1–9 according to the purpose of each subscale. Four demographic questions ended the survey.

The order of the different TORA components was structured to control interference from the frames of reference of the other components. The first subscale evaluated frequency of behavior over the previous semester with the heading, "Please think about your own actual behavior over the last semester. How often did you ..." followed by the list of behaviors. The second subscale looked at cognitive evaluation of the worth or value of the actions held by the respondent and was introduced with the wording, "For this group of items, please think about the worth or value of these actions to you personally. In your

own opinion, how worthwhile is it for you to ...” These ratings were obtained before students considered the perceived value of the activities to people who are important to the respondent, i.e., the relevant norm group. The third subscale began, “Now think about the worth or value of these actions to people who are important to you. These can be any people whose opinions matter to you, including your family, your teachers, or your friends. In their opinion, how worthwhile is it for you to ...” The fourth subscale measured affective attitude, or the feelings of pleasantness or enjoyability of the activity to the respondent, beginning with, “Now think about your personal feelings about these actions and not whether they are worthwhile. Just think about how much you like to do them. How pleasant or enjoyable is it for you to ...” With all of the other components rated, the fifth subscale caused students to formulate their intentions to engage in the behaviors over the next semester with this wording, “For this group of items, think about your plans or intentions for the next semester of classes. How often do you think you will ...”

An additional instrument was completed by TAs at the end of the semester only. The second instrument was a rating scale that asked TAs to assess the level of overall attitude, participation, and effort for each student in their lab sections. They were also asked to rate the overall attitude of the lab section in which each student was enrolled. In addition to these ratings, actual course points earned in activities, exams, homework, and extra credit, along with attendance, were obtained in order to corroborate the self-reports.

Analyses

Two distinct analyses were conducted. First, confirmatory factor analysis with structural equation modeling was used to test the Theory of Reasoned Action model with these sample data. Note that in confirmatory factor analysis adequate model fit indices do not indicate that a particular model is the best one but merely that the specified model is a credible explanation for the data. Therefore, the theoretical adequacy and previous empirical support for the selected model, the TORA in this case, are crucial. Second, paired sample t-tests were used to evaluate the direction and magnitude of change for the individual items over the semester from time one to time two. These t-tests were conducted for each of the individual variables using the matched responses from both surveys.

RESULTS

Theory of Reasoned Action Causal Model

The subscale of cognitive attitudes rather than affective attitudes was selected for this research because cognitive and affective attitudes can be relatively independent of one another and, moreover, cognitively based attitudes are superior at predicting study behavior for university students (Trafimow and Sheeran 1998). For the TORA analyses, attitudes, normative beliefs, and behavioral intentions were measured at time one, while the criterion measure of reported behavior over the semester was taken from the survey administered at time two. This method provided the opportunity for a longitudinal study of the effects of attitudes and behavioral intentions on behavior. The 16 achievement behaviors rated in the self-report survey were evaluated using principal components analysis for each of the four subscales of cognitive attitudes, subjective normative beliefs, behavioral intentions, and behavior.

From the 16 behaviors surveyed, a group of behaviors was selected so that a parallel factor structure for each of the four components would create an internally consistent causal model for the TORA. In other words, the rated behaviors were the same for subjective norms, attitudes, behavioral intentions, and end-of-semester behavior ratings. A set of seven major study skills and key negative behaviors was identified for each component:

