

ETHICS EDUCATION IN MBA PROGRAMS: EFFECTIVENESS AND EFFECTS

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ABSTRACT

Results of a survey of 3,225 MBA graduates from 75 schools located in the United States are analyzed to determine (a) how and how effectively ethics is incorporated in the graduate business curriculum, (b) how graduates assessed the corporate scandals that occurred prior to the study,; and (c) how these scandals affected their job search behavior. Forty-two percent of graduates say that ethics is being incorporated extremely or very effectively in the curriculum, but 18% say incorporation is not effective. The effectiveness of ethics education is most influenced by the number of ways that ethics is incorporated in the curriculum, based on the results of a multiple regression analysis. The inclusion of a required core course, integrated case studies within most courses, and a reference to ethics in most courses also contribute positively to predicting effectiveness. So, too, do ratings of the quality of program management, curriculum, and faculty, as well as students' willingness to recommend their schools.

KEYWORDS: Business Ethics, Business Education, MBA Programs

JEL: M1

INTRODUCTION

When Enron Corp.'s corporate misconduct became apparent in late 2001, and Arthur Andersen met its demise in 2002, many graduate business schools reexamined their commitment to integrate ethics education into their curriculum and initiated reforms (e.g., Griffin, 2002; Browning, 2002; Gottlieb, 2002; Schmalensee, 2003; Alsop, 2003; Lewis, 2003; Weisman, 2003). While this reexamination was under way, students in the MBA class of 2003 were pursuing and/or completing their degrees. These students are the subject of the research reported here. The research was designed to determine (a) how and how effectively ethics is incorporated in the graduate business curriculum; (b) how graduates assessed the corporate scandals that occurred prior to the study; (c) how these scandals affected their job search behavior; and (d) whether individual respondent and school characteristics can contribute to understanding the results of the study.

Although there are copious amounts of research on the effects of ethics education, a limitation is that the data can rarely be generalized to the graduate business school community. The research is usually institution-specific and focused on undergraduate students (e.g., Lowery, 2003; Weber & Glyptis, 2000; Gautschi & Jones, 1998; Peppas & Diskin, 2001; Abdolmohammadi & Reeves, 2000; Arlow & Ulrich, 1988; Earley & Kelly, 2004). This paper seeks to broaden the research base by focusing specifically on graduate business students enrolled in a diverse set of institutions.

The paper begins with a review of the literature on ethics education in business. This is followed by a discussion of research methodology—sample selection, sample characteristics, and questionnaire design. Then, results are presented on how ethics is incorporated in the curriculum, as well as the effectiveness of incorporation. Regression analysis is used to identify predictors of effectiveness and their relative importance. Respondent attitudes toward corporate scandals occurring prior to the study are also discussed, as well as attitudes about the effects of these scandals on business and on post-MBA job searches.

LITERATURE REVIEW

A number of studies indicate that there may be a relationship between age and ethics (e.g., Lowry, 2003; Borkowski & Ugras, 1998; Ruegger & King, 2004; Rest 1986). Borkowski (1998) conducted a meta-analysis of empirical studies from 1985 through 1994 and analyzed the relationship of age to the ethical attitudes and behavior of business students. Of the 35 studies in the meta-analysis, Borkowski found 19 with no significant relationship, one mixed study did not report findings, and 13 found that older students responded more ethically, while two studies found the opposite. Considering that the National Center for Education Statistics reported in 2000 that the average age of graduate business students was 33 and the average age of undergraduate students was 21, it seems imperative that additional research be conducted at the graduate level.

The authors uncovered a few studies that included graduate business students and measured the effects of ethics education (Glenn, 1992; Stead & Miller, 1988; Power & Lundsten, 2001; Peppas, 2003). Both Glenn (1992) and Stead and Miller (1988) administered surveys before and after a “Business and Society” course to measure change in ethical values. Peppas (2003) studied graduate business students’ attitudes about business codes of ethics and the influence that reports of corporate misconduct had on their students’ responses. The Peppas study found that neither taking a course in ethics nor reports of corporate misconduct significantly affected attitudes toward implementation of an ethics code. A limitation of the Peppas study and other research like it is the studies rely on responses to hypothetical scenarios to measure changes in ethical awareness, ethical values, or ethical reasoning after students have taken one course.

There is evidence that the greater the exposure to ethics education, the greater the impact on ethical reasoning and decision-making (Luther, DiBattista & Gautschi, 1997; Rest, 1986). Luther, DeBattista, and Gautschi (1997) found that students exposed to integrative ethical education had more positive attitudes toward the current ethical climate, as well as toward what the climate should be. Rest (1986) noted that “one of the strongest and most consistent correlates of development in moral judgment has been years of formal education” (as cited in Richards, Gilbert, & Harris, 2002).

There is also evidence that student perception of the quality of instruction and curriculum is related to the effectiveness of ethics education (Power & Lundsten, 2001). Power and Lundsten (2001) studied the effects of their school’s integrated ethics curriculum and included student feedback in their assessment. Results of their study indicated that higher perceived class quality is a factor in producing higher values on ethical questions. These results suggest there is a need for additional research that looks across the various ways ethics is incorporated into the curriculum and the differing degrees to which students are exposed to ethics education to truly understand the effects of ethics education. Moreover, because “class quality” can differ even among similar methods, a quality evaluation of ethics incorporation should be included.

Studies indicate that students in general are concerned about the state of business ethics and support the teaching of ethics (e.g., Beltramini, Peterson, & Kozmetsky, 1984, 1991; Crane, 2004; Power & Lundsten, 2001) but that they express doubt that they can have an impact on improving business ethics. Crane (2004) found that though 80% of the students surveyed believed that it is possible to improve ethics in business, only 35% believed that business ethics will improve in the future.

