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Ethical leadership and ethical decision making: A meta-analysis of research related to ethics education

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Abstract

Ethical leadership and ethical decision making in organizations have been the focus of many concerns related to ethics, especially in light of high-profile corporate scandals. The importance of educational preparation for ethical leadership has been highlighted in the general literature and the library and information science literature. This article is based on a meta-analysis of research related to ethics education in business. The meta-analysis considers issues of research design, methodologies used, populations studied and other data analyzed, the nature of the researchers, and the dissemination of the research in the journal literature. It is intended to inform the study of ethics and ethics education in general and in other professional disciplines, such as library and information science. The research results indicate the limited number of research methodologies that have been used in the study of ethics education. Past research has largely focused on undergraduates, particularly in relation to the impact of ethics curricula on their learning/cognitive development and on measures of perceptions and changes in perceptions of ethical issues.
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1. Introduction

Ethical leadership and ethical decision making in organizations are necessary based on the accountability to a range of stakeholder groups. The research indicates that the organizations with the most ethical track records are also the most successful organizations overall. The complexity associated with ethical decision making is based on the competing motivations of

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professionals and managers, levels and types of competition, and individuals' tendency to overestimate their ability to make ethical decisions.

There are myriad examples of high-profile cases of ethical abuses, from many corporate cases to those in higher education, the public sector, sports, and so on. One concern related to the prevalence of such cases is the potential impact on those who are entering the workforce. In business schools, the research related to ethical concerns in organizations, the relationship between ethical performance and overall organizational performance, and the complexity of ethical decision making and ethical leadership have led to an enhanced focus on ethics education in degree programs. However, while there is a documented need for ethics education, the business educators have indicated the need to understand how to incorporate ethical principles into coursework and degree programs. In addition, there is a need to document the extent to which ethics education has an impact on the graduates of such programs and whether it better prepares them to meet the needs of potential employing organizations.

The literature of library and information science (LIS) includes limited discussion of ethical decision making. However, professional values intended to guide decision making are addressed in the literature, if less so in the original research of the profession. The relationship and distinction between ethics and professional values are an important component of the discussion of ethics in professional fields. Codes of ethics reflect the attempts of professional associations and individual organizations to document and communicate principles to guide the work of those in the field. This often occurs in response to documented difficulties and the complexities associated with competing principles.

This article addresses the academic preparation of students for positions of responsibility as professionals and managers. It considers the ways in which educational preparation for ethical decision making and leadership has been studied, using an analysis of prior published research. An area that has emphasized issues of ethics and ethics education, particularly of late, is business. Business is also an academic discipline (or set of related disciplines) that prepares graduates for professional work, similar to the discipline of LIS. Thus, education in business will serve as the basis for this research and inform the research on ethics in LIS, an area about which there has been far less published research related to ethical preparation. Specifically, the study addresses the following three research questions:

1. What methodological approaches have been used to study ethics education and its impact?
2. What factors have served as the bases for measuring the impact of ethics education?
3. What segments of the academic and professional populations have been studied, with regard to the impact of ethics education?

2. Literature review

2.1. Crisis in ethical leadership

There is evidence of a crisis or potential crisis in ethical leadership and decision making in nearly every sector of professional life, both organizationally and societally. Many of the most

widely publicized cases of ethical abuses have involved large corporations and the "misuse of company resources, misrepresentation of financial performance, and aggressive and illegal marketing practices" (Winston, 2005, p. 238). Such issues and their likely causes are well documented in the general and business literature. The issue of misrepresentation of financial performance, for example, has been summarized as

> the financial statement fraud problem that continues to plague the United States, as embodied by Enron, WorldCom, Global Crossing, and too many others. In addition to the impact of stock-based compensation, many have viewed the causes of these frauds as overly powerful CEOs, weak boards and audit committees, ineffective or compliant auditors, weak internal controls and weak management of risks, and soft penalties for accounting fraud perpetrators. (Beasley, 2004, p. 11)