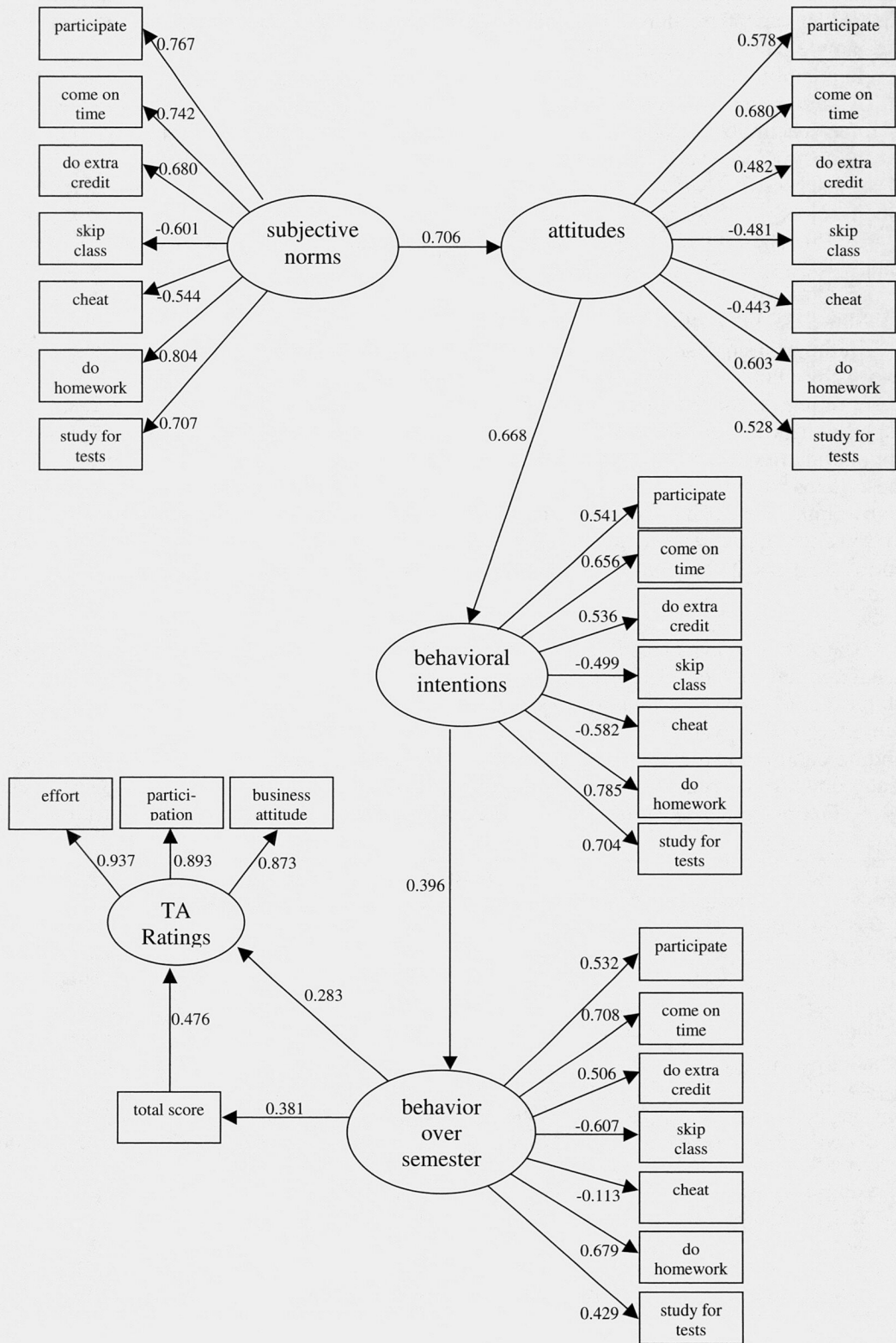
- 1) participate in class activities
- 2) come to class on time
- 3) do available extra credit work
- 4) skip a class
- 5) cheat on tests or quizzes
- 6) do your homework
- 7) study for tests

The process of identifying the parallel set of seven items comprising the TORA factors began with an exploratory principal components analysis that suggested critical related items, continued with confirmatory factor models for each of the individual components, and was finally evaluated in the overall longitudinal model consisting of all four TORA components. The models were analyzed using AMOS (Arbuckle 1999). After the relevant study skills activities were identified, a model-fitting procedure was undertaken in which alternate causal paths were evaluated and insignificant paths eliminated. All of the relevant study skills behaviors were constrained to load only on the intended factors (norms, attitudes, behavioral intentions, or behaviors) and no cross-loadings were permitted. Possible deviations from the theoretical TORA (see Figure 1) were permitted only in the causal paths defining the model. This investigative procedure, required to address research questions 2 and 3, involved two tests.