There is some evidence that moral development may affect the work climate a person prefers (Sims & Keon, 1997; Scott, 2000). Scott (2000) surveyed graduate business school students and found that the values of a company and the fit of those values with the students’ values are important to students’ decisions about whether to interview with that company. Were ethics teachings effective in developing

moral reasoning, one could argue that students would seek employers that display positive business ethics.

Research to date to determine the effectiveness of ethics education is extensive. But, as noted earlier, much of it focuses on undergraduate students, is institutionally specific, and is based on hypotheticals. In addition, conclusions are often based on small sample sizes. The present study seeks to overcome these limitations with data and analysis based on a large sample of respondents enrolled in a diverse set of institutions and MBA programs. And although before-after measurements based on hypotheticals can yield convincing evidence of cause and effect, they are generally less able to produce information on real attitudes and behavior—the objective in this study—than are direct questions.

METHODOLOGY

Data for this study are from an ongoing research project, the Global MBA[®] Graduate Survey of graduating MBA students, funded by the Graduate Management Admission Council[®] (GMAC[®]), sponsors of the Graduate Management Admission Test[®] (GMAT[®]) business school entrance exam. The survey is conducted annually over the Internet. Online questionnaire administration offers several advantages over a paper-and-pencil administration. First, the online survey is programmed to check for the accurate completion of each question before the respondent is allowed to proceed to the next question; this method eliminates the typical problems associated with item nonresponse. Second, for multiple-response questions likely to be affected by order bias, response categories are randomized before the questionnaire is displayed on the respondent's monitor. Third, a geographically diverse sample can be reached in a timely and cost-effective manner. Fourth, skip patterns allow respondents to move quickly and appropriately through the questionnaire because they never see questions that they should not be asked (e.g., race/ethnicity questions for non-U.S. citizens).

Sample Selection

In order to develop the sample for the survey, GMAT-using schools accredited by the Association to Advance Collegiate Schools of Business International (AACSB) were invited to participate by providing e-mail addresses of graduating MBA students. To encourage schools to participate, they were offered confidential access to data on responses from their students that could be benchmarked against results for the overall sample. Ninety-five schools from 10 different countries ultimately participated, including schools from many regions of the United States.

Potential respondents received an invitation via e-mail with an embedded unique identifier in the link to the Web-based survey. The questionnaire was available at the online survey site from February 12, 2003, through March 12, 2003. Two weeks into this time period, nonrespondents and those whose responses were incomplete received a follow-up e-mail message. When the survey closed, 4,216 students had logged in to the site and completed the questionnaire. Based on 15,676 e-mail addresses determined to be valid, the response rate to the survey was 27%.

Because the corporate scandal questions are U.S.-centric, students attending schools outside the United States were removed from the sample for this study. This reduction left a final sample size of 3,225 respondents representing 75 U.S. graduate business schools (see Appendix A for a complete list of participating schools).

Sample Characteristics

The following table shows the characteristics of individuals and schools in the sample. In the table, *school size* refers to the size of the graduating class. School prestige was measured using published rankings of

MBA programs. Although these rankings are controversial, they offer a convenient, standardized, and low-cost way to create a measure of school prestige that possesses some face validity. Rankings from three publications—*Financial Times*, *U.S. News & World Report*, and *Business Week*—were used to classify 25 U.S. business schools as “top-ranked.” Fifteen of the top-ranked schools are included in the present study, representing 20% of the 75 participating schools and contributing 44% of the survey respondents.

As Table 1 shows, the sample is diverse in terms of both individual and school characteristics. It would have been desirable to obtain larger sample sizes from executive MBA programs and from Canadian citizens attending U.S. schools. But even in these cases, sample sizes are sufficient for statistical tests used in the analysis.

Table 1: School, Program, and Individual Characteristics of the Survey Sample

Characteristics	Number	Percent
Gender		
Male	2,174	67%
Female	1,051	33%
Total	3,225	100%
Age		
27 and younger	1,026	32%
28–34	1,824	57%
35 and older	375	12%
Total	3,225	100%
Mean	3, 225	29.8
Median	3, 225	29
Citizenship (World Regions)		
Asia	498	16%
United States	2,202	70%
Canada	38	1%
Latin America & the Caribbean	226	7%
Europe	161	5%
Total	3,125	100%
Race/Ethnicity		
White (non-Hispanic)	1,648	80%
All Others (U.S.)	409	20%
Total	2,057	100%
Program Type		
Full-time	2,596	82%
Part-time	489	15%
Executive	84	3%
Total	3,169	100%
School Size		
Small (Less than 100)	768	24%
Medium (100 to 250)	1,075	33%
Large (251 or more)	1,382	43%
Total	3,225	100%
School Prestige		
Top-ranked	1,424	44%
All others	1,801	56%
Total	3,225	100%

Questionnaire Design

Background for the survey design was provided by (1) prior GMAC[®] research on matriculants in MBA programs; (2) prior GMAC[®] experience in surveying the graduate business school student audience with the Global MBA[®] Graduate Surveys of 2000, 2001, and 2002, as well as with other surveys; and (3) ongoing input from participating schools on their information needs.