There are also concerns regarding the role of senior management in organizations, especially the potential lack of oversight of organizational performance and lack of distribution of authority. This is particularly true in the vast majority of large corporations in which the chief executive officer (CEO) is also chair of the board (Iwata, 2004). In addition, "even if the CEO and the chairman positions are split, most corporate boards still are run by chairmen and directors with business, social or family ties to management, according to corporate governance experts" (Iwata, 2004, p. 4B). The ethical abuses, which involve not only senior managers but employees at all levels, include the hundreds of billions of dollars that employees "steal … from their companies each year" (Winik, 2004, p. 20). Executive compensation does not appear to be tied to organizational performance. However, executive compensation, the use of organizational resources to pay fines and compensation in the loss of civil cases, and the losses related to employee misappropriation lead to concerns related to passing on higher costs to consumers.

Major nonprofit organizations, such as the Red Cross and the United Way, have been the subject of investigations for financial irregularities (Grassley Calls, 2002). Ethical abuses by administrators and students in K-12 and higher education include high-profile recruitment scandals (Jacobson, 2004), often with vague and incomplete policy statements and lack of oversight by responsible parties. In addition, the results of self-report research indicate that three-quarters of high school students admit to having cheated (Winik, 2004, p. 20). Similar self-report research indicates that "nearly 70 percent of students admit to cheating at some point during college," according to Donald McCabe of the Center for Academic Integrity (Barr, 2000, paragraph 5).

High ideals have always been associated with the Olympic Games. The Olympics are often viewed as an example of international cooperation and the best of high-level competition in a context that is consciously removed from the commercialism and direct financial incentives of other sports competitions or other aspects of life. However, as Duke University cultural anthropologist Starn (2004) indicated, "The Olympics have never been as pure as our imaginations would have them. The Games have always been closely tied to the anxieties and interests of their times" (p. 10.1). Ethical questions have been raised with regard to almost every aspect of the planning and execution of Olympic competition. Issues have included cases of alleged and admitted drug use by high-profile athletes in order to enhance performance (Feinstein, 2001; Hohler, 2006), the associated decisions by corporations to retain these athletes as spokespersons and in advertisements (Vranica & Kang, 2004), bribery scandals associated with securing Olympic venues (Hemphill, 2003), and compromised scoring of

Olympic events (Michaelis, 2004). Intense competition and potential financial rewards are typically noted as incentives. According to Starn, for athletes with financial rewards such as "millions in endorsement contracts and appearance fees … it's no wonder athletes might be tempted to turn to 'the clear' or some other designer steroid to jump a little higher, run a little faster or get a little stronger" (p. 10.1).

In addition to individual cases of imposing "criminal fines and civil penalties" (Silverman & Schwab, 2004, p. 8), there has been a range of organizational, regulatory, and professional responses to address and deter ethical abuses. Responses have included codes of ethics developed and communicated by professional associations, increased oversight and enhanced reporting requirements implemented by the Securities and Exchange Commission, and legislation such as the Sarbanes-Oxley Act. This act was intended to enhance the quality of financial reporting and to foster greater accountability on the part of company leaders: "Under the requirements of the Sarbanes-Oxley Act, executives must personally certify a public company's financial results (Section 302) and soon will have to issue a report on the effectiveness of the company's internal controls over financial reporting (Section 404)" (Beasley, 2004, p. 11). In addition, the law encourages the separation of powers to ensure auditor accountability. Thus, the law "contains a number of provisions related to auditor independence (Section 201), audit committee composition (Section 301), and criminal penalties for accounting fraud and related offenses (Title VIII and Title IX)" (Beasley, 2004, p. 11). One primary concern in ensuring the success of changes in financial reporting requirements is the need to "aggressively address ethical attitudes and the potential for rationalizing fraud" (Beasley, 2004, p. 11).

