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A Meta-Analytic Investigation of Business Ethics Instruction

ABSTRACT. The education of students and professionals in business ethics is an increasingly important goal on the agenda of business schools and corporations. The present study provides a meta-analysis of 25 previously conducted business ethics instructional programs. The role of criteria, study design, participant characteristics, quality of instruction, instructional content, instructional program characteristics, and characteristics of instructional methods as moderators of the effectiveness of business ethics instruction were examined. Overall, results indicate that business ethics instructional programs have a minimal impact on increasing outcomes related to ethical perceptions, behavior, or awareness. However, specific criteria, content, and methodological moderators of effectiveness shed light on potential recommendations for improving business ethics instruction. Implications for future research and practice in business ethics are discussed.

KEY WORDS: ethics, business ethics, ethics instruction, ethics training, training effectiveness, meta-analysis

Introduction

Due in part to corporate scandals (Carson, 2003; Ghorpade, 1991), the business community has recognized that the nature of the work environment in the early twenty-first century is drastically impacting ethical behavior. More specifically, the move to a global, service-based economy, coupled with new technology, has made fast-paced changes and high-impact decisions a part of daily work. This shift has brought to the fore the importance of ethics education for both students and professionals in the business realm (LeClair and Ferrell, 2000). Moreover, as corporations move toward developing programs of corporate social responsibility, they place much of their focus on the ethical behavior of employees. With this increasing focus on ethics in the corporate world, ethics education at the undergraduate and graduate levels is also garnering much attention. This growing concern for ethics, both prior to and during employment in business, has been observed in both academic (Baetz and Sharp, 2004; Giacalone and Thompson, 2006; Glenn, 1992; Mintz, 1996; Painter-Morland et al., 2003; Weber, 1990, 2006) and corporate fields (French, 2006; Knouse and Giacalone, 1996; LeClair and Ferrell, 2000; Sanyal, 2000; Weaver et al., 1999).

In line with the greater concern for the delivery of ethics education to future business leaders, Weber (1990) conducted a preliminary review of instructional programs to enhance business ethics for future managers. While this review included only four studies, it resulted in important recommendations for both teaching and evaluating business ethics courses. Similarly, Glenn (1992) built upon Weber's review and reached similar conclusions – namely that the field of research in business ethics required much more rigorous methodology with regard to instrumentation involved in business ethics education. However, similar reviews have not been undertaken in the past decade.

Stemming from these corporate scandals and the calls to action from business ethics scholars, the Association to Advance Collegiate Schools in Business (AACSB) launched a task force in ethics education to prepare a report on the state of ethics education in business schools (Phillips, 2004).

In general, this report requested business schools undergo a ''renaissance'' in ethics education that would better prepare tomorrows' leaders for ethical dilemmas in business (i.e., Tylenol, Valdez Oil Spill, Enron, WorldCom). While current AACSB standards for accreditation require education on ethics issues and ethical reasoning, there are currently no particular stipulations pertaining to how this education is delivered or assessed. Thus, considerable debate still exists among educators as to the method of delivery, content, and assessment criteria regarding business ethics education (Baetz and Sharp, 2004; Weber, 1990, 2007).

While the requested renaissance is an important step to continue the advancement of ethics education in business schools, several key hurdles still remain in determining the future of business ethics education. First, there is a lack of empirical information discussed regarding whether the instruction of ethics within business schools provides any discernible impact on the ethicality of students. Second, if ethics instruction does prove to be effective, there is little evidence to suggest *how* or *why* it is effective. Thus, there is a lack of consistency in how ethics instruction within business schools is currently designed and delivered. Given these concerns, the present study employs a meta-analytic methodology to examine instructional programs in business ethics, seeking to identify whether (1) business ethics instruction is effective and (2) how business ethics instruction might be designed and delivered to increase its effectiveness.

Business ethics instruction

When examining the current state of business ethics instruction, three key issues become immediately apparent. Unfortunately, these issues highlight what appears to be a great deal of turbulence in the ethics education literature. Moreover, they underscore the paucity of empirical studies examining ethics instruction and suggest some of the potential moderators of the effectiveness of business ethics education. These key issues include: (1) what are the appropriate goals for ethics instruction? (2) what discipline should ethics instruction originate from? and (3) what is the desired approach to teaching business ethics?

The first major issue in business ethics instruction appears to be the lack of a true goal set for business ethics instruction. In the past 20 years, there has been an ongoing discussion in the literature pertaining to the goals of instruction in business ethics (Brinkmann and Sims, 2001; Cowton and Cummins, 2003; McDonald and Donleavy, 1995; Oddo, 1997; Sims, 2002). Some scholars have argued that the goal of instruction should be rooted in the awareness of ethical issues (Wynd and Mager, 1989). However, other scholars have noted the importance being in the uncovering of the moral reasoning process of managers (Kavathatzopoulos, 1993; Treviño, 1992). Finally, recent empirical investigations of business ethics have focused on determining exactly how individuals behave and react to ethical situations within the organizational context (Treviño et al., 2006).

The second major issue in ethics instruction emanates from these differential goals, and manifests itself as a debate over who should teach business ethics (Treviño and Weaver, 1994). Traditionally, the responsibility of delivering instruction in ethics has resided squarely in the philosophic realm. However, given the domain-specific nature of *business* ethics, it would seem that at least some contribution on the part of business people is necessary to gain a full understanding of the subject. Schaupp and Lane (1992) highlight this debate, noting that while philosophers may have the requisite knowledge in morality and ethics, business people have the domain-specific knowledge and experience where these principles are to be applied. Similar points have been raised by McDonald and Donleavy (1995) who noted that all business professors should be involved in teaching ethics. On the other hand, Castro (1995) analyzed publications in the *Journal of Business Ethics* and concluded there is considerable importance in the premise that both philosophers and business people collaborate in order to advance research, practice, and teaching in the field of business ethics. These differences of opinion, regarding both the goals of business ethics instruction and which field should provide the majority of the instruction, ultimately give rise to the problem of which major theoretical approach to utilize in guiding instruction in business ethics.

The third major issue in ethics instruction centers around the general approach to instruction. For

example, Mintz (1996) proposed a sample ethics education curriculum based on Aristotelian virtue. Other scholars, such as Painter-Morland et al. (2003) and Weber (2006), proposed tracks based upon Kohlberg's (1969) cognitive moral development (CMD) theory. Yet other programs, such as those proposed by Sanyal (2000), offer no specific grounding for instruction in business ethics. While each of these programs may offer substantively important instructional programs for students of business ethics, this lack of consensus in instructional material poses challenges for examining the effectiveness of business ethics instruction. This challenge is certainly echoed by Baetz and Sharp (2004). Their examination of 25 typical textbooks utilized across fields of business administration (i.e., management and organizational behavior, information systems, finance, marketing, and strategy) showed a consistent lack of coverage of ethical theories as well as a myriad of different conceptual approaches to ethics.