The primary objective of the survey is to provide continuing information to faculty and to MBA program administrators. To guard against potential problems stemming from the sensitive nature of questions about ethics and ethics education and the possibility of demand effects, survey participants received questions on ethics only after answering a series of core questions, most of which had been asked in previous years and without any resulting difficulty. These core questions covered the following topics, in the order shown:

- students' satisfaction with 10 potential benefits of the MBA;
- how the MBA may increase career options;
- the influence of a variety of communication sources on the selection of the schools respondents attend;
- the importance of 17 school selection criteria;
- respondents' satisfaction with different aspects of their MBA program;
- likelihood of respondents' recommending their school to someone deciding whether to pursue an MBA;
- the overall value of the MBA; and
- the amount of respondents' self-reported improvement in 12 skills and abilities.

The questions on ethics covered these topics:

- the ways ethics is incorporated in the graduate business curriculum;
- the effectiveness of the incorporation of ethics in the curriculum;
- an assessment of the significance of recent corporate scandals;
- attitudes toward the effects of recent corporate scandals on business; and
- the effects of corporate scandals on job search.

Findings are reported in the order in which questions were asked, along with additional analyses as appropriate. These additional analyses include (1) analyses of relationships among survey variables; and (2) analyses of relationships between survey variables and sample characteristics reported in Table 1.

RESULTS

Incorporation of Ethics in the Curriculum

Each respondent was presented with a list of eight ways ethics could be incorporated into a graduate business curriculum and asked to select the ways that applied to his or her own school. As discussed in the Method section, because this is a multiple-response question, the eight ways were randomized when displayed on the respondents' computer screens to control for order bias. Results are shown in Table 2.

As Table 2 displays, ethics is incorporated most often (56%) using speakers, followed by required core courses (46%), and integrated case studies within some courses (44%). Two other ways—a reference to ethics in most courses and in elective courses—were selected by two fifths of the respondents. Slightly

more than one fourth (26%) said that ethics was incorporated through workshops. And nearly one fifth reported integrated case studies within most courses (18%) or outside assignments/projects (17%).

Table 2: Methods Used to Incorporate Ethics

Method	Percent Responding Method Used (n = 3,225)
Speakers	56%
Required core course(s)	46%
Integrated case studies within some courses	44%
Referred to in most courses	40%
Elective course(s)	40%
Workshops	26%
Integrated case studies within most courses	18%
Outside Assignments/Projects	17%

The earlier discussion of sample characteristics detailed differences among respondents with regard to the type of MBA program in which they were enrolled, the sizes of schools, and school prestige. Cross-classification of these school characteristics with the ways in which ethics is incorporated in the curriculum reveals important insights into the current status of ethics education. Results are shown in Tables 3, 4, and 5.

Table 3: School Differences in Ways of Incorporation, by Program Type

Ways of Incorporation	Program Type					p (χ ²)
	Total	Full-time	Part-time	Executive		
	<i>n</i> 3,225	2,596	489	84		
Speakers	% 55.9%	62.1%	28.0%	44.0%		< .001
Required core course(s)	% 46.2%	48.3%	39.9%	26.2%		< .001
Integrated case studies within some courses	% 44.5%	44.4%	43.8%	53.6%		NS
Referred to in most courses	% 40.5%	39.8%	43.4%	44.0%		NS
Elective course(s)	% 39.7%	43.1%	28.8%	9.5%		< .001
Workshops	% 26.3%	29.0%	14.9%	14.3%		< .001
Integrated case studies within most courses	% 18.1%	18.0%	17.4%	28.6%		< .05
Outside Assignments/Projects	% 17.4%	18.1%	12.9%	21.4%		< .05

Table 4: School Differences in Ways of Incorporation, by School Size

Ways of Incorporation	School Size				p (χ ²)
	Total	Small	Medium	Large	
	<i>n</i> 3,225	768	1,075	1,382	
Speakers	% 55.9%	50.3%	49.7%	63.9%	< .001
Required core course(s)	% 46.2%	42.7%	50.9%	44.5%	< .001
Integrated case studies within some courses	% 44.5%	47.4%	42.8%	44.1%	NS
Referred to in most courses	% 40.5%	45.8%	41.3%	36.9%	< .001
Elective course(s)	% 39.7%	29.2%	35.5%	48.7%	< .001
Workshops	% 26.3%	19.1%	21.2%	34.2%	< .001
Integrated case studies within most courses	% 18.1%	23.2%	19.0%	14.7%	< .001
Outside Assignments/Projects	% 17.4%	20.7%	16.3%	16.5%	< .05

Table 5: School Differences in Ways of Incorporation, by School Prestige

Ways of Incorporation	School Prestige				
		Total	Top-Ranked	All Others	<i>p</i> (χ^2)
	<i>n</i>	3,225	1,424	1,801	
Speakers	%	55.9%	68.0%	46.3%	< .001
Required core course(s)	%	46.2%	46.0%	46.4%	NS
Integrated case studies within some courses	%	44.5%	43.8%	45.0%	NS
Referred to in most courses	%	40.5%	38.2%	42.3%	< .05
Elective course(s)	%	39.7%	53.8%	28.5%	< .001
Workshops	%	26.3%	36.3%	18.4%	< .001
Integrated case studies within most courses	%	18.1%	14.5%	21.0%	< .001
Outside Assignments/Projects	%	17.4%	16.6%	18.0%	NS

For each of the ways that ethics is incorporated, chi-square analysis of the statistical significance of differences shows the following:

- **Speakers.** Use of speakers to incorporate ethics into the curriculum (the most popular way overall) varies significantly by all three school characteristics. Differences are the widest for type of MBA program. More than three fifths of respondents in full-time programs (62%) reported the use of speakers, compared with 28% of those in part-time programs. Executive programs fall in between, at 44%. Respondents attending large schools reported the use of speakers significantly more than those in small and medium-sized schools. And respondents from top-ranked schools reported the use of speakers more than those in other U.S. schools.
- **Required core courses.** Again, program type influences use of this method of ethics incorporation more than do other school characteristics. A larger share of respondents in full-time programs than part-time programs—and in part-time programs than in executive programs—reported that their schools have required core courses. Respondents in medium-sized schools said that core courses in ethics are required significantly more often than did those in small and large schools. There are no significant differences related to school prestige.
- **Integrated case studies within some courses.** This method of ethics incorporation is not significantly affected by the three school characteristics.
- **Referred to in most courses.** Program type does not significantly affect whether ethics is referred to in most courses, but school size and school prestige do. The smaller the school, the more likely respondents were to say ethics is referred to in most courses. Respondents in other U.S. schools also were more likely to report this method of ethics incorporation than were those in top-ranked schools.
- **Elective courses.** All three school characteristics significantly affect the presence of elective courses. With regard to program type, respondents in full-time programs reported elective courses at more than four times the rate of those in executive programs (43%, compared with 10%); part-time programs are in between at 29%. Where school size is concerned, the larger the school, the more likely respondents were to report elective courses. And respondents in top-ranked schools were nearly twice as likely to report elective courses as those in other U.S. schools were (54%, compared with 29%).
- **Workshops.** Respondents in full-time programs reported ethics incorporation through workshops significantly more than those in part-time and executive programs did. Those in large schools reported the use of workshops significantly more than those in small and medium schools did. And those in top-ranked schools reported the use of workshops at twice the rate of those in other U.S. schools (36%, compared with 18%).

- Integrated case studies within most courses. This method of incorporation also varies significantly by all three school characteristics. Those in executive programs reported integrated case studies within most courses significantly more than did those in full-time and part-time programs. Regarding school size, the smaller the school, the more likely respondents were to report integrated case studies within most courses. Those in other U.S. schools were more likely to report this type of ethics incorporation than were those in top-ranked schools.
- Outside assignments/projects. Respondents in executive programs reported outside assignments/projects the most and those in part-time programs, the least (with full-time programs in between). Those in small schools reported the use of outside assignments/projects significantly more than those in medium and large schools did. School prestige does not significantly affect the usage of outside assignments/projects.

Some differences related to program type, school size, and school prestige are striking. But the importance of these differences can only be known when the effectiveness of ethics integration is examined—the topic to which this paper now turns.

Effectiveness of Ethics Incorporation

After respondents indicated the ways in which ethics is incorporated into the graduate business curriculum, respondents were asked, “How effectively is ethics incorporated into your graduate business curriculum?” They responded along a five-point scale with these descriptors: *extremely effectively* (5), *very effectively* (4), *somewhat effectively* (3), *not very effectively* (2), and *not at all effectively* (1). Results are shown in Table 6.

Table 6: Respondents’ Ratings of Effectiveness of Ethics Incorporation

Rating	Percent (n = 3,225)
Extremely effectively	10%
Very effectively	32%
Somewhat effectively	41%
Not very effectively	14%
Not at all effectively	4%
Total	100%

Attitudes about the effectiveness of ethics incorporation in the curriculum appear mixed. Forty-two percent of respondents said ethics is incorporated either extremely or very effectively, but only about one fourth of these chose the extremely effective point on the scale. And 41% had enough reservations about effectiveness to reduce their evaluation to somewhat effectively. On the other hand, only 20% said ethics is incorporated not very or not at all effectively. Overall, it appears that respondents rated the incorporation of ethics as effective—with reservations (mean effectiveness = 3.29). This conclusion is further supported by responses at extreme scale positions for other survey items also measured on 5-point scales: 44% who are “extremely satisfied” with the opportunity the MBA program gave them to improve personally; 50% who said their abilities to think strategically improved “a great deal”; 37% who said school location was an “extremely important” school selection criteria; and 61% who would “definitely” recommend their schools to someone considering pursuing an MBA. Clearly, respondents are able to respond at extreme scale positions.

Ways Ethics Is Incorporated and Effectiveness

In order to assess the effectiveness of each way ethics is incorporated, the authors calculated mean effectiveness ratings for respondents who reported the use of a given method of ethics incorporation and then compared those ratings to the ratings of respondents who did not report use of the given method.

Differences between the two groups were significant ($p < .001$) for all eight methods. Table 7 shows results ranked in terms of the size of the differences between usage and nonusage.

As the table shows, the widest difference in mean effectiveness between usage and nonusage is for integrated case studies within most courses. Two other ways of incorporation—outside assignments/projects and a reference in most courses—are about equal in difference between usage and nonusage. Interestingly, the difference for required core course(s) is about one half that for integrated case studies within most courses. Elective courses showed the least difference between usage and nonusage.

Table 7: Comparison of Mean Effectiveness Rating Based on Usage of Method

Method	Mean Effectiveness Rating		Difference ^a
	Used	Not Used	
Integrated case studies within most courses	3.97	3.14	0.82
Outside assignments/projects	3.81	3.18	0.63
Referred to in most courses	3.65	3.05	0.59
Speakers	3.50	3.03	0.48
Workshops	3.63	3.17	0.46
Required core course(s)	3.54	3.08	0.45
Integrated cases studies within some courses	3.46	3.16	0.30
Elective courses	3.45	3.19	0.26

^a $p < .001$ for all differences.

Because respondents could select multiple ways used to incorporate ethics in the curriculum, it is relevant to ask how many ways were selected. Although the ways ethics is incorporated are qualitatively quite different in their likely impact, it seems reasonable to suggest that the total number of methods used is a proxy for the exposure a graduate receives to education in ethics. Therefore, the authors calculated the total number of ways selected; results are shown in Table 8.