While there has been limited movement towards greater accountability associated with the separation of powers of the CEO and chair of corporate board positions (Iwata, 2004), there has been increased emphasis on using organizational and professional codes of ethics to guide decision making (Hatcher, 2003). In the nonprofit sector, there have been "several efforts by nonprofit groups to raise accountability in the charitable world, which has been rocked by recent scandals, so that legislators won't impose it from outside" (Salmon, 2004, p. C1). These include developing strict certification processes for nonprofit organizations:

> [certification processes] that go beyond legal requirements in monitoring their operations and that regularly assess their services, train and evaluate volunteers and limit solicitations of their donors.... [Congress has considered] legislation to tighten nonprofit oversight and require charities to re-apply for nonprofit status every five years. (Salmon, 2004, p. C1)

2.2. Motivations for unethical behavior

Despite the responses to (and potential deterrents associated with) unethical behavior, the research indicates that a number of factors may serve as motivators for unethical behavior and complicate the process of making ethical decisions. These factors include competition, the nature of success and successful performance, and the lack of preparation for ethical decision making. Ethical choices that may result in less immediate success may be difficult to make when faced with competing individual and organizational priorities, such as being successful in relation to competitors and the overall market and potential financial rewards. There is concern that the cases of documented and alleged ethical abuses by high-profile figures may

have a detrimental effect on impressionable people. Research related to what has been termed the "cheating effect" relates to the supposition that others are cheating, causing one to engage in unethical behavior in order to be competitive (Callahan, 2004). Thus, defining ethical behavior is more challenging in the context of the nature and perception of being competitive.

In addition to motivations associated with competition and successful performance, the research related to ethical decision making also indicates that many people – managers, in particular – overestimate their ability to make ethical decisions:

> More than two decades of research confirms that, in reality, most of us fall woefully short of our inflated self-perception… we're deluded by what Yale psychologist David Armor calls the illusion of objectivity, the notion that we're free of the very biases we're so quick to recognize in others. What's more, these unconscious, or implicit, biases can be contrary to our consciously held, explicit beliefs. (Banaji, Bazerman, & Chugh, 2003, p. 56.)

The impact of these biases on ethical decision making is profound; "these flawed judgments are ethically problematic and undermine managers' fundamental work-to recruit and retain superior talent, boost the performance of individuals and teams, collaborate effectively with partners" (Banaji et al., 2003, p. 56).

Callahan (2004), author of *The Cheating Culture*, refers to the need for an enhanced focus on ethics education in academic programs to better prepare future graduates for the ethical challenges they will face. Undergraduate and graduate degree programs are changing to reflect the increased emphasis on preparation for ethical leadership and ethical decision making. This article represents an analysis of the research conducted over the last 10 years in the study of education for ethical decision making and leadership in business.

2.3. Ethics in library and information science

As indicated, the literature of LIS includes limited discussion of ethical decision making. Professional values intended to guide decision making in the profession are addressed in the literature and less often in the original research of the profession. To a large extent, the discussion of ethics in LIS has related to the importance of codes of ethics in defining and articulating professional values in support of the work of professionals and managers. Koehler (2003) has distinguished between ethics and professional values: "Ethics are generally perceived to derive from and serve as the application of moral principles. Morals represent a set of mores, customs and traditions that may have been derived from social practice or from religious guidance" (p. 99). In contrast, professional values may be supported by ethical principles, are intended to guide the decision making of professionals, and are often presented in codes of ethics of professional and scholarly associations. In library and information services, articulated professional values include intellectual freedom, privacy and confidentiality, valuing intellectual property, and equity of access (Gorman, 2000; Koehler, Hurych, Dole, & Wall, 2000; Symons & Stoffle, 1998). A study of professional codes of ethics in LIS from countries around the world revealed frequent representation of principles, including:

> professional development (89%), integrity (89%), confidentiality and privacy (85%), free and equal access to information (82%), conflict of interest and personal gain (71%), responsibilities toward the profession (67%), responsibilities toward colleagues (64%), censorship (64%), collection development (53%), competency (50%), high level of service (50%), and responsibilities toward the user (50%). (Shachaf, 2005, p. 526)