Although the issues with respect to the appropriate directions for business ethics education as a discipline are somewhat disconcerting, at the same time, these differences among instructional approaches provide insight into the variables that might be examined to understand what makes for more, or less, effective ethics instruction. For example, how does ethics instruction effectiveness vary as a function of instructional approach, pedagogical method, and criterion of interest? Hence, in the following section, we outline the potential key moderators of instructional effectiveness.

Potential moderators of instructional effectiveness

Based on the aforementioned issues, as well as the general recommendations offered by experts in instructional design and evaluation (cf. Goldstein and Ford, 2002), seven categories of particular importance to the effectiveness of business ethics instruction were selected for analysis in the present study. These factors, which are held to influence the effectiveness of ethics instruction, include: (1) criterion type, (2) study design, (3) characteristics of participants, (4) quality of instruction, (5) instructional content, (6) general instructional program characteristics, and (7) characteristics of instructional methods.

Criterion type

The issue of criterion type flows directly from the three key issues described above. In developing instructional efforts, the selection of the criterion of interest should reflect both a concern for learning the content of the instructional program and how this learning may best be manifested. For example, if the goal of an ethics instruction program is to increase the awareness of ethical issues, then ethical awareness is the most appropriate criterion. Goals may relate to preparing business students to make better decisions (ethical decision-making), assessing or increasing their reasoning ability (moral reasoning), altering their view of ethical issues or problems (ethical perceptions), increasing their propensity for ethical behavior, or making them more cognizant of ethical issues (ethical awareness). If the goals and content of instruction are not appropriately matched with the outcome or criterion measure utilized for evaluation, then any gains resulting from instruction will likely go undetected. For example, instructional programs designed to raise awareness of ethical issues may not impact the ethical behavior of trainees. Most importantly, an examination of effectiveness across criteria will allow us to examine where our current instructional methods may have the greatest impact on increasing the ethics of business students.

Study design

The design of the study may have an important impact on the effects of instruction (Goldstein and Ford, 2002). For example, studies with a true experimental design should yield greater results than those with a quasi-experimental or non-experimental design. Moreover, the type of design holds implications for the internal validity of the studies and, most importantly, the validity of the conclusions drawn from them. Additional variables that impact the design, such as the instructor's field and the involvement of the publishing author, may help determine the existence of bias or demand characteristics in the study conducted. Related to this concern, one last design variable considered important to the validity of conclusions made is whether a study is externally funded or not. Studies funded by external agencies may be more likely to find significant effects than those not funded (Conn et al., 2003; Rosenthal, 1979, 1991).

Characteristics of participants

Noe (1986) first highlighted the importance of the attributes and qualities of participants of instructional efforts, and the impact they may have on effectiveness measures. The impact of participant characteristics has been examined further since then (Colquitt et al., 2000; Mathieu et al., 1992). For example, Campbell (1989) notes individual experiences of trainees may alter instructional effectiveness. In addition, Baldwin and Ford (1988) highlight that prior knowledge may impact the readiness of learners. In an ethics-specific study, Borkowski and Ugras (1998) investigated the importance of both gender and age in ethical decision-making and found no substantive differences between groups. However, given that some training efforts include moral reasoning, one might anticipate that both age and gender could lead to differences in training effectiveness. Finally, given the interactive nature of many ethics training efforts, the number of participants in the course may impact effectiveness.

Quality of instruction

Based on previous meta-analytic efforts (e.g., Scott et al., 2004) we also examined the impact of general "quality" variables on instructional effectiveness. The indices utilized were based on expert ratings of the overall quality of the instructional program, the overall quality of the criterion measure, and the overall methodological quality of the study design.

Instructional content

As discussed previously, in business ethics, the general approach to instruction leads directly to varied instructional content (e.g., Sanyal, 2000; Schaupp and Lane, 1992). Thus, the focus on skills trained may be either cognitive (i.e., moral reasoning), social (ethical awareness), or social-cognitive (ethical decision-making processes). Moreover, these skills may be global in nature or tied to specific business domains (i.e., decision-making in management). In addition to the approaches taken, different types of materials may be included. First, ethics instruction may be built around general rules, principles, or standards for ethical conduct. Given a lack of standardization for these "codes," we included general frameworks of ethical rules or principles in the present study. Second, evidence from other domains of instruction has shown that educating individuals on problems, and methods to work through or resolve these problems (i.e., strategies), has been effective (Kligyte et al., 2008; Mumford et al., 2008; Scott et al., 2004). Thus, we sought to examine if and how instructional programs built around typical problems in ethical decision-making and general strategies for working through ethical problems would moderate the effectiveness of ethics instruction.

General instructional program characteristics

In addition to instructional content, general characteristics of the instructional environment may impact the effectiveness of instructional programs. For example, an instructional program that is standardized may show more effectiveness than one developed for a specific, single use purpose. In addition, organizational support and reward structures may impact instructional effectiveness (Baldwin and Ford, 1988; Hung and Wong, 2007); thus, we examined whether the instructional program was supported by the organization. Lastly, the general purpose of the instructional program, for example, for basic research experimentation, certification, or simply education, may impact overall effectiveness.

Characteristics of instructional methods

The final potential set of moderators includes specific aspects of the instructional delivery method. Thus, aspects such as the length of instruction, the pedagogical methods used in instruction (i.e., case-based versus lecture), the amount of practice engaged in, and the quantity of activities provided for participants – all may impact the effectiveness of the instructional effort (Goldstein and Ford, 2002).

Keeping in mind the state of business ethics education, and in particular the need for further delineation of a common framework, the present study sought to examine the effectiveness of business ethics instruction. More specifically, based on prior empirical studies of business ethics instruction, using meta-analytic techniques we sought to identify the overall effect of business ethics instruction on individuals and the potential moderators of effectiveness. These findings, in turn, allow us to provide recommendations for future directions to improve business ethics instruction and evaluation.

Method

Literature search

To identify potential studies for inclusion in the meta-analytic investigation, an extensive literature search was undertaken. First, major review articles pertaining to ethics education or business ethics were identified. Second, we searched journals focusing on ethics, for example, *Journal of Business Ethics* and *Teaching Business Ethics*, to identify additional articles. Following this search, major databases, such as PsycINFO, Business Source Elite, ERIC, and JSTOR, were examined using targeted search terms, for example, "business ethics instruction," "instruction and professional ethics," "business and moral development instruction," "business and instruction evaluation," and "business ethics and instruction effectiveness." In order to address the file drawer problem, we also searched Dissertation Abstracts International, a database of unpublished dissertations. The final step in our identification of articles was to examine relevant articles appearing in the reference sections of those articles already obtained. This initial article search resulted in approximately 200 potential articles.