The first test of the TORA involved inserting a path from subjective norms to attitudes, which improved model fit significantly. When subjective normative beliefs were allowed to affect attitudes directly, the remaining path indicating the direct effect of subjective norms on behavioral intentions became nonsignificant. In other words, subjective norms for these behaviors affect behavioral intentions only indirectly through attitudes; they have no independent direct effect on behavioral intentions. In order to evaluate the usefulness of behavioral intentions, an additional path from attitudes directly to behavior was inserted into the model alongside the existing factor of behavioral intentions. This path had a low regression coefficient and did not significantly improve the model fit to the data. The paths from attitudes to behavioral intentions—and then from behavioral intentions to behavior—continued to have significant regression coefficients—indicating that behavioral intentions better explain the relationship between attitudes and actual behaviors than does a direct relationship between attitudes and behaviors. Moreover, this finding substantiates a fundamental hypothesis of the TORA: behavioral intentions are an explanatory factor for behavior. These two tests validated the importance of behavioral intentions and revealed the direct influence of subjective norms on attitudes in this study. The final model, however, departs from the original TORA theoretical model in finding a direct effect of subjective norms on attitudes.

As an adjunct to developing and testing the TORA theoretical model, external measures of student attitude and performance were obtained for confirmation of the self-report survey data. These measures included TA ratings of effort, attitude, and class participation for each student in the TA's lab section as well as actual points earned for the different elements of the course. The TA ratings, shown as a factor, and the total score earned, shown as an observed variable, are included in the final model and shown in Figure 2. The positive correlation of the TA ratings and course performance with reported behavior is evident in the positive regression coefficients and factor loadings for those external variables. (By convention, latent variables are shown as ovals and measured variables as rectangles. For ease of interpretation, the error terms for the measured variables and latent factors serving as endogenous variables have been omitted.) The comparative fit index (CFI) for this final

FIGURE 2
Final Model of TORA with External Variables



model is .976 with a root mean square error of approximation (RMSEA) of .075. The Chi-square/degrees of freedom ratio is 3.015. These results indicate strong fit of the model to the sample data (see Byrne 2001).

In addition to corroborating the attitude and behavior ratings with the external measures of TA ratings and total course points earned, it was also possible to correlate the self-ratings of three specific behaviors at the end of the semester with actual course statistics provided by the instructor. The individual behavior "skip a class" was positively related to actual class absences ($r = .556$), "do available extra credit" was commensurate with actual extra credit points ($r = .746$), and "do homework" was correlated with actual homework points ($r = .575$). These three specific examples further demonstrate the validity of the self-report data.

Change over the Semester

In the next analysis, the matching attitude items from the surveys at time one and time two were compared using paired sample t-tests. Unlike the TORA analyses, which used some ratings from the first administration to predict other ratings from the second, this analysis allowed for comparison of identical items measured at both times. These results are provided in Table 1. Significant change was attained over the semester for nearly all of these items in the desired direction. Overall, students rated their attitudes, subjective normative influences, behavioral intentions, and actual behaviors over the prior semester higher (or lower, as appropriate) than they did at the beginning of the semester. Only the subjective norms for participating in class activities did not change significantly.

DISCUSSION

The first research question addressed the adequacy of the TORA for this sample of behaviors and students. The final model demonstrated strong fit to the data and confirmation of the theory with one important variation in answer to the second research question: subjective norms were directly linked to attitude rather than to behavioral intentions. This finding confirms earlier research, including research involving university class attendance, that found high correlations between subjective norms and attitudes (Albrecht and Carpenter 1976; Fredricks and Dossett 1983). In the current study, subjective norms had no direct,

TABLE 1
Changes in Study Skills Attitudes and Behaviors over Semester

Action	Subjective Norm		Attitude		Behavioral Intention		Behavior over Semester	
	Mean Change	p	Mean Change	p	Mean Change	p	Mean Change	p
1. Participate in class activities	.10	.221	.27	.002	.33	.000	.67	.000
2. Come to class on time	.22	.004	.21	.004	.22	.001	.47	.000
3. Do available extra credit work	.39	.000	.64	.002	.46	.000	.35	.002
4. Skip a class	-.49	.000	-.78	.000	-.39	.000	-1.37	.000
5. Cheat on tests or quizzes	-.28	.002	-.49	.000	-.18	.017	-.46	.000
6. Do your homework	.29	.000	.47	.000	.34	.000	.52	.000
7. Study for tests	.24	.007	.33	.000	.24	.003	.28	.001

independent effect on behavioral intentions and only an indirect effect through attitudinal beliefs, with a standardized regression coefficient of .706.