There is some disagreement regarding the relative importance of each of the professional values, particularly in relation to the professional distinctions within the field (Koehler, 2003). In addition, a recent study of the "Ethical Perspectives of Library and Information Science Graduate Students in the United States" (Jefferson & Contreras, 2005) addressed the complexity of the principles embodied in professional codes of ethics when applied in real-word decision making. Considering issues such as privacy, intellectual property, and plagiarism, the results "illustrate a conflict between the ideals presented in a code of ethics and the reality of job performance" (p. 65). A study of principles represented in the American Library Association (ALA) Code of Ethics and that of a state library association indicated a similar complexity, particularly in relation to concerns about censorship and access to some resources for young people. The results indicated that "the least amount of support was given to questions relating to censorship and the obligation of librarians to 'uphold the principles of intellectual freedom and resist all efforts to censor library resources'" (Hoffman, 2005, p. 98). In light of the importance of principles embodied in codes of ethics in the work of information professionals and the inherent complexity in applying such principles, researchers such as Koehler (2003) have addressed the importance of ensuring that professional values are an integral part of library and information science education.

2.4. Education for ethical decision making

As noted, the research indicates that individuals overestimate their ability to make ethical decisions and underestimate the impact of their biases on their decision making, particularly in organizational contexts and managerial decision making. In addition, a number of motivating factors and issues complicate the process of ethical decision making. Thus, the need to prepare future graduates to be successful, ethical, and more conscious of their ability to make sound decisions highlights the importance of well-informed educational preparation.

There are challenges associated with the design and delivery of curricula and course content that reflect the importance of ethical leadership and ethical decision making. In schools of business, faculty have expressed concerns about how to incorporate ethics into their degree programs to greatest advantage. Educators in MBA programs have begun to place increased emphasis on ethics, motivated by a number of issues following highly publicized cases of ethical abuses, such as Enron, Tyco, and WorldCom. The educators have made decisions based on the research reflecting at least two major considerations affecting employers. First, the research indicates that organizational leaders understand that promoting ethical practices is pragmatic and is "good for business" (Is Ethics Good Business, 2003, pp. 6–21). Ethical practices are one of the bases for decisions made by consumers and those who purchase stock. Thus, organizational success has been correlated with ethical track records of organizations. In addition, the research indicates that graduates of MBA programs are concerned about the ethical track records and performance of companies when they make decisions about accepting offers of employment (Graduates Drawn, 2002). Reflecting these considerations associated with organizational performance and the employment decisions of graduates, business educators have acknowledged the need for enhanced ethics education and are re-emphasizing

the importance of ethics in the curricula (Hutchison, 2002; Schneider & Sager, 2004) and in specialties such as accounting (Armstrong, Ketz, & Owsen, 2003).

3. Methodology

According to Ankem (2005), "Meta-analysis, a statistical operation used to combine results from independent studies, has been applied widely in medicine, psychology, and business among other disciplines, but has had limited application in LIS research" (p. 164). The term *meta-analysis* "denotes the entire process from systematic literature review to the summarizing of effect sizes observed in individual studies" (Center for Alcohol and Drug Research, n.d.). Thus, meta-analysis may involve consideration of study design, methodology and research instrument used, information regarding the researchers and context, and population and sample information. One difficulty associated with meta-analysis is that "differences among studies in treatments, settings, measurement instruments, and research methods make research findings difficult to compare" (Bangert-Drowns & Rudner, 1991).

In addition, as Singleton and Straits (1999) have noted in *Approaches to Social Research*, in meta-analysis "ideally, we would like to include or sample all studies bearing upon the research question. In actual practice, however, the data obtained will be a biased sample of the targeted research" (p. 414). In this regard, a limitation of meta-analysis as a methodological approach is the possibility of omission of "unpublished research and studies too recent to be included in literature reviews or databases" (Singleton & Straits, 1999, p. 414) or "poorly indexed publications such as conference proceedings … and international literature … insofar as it is indexed in the standard sources" (Olson & Schlegl, 2001, p. 64). These omissions may also include monographs, dissertations, and theses, depending on the databases used. While some researchers suggest the need for exhaustive searches in support of meta-analysis research, Saxton (1997) noted that

> as a result of the refereeing process, a published study is likely to conform to the accepted standards of its respective discipline and enhance the comparability of results. Unpublished studies that have not been through a review process lack this level of quality control. (p. 270)

In addition, while an exhaustive search is unlikely, such a process may result in "too many candidate studies, which then must be pared through probability sampling, or culled using eligibility criteria" (Singleton & Straits, 1999, p. 415). Thus, it was determined that research related to ethics education published in the journal literature of business would serve as the basis for this study.