Inclusion criteria

In order to determine which studies would be included in the meta-analysis, several criteria were used. First, we required that each article include an empirical investigation of the effectiveness of some type of business ethics education effort. Business ethics education was defined as including single courses in ethics, multiple courses in a sequence covering business ethics, or an entire curriculum, spread over time, that addressed business ethics. Second, the article must have included, at a minimal level, descriptions of both the general instructional approach and an ethics-related outcome measure. Third, and most importantly, the article had to report appropriate descriptive (e.g., *M*, *SD*) and/or inferential (e.g., *F*, *t*, χ^2) statistics in order to calculate the *d* statistic. In order to calculate *d* statistics, we utilized the effect size formulas recommended by Arthur et al. (2001).

Before calculating effect sizes, the independence (or non-independence) of data points was considered. Here, we first determined if the effect size computed was distinct (independent) of other effect sizes produced from the same dataset. Thus, if an article produced an effect for ethical behavior and ethical awareness, they were considered independent. Second, we determined if the effect sizes from an article represented one construct or multiple constructs. For example, if an article reported multiple effects for ethical behaviors (i.e., two different situational judgment tests representing ethical behavior), these effects were combined to avoid problems caused by data dependency.

In addition to determining the dependency of the data, we corrected, where possible, each effect size for measurement error. For example, where the Defining Issues Test was used, we used a reliability coefficient of 0.76 (Rest, 1979) in order to correct the computed effect size. The formula used, as suggested by Arthur et al. (2001) and Hunter and Schmidt (2004), involved dividing the effect size by the square root of the criterion reliability.

Following the application of all inclusion criteria, and the calculation of the appropriate effect size (*d*) statistic, we completed the search with 38 independent effect size data points (*k*) drawn from 25 empirical studies, yielding a total *N* size of 6,791 individuals.

Coding description

For the present study, three industrial and organizational psychologists, familiar with both the ethics literature and the business ethics literature, coded the articles for this meta-analysis. Each coder received approximately 20 hours of instruction in the coding process and the variable set to be coded. For all variables, coders were instructed to only provide a rating if the material was explicitly discussed in the article or could be reasonably inferred to have been covered in the article based on information provided. Otherwise, coders were instructed to provide a missing data code. The coders then were provided with a set of 15 articles from a related literature area, and asked to make initial ratings. Following a check of the inter-rater agreement on these test articles, coders proceeded to the business ethics articles.

Moderators

Criterion type

As mentioned in the introduction, a variety of criteria have been utilized to evaluate the effectiveness of business ethics instructional programs. In the present study, we considered the following criteria categories as distinct from one another, and subsequently coded for them: (1) moral reasoning, (2) perceptions of others ethical behavior, (3) perceptions of own ethical behavior, (4) judgments on the ethicality of actions (i.e., ethical judgment), (5) selection of predicted ethical actions (i.e., ethical behaviors), and (6) awareness of ethical issues (i.e., ethical awareness). In addition, we identified three criterion measures used more frequently than others, (1) Harris (1989, 1991), (2) Defining Issues Test (Rest, 1979), and (3) Real Estate Ethics Survey (RES; Izzo, 1997). Lastly, we also assessed whether articles reported the reliability of the criterion measure.

Study design

The introduction noted the rationale behind examining study and design features. Specifically, we identified studies that included (1) a single group pre-test post-test design, (2) a pre-test post-test with control group design, (3) a post-test only design, and (4) other designs (e.g., longitudinal). In addition to the design types, we identified what field the author was in, coding for (1) management, (2) finance/accounting, and (3) marketing. Also, we noted whether the author (1) conducted or (2) did not conduct the instructional effort. Finally, we coded whether the study was (1) funded or (2) unfunded.

Characteristics of participants

Coders were first asked to determine whether the audience was (1) student, (2) professional, or (3) mixed. Second, coders also determined whether the job held by the sample was either (1) student or (2) professional. Third, the sample was coded for percent having prior instruction in ethics, coded as (1) none, (2) 1–20%, (3) 21–40%, (4) 41–60%, (5) 61–80%, and (6) 81–100%. In addition, coders classified the sample in terms of size (large versus small), gender majority (male, female, mixed), age majority (35 and over, under 35, mixed), and whether or not participants had incentive to complete instruction (e.g., course credit required to graduate).

Quality of instruction

The quality of the instructional program was assessed by three trained coders, all industrial and organizational psychologists. They rated, on a 5-point Likert scale, the quality of the instructional program overall, the quality of the criterion used to evaluate instructional effectiveness, and the quality of the design implemented to test the effectiveness of the instructional program.

Instructional content

The approaches to instructional content were coded in terms of skills trained (global skills versus job specific), overarching skills instruction (strategies for dealing with ethical issues versus strategies and behaviors for dealing with ethical issues), and the general approach to instruction (cognitive versus social interactional). More micro-level aspects of content were also coded. Our search of the literature uncovered a variety of particular ethics domains, rules, and guidelines or standards. For the present effort, we utilized relevant domains of ethical practices in both business and research. This search yielded 22 domains of ethics (Academy of Management, 2008) and 27 ethical standards for business. We also included information from previous reviews of materials in ethics instruction (Mumford et al., 2006), including 14 typical problems in ethical decision-making and seven strategies for dealing with ethical issues.

General instructional program characteristics

These more general characteristics included whether the program was standardized (yes/no), the setting of the instruction (academic versus workshop/professional seminar), whether the organization advocated the instruction (yes/no), whether the instruction was mandatory (yes/no), the primary purpose of the instruction program (educational, developmental, compliance), whether a secondary purpose of the study was stated to address instruction effectiveness experimentally (yes/no), and whether the course was integrated into the curriculum or a stand-alone course.

Characteristics of instructional methods

This coding dimension included determining the length of instruction (<1 month, 1–4 months, and 5 months or greater), the primary delivery method

utilized (traditional classroom or case-based), the type of learning method employed (variable or constant), the type of skill practice utilized (massed or distributed), and the amount of learning activities used (≤3, or 4 or more activities).