Table 8: Number of Incorporation Methods Used in Program

Number Used	Percent (n = 3,225)
0	3%
1	20%
2	21%
3	23%
4	16%
5	9%
6	5%
7	2%
8	1%
Total	100%

In calculating the number of methods used, we included other responses given by respondents, as well as the eight pre-specified ways of incorporation.

Only 3% of respondents indicated that ethics was not incorporated at all in the curriculum. Twenty percent indicated only one way of incorporation, but slightly higher percentages indicated two or three ways of incorporation. One third indicated four or more ways. The mean number of methods of incorporation is 2.9.

If the number of ways ethics is incorporated into the curriculum is a good proxy for the ethics education received by respondents, a positive correlation between effectiveness ratings and the number of ways ethics is incorporated should be expected. In fact, there is a moderate positive relationship between exposure (as measured by the number of ways of incorporation) and ratings of the effectiveness of incorporation; the Pearson correlation coefficient is .50 ($p < .001$).

As discussed earlier, prior research supports a relationship between the quality of instruction and curriculum and the effectiveness of ethics education (Power & Lundsten, 2001). Prior research also supports a relationship between exposure to ethics education and ethical reasoning and decision-making. Also, older students have been found (in some studies) to respond more ethically. Which of these predict evaluations of the effectiveness of ethics education among MBA students? And what is the predictive power of other respondent characteristics (beyond age), as well as school and program characteristics? We use dummy variable, multiple regression analysis (backward elimination) to answer these questions.

The effectiveness of ethics incorporation was specified as the dependent variable in the regression analysis with the following as independent variables:

- Measures of the quality of the students’ educational experience. Students rated the quality of three aspects of their programs (program management, curriculum, and faculty) by answering this question: “Based on your entire educational experience as a graduate business school student, please rate each of the following aspects of your program.” They rated each aspect on a five-point Likert-type scale: *outstanding* (5), *excellent* (4), *good* (3), *fair* (2), or *poor* (1). In addition, students indicated their willingness to recommend their schools, used here as an overall measure of school/program quality. They were asked: “Would you recommend your school to someone who has decided to pursue an MBA?” Respondents selected from the following possibilities: *definitely yes* (5), *probably yes* (4), *probably no* (2), *definitely no* (1), or *uncertain* (3).
- Measures of exposure: eight pre-specified methods by which ethics is incorporated in the curriculum (discussed earlier and shown in Table 2) and the number of ways ethics is incorporated in the curriculum; and
- Dummy variables for demographic characteristics (gender, age, citizenship, race/ethnicity) and school characteristics (program type, school size, and school prestige).

The model produced from the analysis includes eight variables, and the multiple R is a moderately strong .62. The independent variables included in the model are shown in Table 9, along with their standardized beta coefficients.

Table 9: Variables Included in Multiple Regression Model Predicting Effectiveness Rating

Independent Variable	Standardized Beta Coefficient
Number of incorporation methods used	0.260*
Required core course(s)	0.152*
Quality of program management	0.149*
Integrated case studies within most courses	0.145*
Referred to in most courses	0.120*
Willingness to recommend school	0.081*
Quality of curriculum	0.075**
Quality of faculty	0.062***

* $p < .001$; ** $p < .01$; *** $p < .02$.

As shown in Table 9, the most powerful variable in the model is the number of ways in which ethics is incorporated in the curriculum. Three other variables that also make independent contributions to the prediction of effectiveness relate to specific ways that ethics is incorporated in the curriculum: required core courses, integrated case studies within most courses, and referred to in most courses. Respondent evaluations of the quality of program management enters the model with slightly greater impact than two of the specific ways in which ethics is incorporated in the curriculum. The willingness of students to recommend their schools, as well as ratings of the quality of curriculum and faculty, also make unique contributions to predicting effectiveness, but with notably less impact than other variables in the model. School prestige does not predict effectiveness, nor does the size of the MBA program or the type of MBA

program (full-time, part-time, or executive). Age and other specific ways in which ethics is incorporated in the curriculum do not enter the model.

The model clearly shows the powerful impact of exposure to ethics education on assessments of effectiveness—expressed both in the extent of exposure and, independently, in the inclusion of required core courses in the curriculum, the use of integrated case studies, and the reinforcement that would result from repeated reference in courses. While regression analysis can only suggest causation and not prove it, the suggestion is both plausible and strong for these predictors. Regarding ratings of the quality of aspects of the MBA program—program management, curriculum, and faculty—and the willingness of students to recommend their schools, the examination of suggested causality raises an important question: Is it more likely that the quality of these aspects of the school/program are affecting ethics education effectiveness or that effectiveness is affecting evaluations of school/program quality and students' willingness to recommend their schools? Indeed, the bivariate Pearson correlation coefficients between ethics education effectiveness and these predictors are not trivial: program management, .37; curriculum, .36; faculty, .33; and school recommendation, .33. If the effectiveness of the incorporation of ethics in the curriculum leads to higher ratings of program management, curriculum, and faculty, as well as an increased willingness to recommend the school, there are at least three important implications. First, MBA program directors and faculty should know that education effectiveness could be a determinant of how they are being evaluated. Second, curriculum planning committees should realize that students likely have expectations about receiving ethics education and that their evaluations of the effectiveness with which it is provided affects their ratings of curriculum quality. Finally, if ethics education effectiveness enhances the willingness of students to recommend their schools, it is imperative that steps are taken to maintain and/or improve it. Current students and alumni are a major source of influence on the decisions of prospective students (Schoenfeld & Bruce, 2004).

Because repeated exposure to ethics education is so important in the model, it is important to examine how exposure varies by school characteristics—program type, school size, and school prestige—not because these school characteristics contribute directly to the prediction of effectiveness (which the regression analysis shows is not the case), but because of the implications this may have for curriculum planning. Results are shown in Table 10.