4. Data gathering and analysis

In order to gather data for the study, the researchers needed to identify the journal literature in which original research regarding ethics education in business is published. It was necessary to focus the research by addressing the body of literature which is likely to publish empirical data, other research findings, theory, and new knowledge related to business and specialties

such as accounting. A literature search was conducted using the Business Source Premier online database because "all aspects of business fall within Business Source Premier's scope, as does management, finance, accounting, international business, and economics" (Golderman & Connolly, 2003, p. 41). Business Source Premier represents an "emphasis on research-oriented and scholarly business literature," with "8800 serials, including full text for more than 1,100 peer-reviewed business publications" (Business Source Premier, 2006).

In order to include different terminology used by individual researchers, keyword searches were conducted using terms related to the focus of the research. The research addressed education related to ethics, ethical and moral values, and character development. It did not include education related to professional values because of the distinctions in values articulated by the various professions and the difference between professional and ethical values. The research was limited to articles published in the last 10 years. The number of articles retrieved, with the keywords identified, was as follows:

- "Ethics education" = 118 (36.5%)
- "Education in ethics" = 15 (4.6%)
- "Moral education" = 98 (30.3%)
- "Character development" = 54 (16.7%)
- "Character education" = 38 (11.8%)

As there was some overlap among the five searches, the total number of articles retrieved was 299. Original research was defined on the basis of the use of an applicable methodological approach and the gathering and/or analysis of data. This distinguished the articles from opinion pieces, articles that represented theory development but were not based on original research, and any other discussion articles that did not reflect original research. The analysis and comparative analysis of data were limited to education in the academic environment and classroom setting. They did not include ethics education provided outside of the classroom setting by consultants, at professional conferences, by community-based organizations, or in other venues. In addition, the research was limited to research conducted in the context of education in business in the United States or comparative studies of education in the United States and other countries. The analysis revealed 31 articles based on original research that met the other criteria indicated.

To supplement the search of Business Source Premier, identical keyword searches were conducted using ABI Inform. The ABI Inform database indexes "1800+ primary business and management publications … [as well as] 700+ full-text titles useful for the study and comparison of specific trades and industries … [and] 140+ local and regional business publications" (Golderman & Connolly, 2003, p. 38). The following results were noted:

- "Ethics education" = 84 (50.6%)
- "Education in ethics" = 6 (3.6%)
- "Moral education" = 25 (15.1%)
- "Character development" = 37 (22.2%)
- "Character education" = 14 (8.4%)

Accounting for the overlap among the five searches, the total number of articles retrieved was 163. The articles were analyzed to exclude those not based on original research, those not focused on business education in the U.S. or comparative studies, and those which had been retrieved in the prior search of Business Source Premier. Five additional articles were included in the research.

In total, 36 articles were included in the research study. For each of the articles, the research methodology identified or described by the author or authors was noted. All of the methodologies were identified if more than one type was used. Depending on the way the research was structured, data collection techniques such as survey methodology may have included quantitative statistics, qualitative results, or a combination of the two. Coding the research studies and analyzing the data on the basis of the research methodology, as opposed to whether the studies were qualitative or quantitative, allowed for greater specificity in the results reported. As the focus of the research was using meta-analysis to address the way in which ethics education has been studied in professional disciplines that emphasize this area, it was determined that data regarding the analytical approaches used to measure impact would be gathered and analyzed in relation to changes in perceptions, changes in behavior, measuring learning among study participants, or in program or course offerings. Data regarding the nature of the participants in the research studies (e.g., graduate or undergraduate business students or business school faculty) were gathered, if applicable, as were data regarding sample sizes used. In addition, the timeframe for the research studies was identified. The timeframes were measured using the source of the data as the basis. In other words, the timeframe for studies involving human subjects was articulated explicitly by the researchers in most instances. However, research involving the bibliometric analysis of published research, for example, was categorized on the basis of the years of coverage of the data or published research used in the research and analyzed by the author, as opposed to the timeframe during which the author conducted the research. With regard to the analyses, data were gathered in relation to whether the researchers considered the impact of gender and race/ethnicity in the outcomes measured in their research.