The third question looked at the relationship between behavioral intentions and actual behavior. The intention-behavior link has been repeatedly substantiated over varying time frames (Sheppard et al. 1988). The current study required a full semester between the assessment of behavioral intentions and behavior ratings, a time lag that might have been expected to attenuate the predictive relationship. Nonetheless, behavioral intentions rated at time one were still significant predictors of achievement behavior rated four months later at time two (regression coefficient .396). This finding confirms the importance of behavioral intentions in the attitude-behavior chain for these consciously deliberated study skills.

The fourth research question addressed the trustworthiness of the self-report instrument and the linkage of self-reported attitudes and behaviors to external measures of academic performance at time two. An important feature of this study was the opportunity to verify the subjective nature of the self-report data and to extend the TORA model by including objectively measured outcomes. When included in the TORA confirmatory factor analytic model, the external measures serve as validation of the self-report data. The TA ratings of attitude, effort, and course participation substantiated the students' self-ratings from the perspective of an external observer (regression coefficient .283). Further, the significant positive relationship between self-reported study behaviors and total scores in Business 240 (regression coefficient .381) demonstrates that positive attitudes about the behavior set translate directly into higher achievement through the performance of achievement-related behaviors. This empirical relationship persisted in spite of the fact that other factors that heavily influence course achievement, such as cognitive ability, were not included in the model. These findings support the notion that behavioral intentions to engage in a range of positive behaviors led to actual behaviors and hence to higher achievement as indicated by students' actual course performance.

The TORA predicts posttest behavior from pretest behavioral intentions and does not assess change over time. The issue of change as a result of classroom interventions was addressed by question 5. Paired sample t-tests showed that almost all ratings of attitudes, norms, behavioral intentions, and self-reported behavior improved from the beginning to the end of the semester. This finding speaks to the importance of the activities and procedures used to create a relevant norm group within Business 240, particularly in the laboratory sections. TAs, who are role models for achievement in business and accounting, may exert special influence in the development of good study habits, professional behavior, and attitudes toward continued business study.

Several limitations to this study must be mentioned. First, no control group outside of Business 240 was used. While the longitudinal model made it possible to assess changes that occurred in the Business 240 students over the course of the semester of this study, it is not known if some other course structure might have had different effects on attitudes, behaviors, or even content mastery. However, similar classroom management, organizational techniques, and instructional strategies have been demonstrated to have these effects at elementary and secondary grade levels. Second, the sample, though adequate in size, was a convenience sample enrolled in a single business class and likely reflected a fair amount of homogeneity, making generalization to other populations, subjects, and instructors inadvisable.

Future research directions should continue to use the theoretical and empirical model of the TORA, which has not been used before with this variety of achievement-oriented behaviors and study skills. Replication in this area would be a worthwhile research avenue, particularly with respect to the nature of the normative influence in this arena and with

different ages of students. In order to confirm the effects of particular classroom techniques, similar longitudinal studies with control groups or follow-up surveys could be conducted to find out if attitudes and behaviors that are influenced by effective teaching are maintained after that exposure ceases.

The research presented in this paper makes a contribution in a variety of ways. First, it adds to the empirical literature on the effects of classroom management practices at the university level. Second, the focus of this research is a very successful Introduction to Business and Accounting course taught to large numbers of students. Although large classes have an economic benefit for an institution, some faculty and administrators believe that these courses cannot be as effective as small lectures or, worse, that they are not a good idea at all. In times of tight resources, the large class/small class trade-off becomes a hot topic of discussion. This research, along with the continued increasing enrollment that Business 240 has experienced since restructuring, provides evidence that large classes can be successful if careful thought is given to the attributes of an effective classroom. Third, the research combines a robust and useful theory of the link between attitudes and behavior with a study of how university faculty members can improve learning. Although gains in content knowledge are clearly measurable by a variety of techniques commonly used in the classroom, few methods exist for measuring instructors' positive impact on students. This research demonstrates that they can have an impact and provides a model for understanding how this might happen. Teaching does make a difference after all.