Table 10: Mean Number of Ways of Incorporation by School Characteristics

School Characteristics	Number	Mean ^a
Program Type		
Full-time	2,596	3.1
Part-time	489	2.3
Executive	84	2.5
School Size		
Small (Less than 100)	768	2.8
Medium (100 to 250)	1,075	2.8
Large (251 or more)	1,382	3.1
School Prestige		
Top-ranked	1,424	3.2
All others	1,801	2.7

^aOverall mean = 2.9.

One-way ANOVA analyses with post hoc Bonferroni tests show that the extent of ethics education exposure in—

- full-time programs significantly exceeds that of part-time and executive programs;
- large schools significantly exceeds that of small and medium-sized schools; and
- top-ranked schools significantly exceeds that of other U.S. schools.

When combined with findings from the regression analysis, the implications of the aforementioned differences are as follows: First, faculty and administrators in part-time and executive programs, in small and medium-sized schools, and in schools that are not top ranked should seek to expand the number of ways in which ethics is incorporated in the curriculum. Second, because the model also shows the power of integrated case studies within most courses, required core courses, and a reference to ethics in most courses, faculty and administrators should conduct curriculum reviews with this finding in mind—regardless of school characteristics. Individual courses should be reviewed to determine whether they include integrated case studies on ethics, and the addition of a required core course should be considered when one is not already offered. Finally, schools that are not top ranked may benefit from studying the activities of more prestigious schools when doing their curriculum reviews.

Attitudes toward Recent Corporate Scandals

In order to evaluate graduate business students' opinions of the state of business ethics, respondents were asked the following question: "Which of the following best describes your assessment of recent corporate scandals? These scandals are..." Sixty-eight percent believed the recent scandals were more significant than those experienced in the past; 29% believed the scandals were no different from those experienced in the past; and 3% believed scandals were less significant than those experienced in the past.

The analysis of subgroup differences in the assessment of recent corporate scandals shows significant differences across all four individual characteristics (Table 11). This is due, in part, to the sensitivity of chi-square analysis to large sample sizes. Nevertheless, these differences are revealing.

Table 11: Sub-group Differences in Assessment of Recent Corporate Scandals

	N	More Significant	No Different	Less Significant	Total
All	3,225	68%	29%	3%	100%
Gender^a					
Male	2,174	66%	31%	3%	100%
Female	1,051	73%	25%	3%	100%
Age^b					
27 and younger	1,026	68%	29%	3%	100%
28-34	1,824	66%	30%	3%	100%
35 and older	375	75%	23%	2%	100%
Citizenship^c					
Asia	498	58%	28%	14%	100%
Canada	38	74%	26%	0%	100%
Europe	161	73%	25%	1%	100%
Latin America	226	81%	18%	1%	100%
United States	2,202	68%	31%	1%	100%
Race/Ethnicity^d					
White (non-Hispanic)	1,648	68%	32%	0%	100%
All Others	409	71%	27%	2%	100%

^aChi-square = 15.4, df = 2, p < .001.

^bChi-square = 10.7, df = 4, p < .05.

^cChi-square = 259.9, df = 8, p < .001.

^dChi-square = 16.7, df = 2, p < .001.

Results revealed in Table 11 show the following:

- Females were more likely than males to assess the recent scandals as more significant than those in the past.
- Respondents 35 and older, compared to those younger than 35, assessed the recent scandals as more significant than those in the past.
- Citizens of Latin America assess the recent scandals as more significant than those in the past more so than citizens from any other world region do (81%); and those from Asia, the least (58%).
- Minorities are slightly more likely than non-Hispanic whites to regard the recent scandals as more significant.

The findings with regard to age are consistent with those from a number of other studies discussed earlier.

Effects of Corporate Scandals

Respondents were presented with a list of eight possible effects of the recent corporate scandals on business. They were then asked to select the ones they believed had occurred (randomized multiple-response items). Table 12 shows results ranked in terms of the percentage indicating an effect. More than four fifths (81%) believed that the scandals created an atmosphere of distrust of corporations. A substantially lower percentage believed that the scandals had positive effects: 52% said the scandals promoted short- and long-term change in business practices; 41% said the scandals caused companies to act more openly; and slightly less than two fifths (37%) said the scandals caused companies to act more ethically. Less than one third selected other possible effects.

Table 12: Effects of Recent Corporate Scandals

Effect	Percent Choosing Effect (n = 3,225)
Created an atmosphere of distrust of corporations	81%
Promoted short- and long-term change in business practices	52%
Caused companies to act more openly	41%
Caused companies to act more ethically	37%
Negatively impacted the perceptions by the marketplace of MBAs	30%
Brought about short-term change, but will not change long-term business practices	29%
Had little or no effect on business practices	8%
Elevated the respectability of an MBA education	4%

The authors used Pearson correlation coefficients to explore the relationship between perceived effects of recent corporate scandals and the effectiveness of ethics incorporation in the curriculum. The 5-point scale used to measure effectiveness is assumed to be an interval scale. Correlation coefficients and significance levels are shown in Table 13. Correlation coefficients for all of the effects are weak.

The more effective the incorporation of ethics in the curriculum, the more likely respondents were to say the recent corporate scandals—

- caused companies to act more ethically;
- promoted short- and long-term change in business practices;
- elevated the respectability of an MBA education; and/or
- caused companies to act more openly.

The more effective the incorporation of ethics in the curriculum, the less likely respondents were to say the recent corporate scandals—

- brought about short-term change, but will not change long-term business practices;
- had little or no effect on business practices; and/or
- negatively affected the perceptions by the marketplace of MBAs.