Coder accuracy

In order to ensure the accuracy of the data, consensus was reached by the group of three trained coders on every variable assessed in the coding scheme. Thus, each data point entered into the moderator analysis reflected, in essence, complete agreement between coders. However, to demonstrate the accuracy of coders prior to consensus, agreement analyses were conducted on the coding dimensions. For the majority of dimensions, where binary decisions were made, percent agreement was utilized to assess reliability. Percent agreement is one of the most frequently utilized methods of inter-rater reliability assessment in meta-analysis (Arthur et al., 2001; Orwin, 1994). Overall, the average agreement was high (85%), with the lowest dimension being the inclusion of problems (70%) and the highest being the purpose of instructional effort (97%). The inter-rater reliability of the quality dimension was assessed using ICC, and was fairly high for quality of instructional program (ICC = 0.88), quality of criterion (ICC = 0.79), and quality of design (ICC = 0.95).

Analysis plan

To examine the moderators of instructional effectiveness, we employed the 75% rule-of-thumb offered by Hunter and Schmidt (2004). Thus, if the overall meta-analysis resulted in <75% of the variance being accounted for by sampling error, moderators were investigated. For the moderator analysis, researchers (Arthur et al., 2001; Hunter and Schmidt, 2004) suggest that the examination of moderators should be limited to situations where large samples of studies are available (i.e., $k \geq 10$). However, we made the decision, in part based on the already limited k, that moderators would be examined if there were at least two cases available. This decision mirrors Arthur et al.'s (2001) methodology. However, we also acknowledge that any interpretation made from these particular analyses should be made with caution.

Results

The results of the overall meta-analysis, as well as those pertaining to the individual criterion measures, are reported in Table I. Globally speaking, the use of Cohen's (1969) classification of effect size magnitude was applied here, where $d = 0.20$ was considered small, $d = 0.50$ was medium-sized, $d = 0.80$ was considered a large effect.

As can be seen in Table I, the overall effectiveness of business ethics instruction was minimal, with Cohen's $d = 0.29$ ($SD = 0.42$). However, the percent of variance accounted for by sampling error was also minimal (12%), and thus the presence of moderators was investigated. Table I also contains results relating to individual criterion, where moral reasoning ($d = 0.76$) was most effective, followed by perceptions of others, perceptions of self, ethical judgment, and ethical awareness – all of which produced small effects. The least effective criterion, in this case, was ethical behaviors ($d = -0.86$); however, this effect was computed from merely two data points ($k = 2$). Examining particularly popular dependent measures, the DIT produced medium-sized effects ($d = 0.63$). Not surprisingly, cases where the reliability of dependent measures were reported produced higher effects ($d = 0.40$, $SD = 0.30$) than those neglecting to report reliability information ($d = 0.19$, $SD = 0.48$).

Table II presents the results with respect to study and design characteristics. As expected, studies using a pre-test post-test with control group design obtained the largest effects ($d = 0.55$, $SD = 0.48$) whereas other designs, which included longitudinal designs, produced the smallest gains ($d = 0.03$, $SD = 0.40$). Also of note are the findings by the field of the investigator, where the largest effects ($d = 0.64$) were produced by those in finance and accounting. The only other groups with more than two studies were management and marketing investigators, both of which had smaller effects, by about 0.40, than finance and accounting investigators. Interestingly, there were not large differences observed between studies where the author did or did not conduct the instruction – although effects

TABLE I

Overall meta-analysis and individual criterion

	k	*N*	Sample weighted *M d*	*SD*	Variance due to sampling error (%)	95% CI			χ^2	N_{fs}
Business ethics instruction effectiveness										
Overall meta-analysis	38	6,791	0.29	0.42	12	−0.53	–	1.11	328.90	17
Criterion type										
Moral reasoning	10	1,056	0.76	0.51	14	−0.23	–	1.75	72.01	28
Perceptions of others	5	985	0.37	0.18	40	0.02	–	0.71	12.37	4
Perceptions of self	8	1,247	0.17	0.27	26	−0.37	–	0.71	31.03	0
Ethical judgment	9	2,503	0.24	0.29	14	−0.34	–	0.82	62.26	2
Ethical behaviors	2	251	−0.86	0.00	100	−0.86		−0.86	0.00	0
Ethical awareness	2	202	0.24	0.00	100	0.24	–	0.24	0.41	0
Specific dependent measures										
Harris (1989, 1991)	2	517	0.29	0.00	100	0.29	–	0.29	0.96	1
Defining Issues Test	7	825	0.63	0.31	27	0.02	–	1.24	25.70	15
Real Estate Ethics Survey[a]	2	167	1.54	0.64	13	0.28	–	2.80	14.90	13
Reliability reported?										
No[a]	18	3,451	0.19	0.48	8	−0.76	–	1.14	217.59	0
Yes	20	3,340	0.40	0.30	21	−0.19	–	0.99	93.85	20

Note. [a]Mean ES not corrected for reliability; *k* = number of effect sizes; *N* = total sample; SW *M d* = sample weighted mean effect size *d* corrected for measurement error; *SD* = standard deviation of mean effect size *d*; CI = confidence interval; χ^2 = chi-squared value; N_{fs} = Orwin's (1983) Fail safe *N* (number of effects to reduce *M d* below 0.20).

TABLE II

Study/design characteristics

	k	*N*	Sample weighted *M d*	*SD*	Variance due to sampling error (%)	95% CI			χ^2	N_{fs}
Design type										
Pre-post	11	1,582	0.42	0.25	31	−0.08	–	0.92	35.67	12
Pre-post w/control	8	1,650	0.55	0.48	8	−0.39	–	1.49	99.15	14
Post only	7	923	0.23	0.00	100	0.23	–	0.23	3.04	1
Other	10	2,327	0.03	0.40	10	−0.75	–	0.82	102.20	0
Investigator field										
Management	3	510	0.22	0.00	100	0.22	–	0.22	0.27	0
Finance/accounting	3	384	0.64	0.15	61	0.35	–	0.92	4.91	6
Marketing	12	2,209	0.18	0.66	5	−1.11	–	1.47	247.68	0
Author conducted instruction?										
No	13	1,982	0.35	0.72	5	−1.07	–	1.77	265.16	10
Yes	5	832	0.45	0.16	51	0.15	–	0.76	9.88	6
Was study funded?										
No	28	5,327	0.23	0.35	15	−0.45	–	0.91	184.15	4
Yes	4	460	1.07	0.66	8	−0.22	–	2.37	47.20	17

Note. [a]Mean ES not corrected for reliability; *k* = number of effect sizes; *N* = total sample; SW *M d* = sample weighted mean effect size *d* corrected for measurement error; *SD* = standard deviation of mean effect size *d*; CI = confidence interval; χ^2 = chi-squared value; N_{fs} = Orwin's (1983) Fail safe *N* (number of effects to reduce *M d* below 0.20).

were slightly higher when the author conducted instruction. Along similar lines, funded studies (d = 1.07, SD = 0.66) had considerably larger effects than unfunded studies (d = 0.23, SD = 0.35). This finding is interesting, given that it is assumed that bias usually exists between published and unpublished studies (Hunter and Schmidt, 2004), rather than funded versus unfunded. Perhaps future research might answer this question.