APPENDIX A
Large Lecture Activity Segments

Segment	Purpose	Brief Description
Attendance and grades	Motivate attendance	Grades as a function of attendance: 40 percent of A students missed no classes; 65 percent of D and F students missed 6 or more.
Stock sale	Business concepts	Students buy stock, vote for Board of Directors in a good year and again in a bad year, some resell on market
Partnership	Be careful out there	Students form a partnership that goes sour because one partner cheats. Honest partner has a problem.
Annual reports	Business concepts	Various times throughout the semester, e.g., debt or equity financing, turnover ratios and contingencies.
Pay and education	Motivate study	Graph showing level of education and lifetime earnings: Professional pay is five times that of "no high school."
Career Fair	Career planning	Encourage attendance at the career fairs on campus. Some students have gotten internship offers.
Business news	Business is interesting	Students subscribe to the <i>Wall Street Journal</i> . Pertinent articles are regularly highlighted and discussed.

University tickets	Business concepts	Student becomes ticket seller. Revenue recognition and cash accounting are discussed.
Hat day	Business concepts	Accounting rules and one size does not fit all.
400 Richest Americans	Motivate career	Students guess where the cutoff is and who is on the list. Not one professional athlete is included.
Ethics	Be careful out there	Students are given real cases and asked to be the jury. What's the punishment for a company cheating on coal dust testing?
Free on Board	Business concepts	Students watch as goods are shipped across class and are destroyed in a tornado, but whose loss is it?
Ace's Autos	Business concepts	Matchbook cars are bought and sold at Ace's using specific identification inventory.
CHP Corporation	Accounting magic	Bags of chips are used to show inventory assumptions and resulting profit.
Credit cards	Be careful out there	Usually motivated by a <i>WSJ</i> article this demonstrates impact of not paying off balance, to the dismay of many.
Audit game	Business concepts	Students are put on teams to complete a university audit in limited time.
Bankruptcy	Business concepts	Explains how bankruptcy does or does not work. Sorry, you cannot get out of paying student loans.
King's Dilemma Game	Business concepts	Students are put in random groups (takes ten minutes) and asked to decide which child inherits the kingdom. Some information relevant, other information reliable.
Money Games	Business concepts	Time value using four games everybody plays: Honey, I Blew up the Kids (College fund), Debtors' Dilemma (or, What's the Deal?), You Bet Your Life, and Wow!
Extra Credit Bonds	Business concepts	Students buy bonds in an auction where the effective rate is different from the stated rate.
Stock Purchase	Be careful out there	Sleazy partner suggests the company buy out a retiring partner's stock, leaving him in control. (Based on actual case)

APPENDIX B
Laboratory Section Activities

Activity	Brief Description
Monopoly 1	Students play Monopoly for practice; allows the TAs to do some administrative activities and to get to know the students and to help everyone relax.
Monopoly 2 and 3	Students play Monopoly and record transactions in the journal. Necessary adjusting entries are provided.
WSJ presentation	Students are given current <i>WSJ</i> articles on interesting nonaccounting topics (law, marketing, advertising, etc.) and asked to prepare and practice a presentation. One student from each team gives the presentation.
Purveyor of fine wines	Mini-case worked on in teams covering the internal control of cash.
WSJ debates	Students in teams prepare a debate based on current articles that have some controversial features.
Exam reviews	The students are provided with an example test. They work a portion of the exam and discuss their answers.
New material lectures	Bank reconciliation, petty cash, auditing concepts, internal controls of inventory, periodic versus perpetual inventory, financial statement analysis.
TVM review	The TAs use the TVM concepts taught in lecture to work some practical decision making problems.
Career Day	All ex-TAs are invited back to speak to the labs. Four or five alumni at different career stages are assigned to each lab.
The TA bookstore	Mini-case worked on in teams covering inventory control features. They do everything wrong.
Financial statement analysis	Students must get an original, current financial statement and try to analyze what is happening in the company.
Financial statement presentation	Students in teams prepare a presentation of a company's financial information. A large portion of the grade is based on keeping the audience interested.
Investing in a Monopoly business	Monopoly players start with limited endowment but can sell ownership interest to individual students who have cash and not much else to do.

APPENDIX C
Sixteen Surveyed Behaviors

- 1) participate in class activities*
- 2) come to class on time*
- 3) do available extra credit work*
- 4) skip a class*
- 5) take notes in class
- 6) review your notes

- 7) cheat on tests or quizzes*
- 8) do your homework*
- 9) study with other students from class
- 10) read business magazines or newspapers
- 11) sleep or read during class
- 12) study for tests*
- 13) copy someone else's homework
- 14) do the assigned reading
- 15) leave class early
- 16) get to know classmates

* = used in TORA model.

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