Table 13: Correlations of Effects of Scandals with Ethics Incorporation Rating

Effect	Pearson Correlation (n = 3,225)
Caused companies to act more ethically	0.16*
Brought about short-term change, but will not change long-term business practices	-0.15*
Promoted short- and long-term change in business practices	0.12*
Elevated the respectability of an MBA education	0.10*
Caused companies to act more openly	0.10*
Had little or no effect on business practices	-0.08*
Negatively impacted the perceptions by the marketplace of MBAs	-0.04*
Created an atmosphere of distrust of corporations	-0.02

* $p < .001$

Although the correlation coefficients are suggestive, they may mask effects at the extreme points on the ethics education effectiveness scale. Therefore, responses to the effectiveness question were cross-classified with perceived effects of the recent corporate scandals to further explore the nature of the relationship between the two. Results are shown in Table 14; the potential effects are listed in descending order in terms of the strength of the underlying correlation coefficient.

Table 14: Percent Choosing Effect of Scandals Based on Ethics Incorporation Rating

Effect	Total (n = 3,225)	Extremely Effectively (n = 310)	Very Effectively (n = 1,025)	Somewhat Effectively (n = 1,316)	Not very Effectively (n = 449)	Not at all Effectively (n = 125)
Caused companies to act more ethically*	37%	49%	45%	34%	28%	20%
Brought about short-term change, but will not change long-term business practices*	29%	23%	22%	31%	40%	46%
Promoted short- and long-term change in business practices*	52%	57%	60%	51%	41%	36%
Elevated the respectability of an MBA education*	4%	10%	5%	3%	1%	2%
Caused companies to act more openly*	41%	49%	45%	34%	28%	20%
Had little or no effect on business practices*	8%	7%	5%	8%	11%	14%
Negatively impacted the perceptions by the marketplace of MBAs	30%	27%	28%	31%	33%	34%
Created an atmosphere of distrust of corporations	81%	76%	80%	82%	83%	74%

* $p (\chi^2) < .001$

As the table shows, respondents who rated the effectiveness of the incorporation of ethics in the curriculum as extremely effective are nearly two and one-half times as likely as those who rated incorporation as not at all effective to say that the recent corporate scandals have caused companies to act more ethically. And those who rated incorporation as not at all effective are twice as likely as those who rated it extremely effective to say that recent corporate scandals have brought about short-term change but

will not change long-term business practices. For both of these items, however, almost the same can be said in a comparison between not at all effective and very effective.

Many respondents in MBA programs are fully employed while attending school and intend to remain with their employers upon graduation. Others are actively searching for jobs. In the sample of respondents in this study, 72% were searching for jobs at the time of the study. These respondents were asked to select all that applied from a list of four effects corporate scandals “over the last few years” have had on their job search (randomized multiple-response items). Results are shown in Table 15.

Table 15: Effects of Corporate Scandals on Job Search Behavior

Effect	Percent Choosing Effect (n=2,314)
I'm more likely to accept a job offer from a reputable company versus one under investigation	64%
I think more critically about the ethical culture of prospective employers	52%
I'm more likely to ask questions about company values in job interviews	39%
I spend more time closely reading corporate financial statements	24%

In order to explore the relationship between the effectiveness of ethics incorporation in the curriculum and the effects of corporate scandals on job search behavior, the authors used Pearson correlation coefficients (again, with the assumption that the 5-point scale used to measure effectiveness is an interval scale). Correlation coefficients and significance levels are shown in Table 16.

Table 16: Correlations of Effects on Job Search Behavior with Ethics Incorporation Rating

Effect	Pearson Correlation (n = 2,314)
I think more critically about the ethical culture of prospective employers	0.13*
I spend more time closely reading corporate financial statements	0.11*
I'm more likely to accept a job offer from a reputable company versus one under investigation	0.09*
I'm more likely to ask questions about company values in job interviews	0.07*

* $p < .001$.

The correlation coefficients indicate that the effectiveness of ethics education is weakly related to the effects of recent corporate scandals on job search behavior. Again, though, these correlation coefficients may mask effects at the extreme points on the ethics education-effectiveness scale, and a cross-classification of effects on job search behavior with responses on the ethics-effectiveness scale may produce additional insight. Table 17 reports the results of this cross-classification.

Table 17 shows that respondents who rated the effectiveness of the incorporation of ethics into the curriculum as extremely effective are more than twice as likely as those who rated incorporation as not at all effective to say they think more critically about the ethical culture of prospective employers and that they spend more time closely reading financial statements. For the other two possible effects on job search behavior, those in the extremely effective group are about one and one-half times as likely as those in the not at all effective group to indicate the stated effect on job search. In general, then, increases in effectiveness of ethics education are related to effects on job search behavior, but only weakly. And the effects can be seen best by focusing on the extreme points on the effectiveness scale.

Table 17: Percent Choosing Effect on Job Search Behavior Based on Ethics Incorporation Effectiveness Rating

Effect	Total (n = 2,314)	Extremely Effectively (n = 240)	Very Effectively (n = 744)	Somewhat Effectively (n = 361)	Not very Effectively (n = 301)	Not at all Effectively (n = 92)
More likely to accept a job offer from a reputable company versus one under investigation*	64%	67%	69%	63%	61%	45%
Think more critically about the ethical culture of prospective employers*	52%	68%	54%	49%	46%	33%
More likely to ask questions about company values in job interviews**	39%	46%	41%	39%	35%	29%
Spend more time closely reading corporate financial statements*	24%	30%	28%	22%	18%	13%

* $p(\chi^2) < .001$; ** $p(\chi^2) < .02$.