As noted in the introduction, the characteristics of participants may play a role in determining instruction effectiveness (Noe, 1986). Accordingly, Table III presents the moderating effects of participant characteristics. Regarding participant characteristics, marked differences surfaced between the effects of mixed (i.e., student and professional) audiences (d = 0.92) versus student audiences (d = 0.28). Although not as severe, this difference was replicated where the primary job of the audience was classified as students (d = 0.26) or professionals (d = 0.39). Thus, it appears that business ethics instruction shows more consistent effects for older populations that are also working in the "real world." This statement is corroborated by the finding showing that samples including a 35 and over age majority (d = 1.07) and mixed age (d = 0.41) individuals produced larger effects than samples consisting of under age 35 majority (d = 0.27). This is consistent with findings from Borkowski and Ugras (1998), and also those of Ruegger and King (1992), who found that older students were more ethical. Moreover, it is

TABLE III

Characteristics of participants

	k	N	Sample weighted M d	SD	Variance due to sampling error (%)	95% CI			χ^2	N_{fs}
Audience										
Student	25	5,297	0.28	0.19	34	−0.10	–	0.66	72.95	10
Professional	3	145	0.77	0.48	29	−0.17	–	1.71	10.40	9
Mixed	5	555	0.92	0.68	8	−0.40	–	2.25	61.20	18
Participant job										
Students	24	5,085	0.26	0.18	36	−0.10	–	0.62	65.86	7
Professionals	13	1,414	0.39	0.84	5	−1.26	–	2.04	254.97	12
Prior instruction										
21–40%	10	2,016	0.30	0.21	33	−0.10	–	0.70	30.74	5
61–80%	3	474	0.14	0.00	100	0.14	–	0.14	0.26	0
81–100%[a]	2	172	0.63	0.27	41	0.11	–	1.16	4.87	4
Sample size										
Sample < 100	11	720	0.14	0.66	13	−1.14	–	1.43	85.79	0
Sample ≥ 100	27	6,071	0.31	0.38	11	−0.43	–	1.05	237.77	15
Sample gender										
70% Males	6	826	0.45	0.27	29	−0.08	–	0.98	20.47	8
Mixed gender	23	3,647	0.40	0.39	15	−0.35	–	1.16	154.64	23
Sample age										
70% ≥ 35	5	546	1.07	0.56	12	−0.04	–	2.17	42.14	22
70% < 35	15	2,436	0.27	0.08	82	0.13	–	0.42	18.36	5
Mixed ages	4	513	0.41	0.00	100	0.41	–	0.41	3.03	4
Participants had incentive										
No	2	270	1.63	0.15	63	1.32	–	1.92	3.18	14
Yes	29	5,489	0.28	0.19	37	−0.09	–	0.66	77.56	12

Note. [a]Mean ES not corrected for reliability; k = number of effect sizes; N = total sample; SW M d = sample weighted mean effect size d corrected for measurement error; SD = standard deviation of mean effect size d; CI = confidence interval; χ^2 = chi-squared value; N_{fs} = Orwin's (1983) Fail safe N (number of effects to reduce M d below 0.20).

consistent with beliefs that an individual's moral compass is refined over time (e.g., Kohlberg, 1969).

Regarding gender, samples consisting of a male gender majority ($d = 0.45$) did not greatly differ from mixed gender samples ($d = 0.40$). Unfortunately, not enough female majority samples were found; thus, we are unable to confer with findings from Borkowski and Ugras (1998) that females display more ethical behavior and attitudes. In terms of overall sample size, however, instructional efforts with samples ≥ 100 people ($d = 0.31$) yielded larger effect sizes than did instructional efforts with samples < 100 people ($d = 0.14$). This finding is interesting, given that research in higher education has found that individuals in smaller classes rate higher in terms of their reaction to the course (Feldman, 1984). Although, regarding learning, Kennedy and Siegfried (1997) found that the achievement of students in introductory economics courses was not impacted by class size. A final result from participant characteristics, regarding incentive, showed participants without incentive to complete instruction ($d = 1.63$) considerably outperformed those that had incentive ($d = 0.28$). Of note, however, is that $k = 2$ for those without incentive. However, taken at face value, this finding suggests that participants who attended business ethics instruction for more intrinsically motivated reasons were more likely to show gains in outcome variables.

Table IV displays the results from the subjective ratings of quality. Not surprisingly, both quality of the instructional program and quality of the design, in general, had larger effects sizes tethered to higher values of quality. However, the range of these effects (from $d = -0.10$ to $d = 0.71$) was much higher for quality of the design. Quality of the criterion did not provide nearly as much discrimination, with the effect sizes stemming from below average, average, and above average criteria ranging only from $d = 0.21$ to 0.34.

Table V presents the results pertaining to instructional content. It is of note here that no real differences were revealed between instructing global skills regarding ethical issues or job-specific skills. Notably, however, when job-specific skills were the focus of instruction, the percent of variance accounted for was considerably higher, and the 95% confidence interval was also much narrower ($L_{95\%} = 0.25$ to $U_{95\%} = 0.75$). This may indicate that training skills in ethics or ethical behavior that are

TABLE IV

Quality of instruction

	k	N	Sample weighted $M\ d$	SD	Variance due to sampling error (%)	95% CI	χ^2	N_{fs}
Quality rating of instructional program								
Below average[a]	4	1,389	0.12	0.08	63	−0.05 – 0.28	6.37	0
Average	4	362	0.45	0.23	48	0.01 – 0.89	8.36	5
Above average	10	1,751	0.61	0.52	8	−0.41 – 1.63	121.51	21
Good	3	276	0.50	0.00	100	0.50 – 0.50	1.85	5
Quality rating of criterion								
Below average	8	2,408	0.21	0.15	37	−0.09 – 0.50	21.77	0
Average	17	2,552	0.34	0.21	38	−0.07 – 0.76	44.69	12
Above average	12	1,539	0.34	0.80	5	−1.24 – 1.91	253.54	8
Quality rating of design								
Poor[a]	6	1,602	−0.10	0.41	8	−0.90 – 0.70	71.96	0
Below average	10	1,761	0.25	0.06	88	0.14 – 0.36	11.39	3
Average	11	1,829	0.38	0.23	31	−0.08 – 0.83	35.10	10
Above average	10	1,307	0.71	0.51	11	−0.29 – 1.70	88.20	26

Note. [a]Mean ES not corrected for reliability; k = number of effect sizes; N = total sample; SW $M\ d$ = sample weighted mean effect size d corrected for measurement error; SD = standard deviation of mean effect size d; CI = confidence interval; χ^2 = chi-squared value; N_{fs} = Orwin's (1983) Fail safe N (number of effects to reduce $M\ d$ below 0.20).

TABLE V

Instructional content

	k	*N*	Sample weighted *M d*	*SD*	Variance due to sampling error (%)	95% CI	χ^2	N_{fs}
Skills trained								
Global	12	2,035	0.55	0.49	9	−0.42 – 1.51	129.94	21
Specific job domain	8	784	0.50	0.13	73	0.25 – 0.75	10.95	12
Overarching skills								
Strategies	6	605	0.57	0.33	28	−0.07 – 1.21	21.37	11
Strategies and behaviors	18	2,777	0.47	0.41	14	−0.32 – 1.27	128.02	24
General approach								
Cognitive	22	3,047	0.51	0.42	15	−0.31 – 1.32	147.76	34
Social interactional[a]	2	335	0.33	0.00	100	0.33 – 0.33	0.04	1
AoM domain coverage								
No	5	794	−0.14	0.61	6	−1.34 – 1.06	78.54	0
Yes	22	3,741	0.39	0.41	13	−0.42 – 1.20	175.84	21
Standard coverage								
No	5	794	−0.14	0.61	6	−1.34 – 1.06	78.54	0
Yes	15	1,955	0.35	0.17	52	0.02 – 0.69	28.83	11
Problems in EDM coverage								
No	5	794	−0.14	0.61	6	−1.34 – 1.06	78.54	0
Yes	15	2,188	0.57	0.47	12	−0.35 – 1.49	129.81	28
Strategies for EDM coverage								
No	5	794	−0.14	0.61	6	−1.34 – 1.06	78.54	0
Yes	19	2,594	0.55	0.44	14	−0.31 – 1.41	137.85	33

Note. [a]Mean ES not corrected for reliability; *k* = number of effect sizes; *N* = total sample; SW *M d* = sample weighted mean effect size *d* corrected for measurement error; *SD* = standard deviation of mean effect size *d*; CI = confidence interval; χ^2 = chi-squared value; N_{fs} = Orwin's (1983) Fail safe *N* (number of effects to reduce *M d* below 0.20).

specific and applicable to an individual's position enhance learning and performance (Goldstein and Ford, 2002) – regardless of other instructional variables.

In the present study, instructional content was also coded as to whether business ethics instructional programs covered traditional ethical domains and standards. For example, domains included societal responsibility, responsibility, and integrity; standards included conflicts of interest, fiduciary responsibility, and reporting ethical violations. The results indicated that the effect of a program covering either domains ($d = 0.39$) or standards ($d = 0.35$) were higher than those studies not covering either one – where in both cases $d = -0.14$. A primary focus on cognitive strategies for reasoning through ethical issues ($d = 0.57$) was only slightly higher than including both cognitive strategies and potential behaviors ($d = 0.47$). This difference was, similarly, manifested when the general approach to instruction was cognitive ($d = 0.51$) versus social-interactional ($d = 0.33$). This finding suggests that, perhaps, attempting to train behaviors or specific responses is not nearly as effective as a simple cognitive reasoning or cognitive strategy approach to instruction. This is likely due to the lack of appropriate instructional methodology (i.e., observational or vicarious learning) for behavioral learning. In addition, ethical situations often require substantial amounts of cognition and problem solving – which suggests that cognitive approaches to training ethical reasoning would be more appropriate. Along these lines, regarding strategy instruction, which involves addressing potential problems encountered when dealing with ethical issues, results indicated that problem coverage ($d = 0.57$) was more beneficial than a lack thereof ($d = -0.14$). In line with the previous pattern of results, the coverage of cognitive

strategies (d = 0.55) resulted in larger gains than not covering them (d = −0.14). These findings are in line with research on problem solving and planning in domains such as creativity, where strategy-based training is effective in enhancing skills (e.g., Osburn and Mumford, 2006; Scott et al., 2004).

Table VI presents the results of general instructional characteristic moderators. The standardization of the program had an impact, where standardized programs, or those that were developed and used over multiple points in time, produced larger effect sizes (d = 0.36) than unstandardized programs (d = −0.02). This is not surprising, as standardized courses are often developed, instituted, evaluated, and refined in a more critical manner, which may contribute to their enhanced effectiveness (Goldstein and Ford, 2002). Similarly, programs that were integrated (d = 0.42) with other established courses produced greater effects than stand-alone courses (d = 0.32), although this difference was not particularly large. Also of note – and similar to the findings regarding incentive to complete instruction – mandatory instruction (d = 0.28) showed smaller effects than non-mandatory instruction (d = 0.57). This finding is consistent with previous studies that show instructional efforts that are mandatory or required result in lower motivation and learning (Hicks and Klimoski, 1987).

Similarly, organizational advocacy (d = 0.52) of instruction revealed higher effects than a lack thereof (d = 0.28), reflecting the importance of organizational support in instructional interventions (Baldwin and Ford, 1988). Related to this finding, instruction conducted in a professional workshop or seminar setting (d = 1.66) produced much larger effects than instruction conducted within an aca-

TABLE VI

General instructional program characteristics

	k	N	Sample weighted M d	SD	Variance due to sampling error (%)	95% CI	χ^2	N_{fs}
Was the program standardized?								
No	8	1,276	−0.02	0.50	9	−1.01 – 0.96	87.77	0
Yes	28	5,011	0.36	0.37	14	−0.38 – 1.09	198.62	22
Setting of instruction								
Academic Setting	28	5,646	0.29	0.19	36	−0.08 – 0.66	77.19	13
Workshop/Seminar	3	287	1.66	0.15	72	1.37 – 1.95	4.14	22
Organization advocates instruction								
No	12	2,220	0.28	0.18	40	−0.07 – 0.64	30.17	5
Yes	15	1,928	0.52	0.46	13	−0.38 – 1.43	112.93	24
Was instruction mandatory?								
No	6	992	0.57	0.64	6	−0.69 – 1.82	102.58	11
Yes	24	4,555	0.28	0.20	35	−0.11 – 0.67	68.15	10
Primary purpose of instruction								
Educational	28	5,646	0.29	0.19	36	−0.08 – 0.66	77.19	13
Developmental	3	287	1.66	0.15	72	1.37 – 1.95	4.14	22
Compliance	2	64	0.12	0.00	100	0.12 – 0.12	0.00	0
Was purpose also experimental?								
No	19	3,745	0.17	0.37	13	−0.55 – 0.89	143.25	0
Yes	18	2,825	0.46	0.44	12	−0.41 – 1.33	150.30	23
Type of course								
Integrated	13	2,002	0.42	0.23	34	−0.04 – 0.87	38.76	14
Standalone	19	3,774	0.32	0.40	11	−0.47 – 1.10	166.79	11

Note. [a]Mean ES not corrected for reliability; k = number of effect sizes; N = total sample; SW M d = sample weighted mean effect size d corrected for measurement error; SD = standard deviation of mean effect size d; CI = confidence interval; χ^2 = chi-squared value; N_{fs} = Orwin's (1983) Fail safe N (number of effects to reduce M d below 0.20).