CONCLUSION

It is important to examine what is being done to incorporate ethics education in graduate business education programs to increase understanding of curriculum design issues and to aid in the development and/or improvement of ethics education. The results of this study suggest that ethics education can be effective at graduate business schools and can influence opinions about business ethics, belief in the potential for positive change in business ethics, and behavior and attitudes toward the ethical culture of prospective employers.

The sample of schools in this study are accredited by AACSB International. AACSB's Eligibility Procedures and Accreditation Standards for Business Accreditation (updated in 2004) asks that a:

school [use] well documented, systematic processes to develop, monitor, evaluate, and revise the substance and delivery of the curricula of degree programs and to assess the impact of the curricula on learning...that will include learning experiences in such management-specific knowledge and skills areas as...ethical and legal responsibilities in organizations and society.

Therefore, it is no surprise to find ethics education incorporated in the curriculum in some way at every school. What is interesting are the various ways schools incorporate ethics and how their methods differ depending on school characteristics. Some of the differences may be attributable to administrative constraints. For instance, executive programs may be less likely to require core course(s) in ethics because of the shorter length of their programs, so for this type of program it may make more sense to use other methods. The difference could also stem from a lack of resources allocated toward faculty and curriculum development. Large schools and the top-ranked schools were more likely to incorporate ethics in a greater number of ways, but they may also be more likely to have the resources to do so.

The results of this study lend much support to an integrated business ethics curriculum. In addition to the number of incorporation methods used, integrated case studies and references to ethics in most courses along with required core course(s) are the most powerful ways to incorporate ethics education effectively, regardless of program type, school size, school prestige and individual characteristics such as gender, age, citizenship, and race/ethnicity. Respondent ratings of the quality of program management, curriculum, and faculty, as well as the students' willingness to recommend their schools, also positively predict the effectiveness of ethics education. On the other hand, the underlying causal mechanism may be the reverse of that posited by the regression model: ethics education effectiveness may produce higher evaluations of program management, curriculum, and faculty and an increased willingness of students to recommend their schools.

Part of this study identified perceptions about the current state of business ethics, the perceived impact of public revelations of corporate misconduct, and the impact these revelations had on how students evaluate prospective employers. This study shows that the more effective the incorporation of ethics in the curriculum, the more likely students are to anticipate positive changes in ethical behavior by businesses, accept a job offer from a reputable company versus one under investigation, think more critically about the ethical culture of prospective employers, ask questions about company values in job interviews, and carefully read corporate financial statements.

If, as Ghorpade (1991) states, “[business schools are to] play a constructive role in reinstating business as a respectable member of society,” then efforts by graduate business schools to incorporate ethics in their curricula should be applauded. This study did not investigate pedagogical style and content, but, because of issues of inadequate textbooks, unclear theories and objectives, and other challenges related to the content and teaching of ethics in business schools discussed by such authors as Ghorpade (1991) and Baetz and Sharp (2004), further study is needed to investigate the implementation of the various ethics-education techniques mentioned in this study.

Because an investment in effectively incorporating ethics in business school curriculum appears to influence students’ perceptions about corporate misconduct and their subsequent employer choices, it is imperative that schools continue their commitments to assess their curricula, develop and improve faculty training and curriculum in ethics, and integrate ethics education across their curriculum.

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Appendix A: School Sample

School
Arizona State University
Babson College (Franklin Olin)
Baruch College/CUNY(Zicklin)
Baylor University (Hankamer)
Boston College (Carroll)
Carnegie Mellon University
Case Western Reserve University (Weatherhead)
Clark Atlanta University
Clemson University
College of William and Mary
Cornell University (Johnson)
Dartmouth College (Tuck)
DePaul University (Kellstadt)
Duke University (Fuqua)
Florida International University
Florida State University
Fordham University
George Mason University
George Washington University
Georgetown University (McDonough)
Georgia Institute of Technology (DuPree)
Georgia Southern University
Georgia State University (Robinson)
Illinois State University
Indiana University (Kelley)
Kent State University
Lipscomb University
Mercer University
Northeastern University
Ohio State University (Fisher)
Pennsylvania State University (Smeal)
Pepperdine University
Rensselaer Polytechnic Institute (Lally)
Rollins College (Crummer)
Rutgers, The State University of New Jersey
Seton Hall University (Stillman)
Temple University (Fox)
Texas A & M University (Mays)
Texas Christian University (Neeley)
Thunderbird, The American Graduate School of International Management
Tulane University (Freeman)
University at Buffalo, New York State
University of Arizona (Eller)
University of California, Berkeley (Haas)
University of California, Irvine
University of Central Arkansas
University of Colorado at Boulder (Leeds)
University of Connecticut
University of Georgia (Terry)

School

University of Illinois at Chicago
University of Kansas
University of Las Vegas, Nevada
University of Maryland (Smith)
University of Minnesota (Carlson)
University of Missouri, St. Louis
University of North Carolina, Chapel Hill (Kenan-Flagler)
University of Notre Dame (Mendoza)
University of Oklahoma (Price)
University of Oregon
University of Pennsylvania (Wharton)
University of Richmond (Robins)
University of Rochester (Simon)
University of San Francisco (McLaren)
University of South Carolina (Moore)
University of South Florida
University of Tennessee, Knoxville
University of Texas at Austin (McCombs)
University of Texas at Dallas
University of Virginia
University of Washington
University of Wisconsin-Madison
Virginia Commonwealth University
Virginia Polytechnic Institute and State University
Wake Forest University (Babcock)
Washington University (John Olin)
Yale University