TABLE VII

Characteristics of instructional methods

	k	*N*	Sample weighted *M d*	*SD*	Variance due to sampling error (%)	95% CI	χ^2	N_{fs}
Length of instruction								
<1 month	5	556	1.04	0.65	9	−0.23 – 2.30	55.03	21
1–4 months[a]	5	548	0.44	0.21	45	0.02 – 0.86	11.03	6
5+ months	11	2,011	0.31	0.20	36	−0.08 – 0.71	30.87	6
Primary delivery method								
Classroom based	13	2,079	0.39	0.24	30	−0.09 – 0.87	43.01	12
Case based-classroom	12	1,800	0.54	0.48	11	−0.41 – 1.48	111.14	20
Learning method								
Constant	6	758	0.99	0.54	11	−0.08 – 2.06	55.10	24
Variable	13	1,966	0.37	0.19	43	0.00 – 0.75	30.30	11
Practice								
Massed	3	287	1.66	0.15	72	1.37 – 1.95	4.14	22
Distributed	9	1,441	0.39	0.24	31	−0.07 – 0.86	28.73	9
Learning activity usage								
0–3	10	1,724	0.23	0.56	7	−0.87 – 1.32	142.40	2
4+	14	1,794	0.55	0.51	11	−0.45 – 1.54	123.98	25

Note. [a]Mean ES not corrected for reliability; *k* = number of effect sizes; *N* = total sample; SW *M d* = sample weighted mean effect size *d* corrected for measurement error; *SD* = standard deviation of mean effect size *d*; CI = Confidence interval; χ^2 = chi-squared value; N_{fs} = Orwin's (1983) Fail safe *N* (number of effects to reduce *M d* below 0.20).

demic setting ($d = 0.29$). Interestingly, these effects corresponded with instruction that was conducted for either developmental ($d = 1.66$) or educational ($d = 0.29$) purposes. Of note is that the effect size for instruction conducted for compliance purposes ($d = 0.12$) was lower than for either of the aforementioned purposes.

The last set of results concerned moderators pertaining to instructional methods. These results are presented in Table VII. Shorter instructional periods ($d = 1.04$) produced larger effects than instructional periods lasting from 1 to 4 months ($d = 0.44$) – or instructional periods lasting 5 months or greater ($d = 0.31$).

Regarding more specific pedagogical issues, case-based instruction ($d = 0.54$) was more effective, on average, than traditional classroom-based instruction ($d = 0.39$). This is not surprising, as case-based instruction provides learners with a knowledge base of experiences they are able to build upon and rely on when they encounter future situations (Kolodner, 1993). In addition, instruction that utilized constant learning methods ($d = 0.99$) revealed higher effectiveness than variable learning methods ($d = 0.37$) of instruction. Although distributed practice ($d = 0.39$) for complex tasks is traditionally more effective than massed practice (Baldwin and Ford, 1988), that was not the case here ($d = 1.66$). However, this could be due to the small number of effects from studies using massed practice, or perhaps the nature of those studies – which were all conducted in workshop or seminar sessions. Lastly, the number of learning activities impacted instruction effectiveness, where using four or more activities ($d = 0.55$) more than doubled the effects of instruction compared to using three or fewer activities ($d = 0.23$). A broad summary of the results and implications of findings may be found in Table VIII.

Discussion

Prior to turning to the specific findings and broader implications stemming from the present study, certain limitations should be noted. First, the present study is limited by the number of studies included in the meta-analysis. Although meta-analysis may be completed on as few as two empirical studies

TABLE VIII
Key findings and implications

Variable group	Summary of findings
Overall	Business ethics instruction has minimal effects on various outcomes
Criteria	Design instructional efforts to capture desired outcomes – current efforts do not appear to translate to gains in awareness, perceptions, decision-making, or behavior
Design of study	Where possible, utilize research design to capture differences across groups
Characteristics of participants	Older professionals, in general, benefit more from current business ethics instructional programs. Revisiting how to reach younger students may be necessary
Instructional content	Focusing on strategies for dealing with ethical problems, with a focus on cognitive strategies, is key. Covering basic rules and principles also seems essential, but not quite as important as covering potential pitfalls and workarounds in decision-making
Program characteristics	Standardized programs are best – potentially workshops and seminars. Organizational support and a developmental focus may also enhance learning outcomes
Characteristics of instructional methods	Shorter instructional periods appear to produce the best results. Case-based learning is most effective, along with a variety of additional learning activities

(Rosenthal, 1995), more obtained effect size estimates (k) would certainly serve the broader purpose of meta-analysis more appropriately – and provide more stable results. In the present study, however, only 25 studies met our inclusion criteria. It is of note that our inclusion criteria were not overly stringent; rather a number of studies initially identified had to be discarded from the meta-analysis because of their failure to report the statistics necessary (e.g., standard deviations) for calculating effect sizes. Thus, it was most often the case that studies were removed solely based on their lack of reported statistics. Moreover, additional studies were excluded given that they did not adequately describe their particular instructional program. While the number of effects included in our study is not large, we computed fail-safe N statistics (Orwin, 1983), which provide the reader with context on the additional number of null effects it would take to reduce a particular effect size to below 0.20.

A second limitation revolves around moderator analyses. More specifically, we were not able to provide moderator data for every effect size included in the analysis due to the lack of descriptive information provided in the articles. Unfortunately, the descriptiveness of the articles, regarding the methods employed, was not sufficiently in depth. Thus, in many cases, the moderator analyses did not include data from each of the studies. Consequently, our conclusions about how these characteristics moderate instructional effectiveness is limited to a smaller sample of studies.

A third limitation relates to the coding dimensions themselves. Specifically, it was not possible to represent each and every perspective on business ethics instruction. Rather, the present effort coded for approaches and content that, at a broad yet meaningful level, represented the instructional programs we were able to evaluate. Thus, our conclusions are limited to this broader level of analysis.

Even bearing these limitations in mind, the present study provides several noteworthy implications for education and evaluation in business ethics. Most centrally, the present study provides evidence that business ethics instruction, as reported in the literature, is at best minimally effective in enhancing ethics among students and business people. The overall effect size ($d = 0.29$) obtained across 38 independent effect sizes is in a range considered just above small (Cohen, 1969). This is not to say, however, that business ethics instruction is a fruitless endeavor. Rather, the results of the moderator analysis in the present study indicate that there are several key considerations – some of which may enhance the effectiveness of business ethics instruction – to take into account prior to designing, delivering, and evaluating business ethics instruction.

With regard to designing instructional interventions in business ethics, instructors must pay special attention to several key variables. First and foremost,

studies of business ethics instruction must carefully specify the criterion of interest, and tie this final criterion to the instructional content. For example, our meta-analysis shows a wide range of effectiveness across criteria. Thus, a focus on the moral reasoning of participants produced medium to large effects; however, a focus on measuring perceptions or awareness of ethics in business resulted in substantially smaller effects of instruction. Moreover, the true goals of ethics instruction, to see participants *use* and *apply* their knowledge of good business ethics for the benefit of both companies and society, is rarely used as a criterion ($k = 2$). Even so, the effects produced by these two independent data points examining ethical behaviors were negative. In fact, the nine studies examining ethical judgment, or ethical decision-making, again produced small effects.

Secondly, instructors must think carefully about course design. That is to say, our available evidence indicates that those courses which are geared toward and delivered to a mixed sample audience (i.e., both professional and students), shorter in length (i.e., span no more than 30 days time in total), and delivered in the mold of a weekend seminar/workshop format are, for the most part, more effective in providing gains on ethics-related criterion. Thus, it appears important that instructional programs in business ethics steer away from the force-feeding of ethics education to purely student populations over long periods of time, as the impact of this effort will, more than likely, not be observed in relation to learning. Rather, it is those individuals who are in the workforce and study for developmental purposes that demonstrate the greatest improvement in ethics. Also included in the consideration of training design are the methods employed to deliver instructional material. Our findings indicate that the instructional approach that is most fruitful for ethics is a case-based approach. Moreover, this approach must be subsidized with the inclusion of multiple activities for students to have the opportunity to be heavily engaged in the learning process as well as facilitate transfer of this learning to the world of work.

The third key variable for instructional designers to consider is the content of the instructional program. Our evaluation of the available business ethics programs indicates application of a wide variety of content areas. However, specific areas of content, when not included within the instructional material, have quite detrimental effects on instructional effectiveness. More specifically, it seems important to include general ethical rules, principles, and guidelines for participants to understand and refer to during instruction. Most importantly, however, the inclusion of strategies within the instructional content reveals a much larger impact on the effects of instruction. Similarly, the focus on a cognitive, rather than social interactional, approach contributes to the effectiveness of the instructional program. Thus, it appears instructional programs designed to foster critical thought processes, geared toward understanding of the problem at hand – in the appropriate context – and then dissecting the thought and behavior process leading to the resolution of the problem lead to the greatest gain in ethics-related outcomes.

Taken together, the criterion, design, and content considerations bring to light the fourth and final major consideration for instructional designers – evaluation. More specifically, it appears particularly critical that studies are designed such that they employ systematic methods of both instruction and measurement. Thus, studies should certainly employ a pre–post design, using a control group whenever possible. However, the recommendation for methodological rigor need not be taken to extremes. For example, the findings regarding design and the quality of design indicate that if instruction designers consider educational effort assessment in the instruction development process, these actual gains in learning have a greater probability of being captured by criterion measures. Thus, some of the key factors to be considered include how individuals will be assigned to groups, at what point evaluations will take place, and whether the content of the instructional intervention is reflected in the evaluation. Overall, instructional designers need to ensure they have carefully plotted out the design and evaluation of their business ethics instruction effort, paying particular attention to the specific aspect of ethics their effort is intended to change and how this change will be reflected and measured in the evaluation process.

Implications

The present study provides several key theoretical and practical implications. First, this meta-analytic effort

suggests that the theoretical basis being utilized to instruct in business ethics may be incomplete. Thus, while studies utilizing CMD as the foundation for instruction may be moderately successful, their primary criterion was level of moral reasoning, which Treviño (1992) notes has little bearing on actual managerial decision-making given the amount of external forces acting upon managers when confronted with real organizational ethical situations. On the other hand, we saw that instructional programs built around the assessment of behavior or decision-based criterion were less successful, indicating either the theories do not completely capture ethical decision-making or that the instructional intervention does not adequately encompass the theory. Perhaps recent theoretical models of ethical decision-making and behavior in organizations, which incorporate aspects of both reasoning theory and general decision-making, such as those views of ethics proposed by Treviño (1986), Sonenshein (2007), and Mumford et al. (2008), provide a more complete framework to serve as a backdrop for the development of ethics instruction.

Practically, this meta-analysis has already suggested a number of important considerations for individuals who are designing and implementing instructional efforts in business ethics. While these suggestions may assist in solving micro-oriented problems in instructional design and evaluation, they do help in developing a unified approach to be taken for instructing individuals in business ethics. Still, we think that the effect sizes yielded by some of the criteria and content variables point to particular directions. Thus, while the use of ethical guidelines and codes of conduct are valuable bases for ethics instruction – and may in fact help to direct ethical decision-making – these codes are often not enough. Rather, our results would suggest that instructors begin to employ a cognitive approach to ethical education – one with a focus, in particular, on the strategies individuals may apply in a given situation to solve ethical problems. That stated, we would also underscore the importance of creating and validating discipline-specific ethical decision-making measures. Such measures would not only allow for a constant metric for evaluating our business ethics educational programs, but also assist in designing the content of instructional efforts, to focus more on discipline- or field-specific issues that are likely to be relevant and salient to the participants of these ethics programs.

Furthermore, for researchers in the field of business ethics, we hope that this meta-analysis will shed light on the issues raised by both Weber (1990) and Glenn (1992) over a decade ago. Specifically, the field of business ethics is still in need of research that describes methodologically rigorous instructional efforts in business ethics, with instructional objectives matched to the appropriate evaluation procedures.

Most importantly, we hope that this effort has, at least, provided an impetus to continue the introspection as to how we can continue to improve upon the field of instruction in business ethics. While reaching the solution may not be immediate, we hope these findings will provide useful direction for both future research and instructional design in the field of business ethics.

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