Data associated with the discipline of the author(s) were gathered from the "about the author" section of each article. In instances where this information was not available, Business Source Premier's author information was consulted. If author information was not available there, a Google™ search of the author's name and affiliation was conducted. In relation to the dissemination of the research and the levels of review of the publications, the articles were categorized with regard to the specific journals in which they were published and whether these journals were refereed, as identified in Ulrich's Periodical Directory (2006). *Ulrich's* was also used to identify the primary disciplines associated with each periodical in which the identified articles had been published. Based on the specific emphasis on ethics in organizations and ethics education after the highly publicized corporate scandals in 2002 and after, data regarding the year of publication were recorded and analyzed as well.

In addition, the researchers identified studies for which some sort of treatment had been applied and the change or impact on research participants was measured in some way. This was done to calculate the nature of the general types of treatments (e.g., course content) and the treatment effect sizes (e.g., average change in identified measure of perception in each study) and assess the variability in the true-effect parameters, in order to account for the variation.

Table 1
Disciplines of the authors

Discipline	Number of articles	% of total
Accounting	9	25.0
Marketing	8	22.2
Management	5	13.9
Business ethics	2	5.6
Economics	1	2.8
Business (general)	1	2.8
Public administration	1	2.8
Other	9	25.0
Total	36	100.0

Nonparametric tests of independence (chi-square) were undertaken with particular consideration of the issues of research methods and approaches used in measuring impact. This determined if there were differences based on the nature of the study participants, publication in refereed journals, and the years during which the studies were published.[1] Similarly, analyses were used to determine whether there were significant differences in the types of research that were conducted based on the disciplinary representation of the authors.

5. Findings

5.1. Specialties and subdisciplines of business

The research represented a number of specialties or subdisciplines in or related to business. In fact, one-quarter of the research studies was conducted by faculty and other researchers in accounting, with nearly as many (22.2%) being in marketing (see Table 1). Approximately 14.0% were in management, with far smaller percentages who are business ethics faculty (5.6%) or in economics, business (general), or public administration (2.8% each). The "other" category included disciplines not related directly to business, including research in areas such as engineering, agriculture, mass media, aviation technology, and information systems. This category also included co-authored articles, which included pairings such as marketing and management or marketing and accounting.

Similarly, the journals in which the research studies were published represent a range of subdisciplines as determined by the areas of coverage identified for the journals in *Ulrich's*. See Table 2 for a listing of all subdisciplines. The major subdiscipline was ethics or ethics education (50.0%). Nearly 17.0% were categorized as Business (general)/Business (other), including titles such as the *Journal of the American Taxation Association* and *Public*

[1] As a nonparametric test of difference in the observed frequency and expected frequency in data based on chance, chi-square is an appropriate test of the relationship (or potential relationship) in categorical data analyzed in the study.

Table 2
Disciplines of journals

Discipline	Number of articles	% of total
Ethics or ethics education	18	50.0
Business (general)	6	16.7
Accounting	5	13.9
Marketing	5	13.9
Other	2	5.6
Total	36	100.0

Administration Review. A number of other journals were in accounting and marketing (13.9% each). The two journals identified as "other" were *Technology and Society Magazine*, *IEEE*, and *Journal of Air Transportation*.

5.2. Specific journals and their educational foci

Data regarding the specific journals in which the research articles were published were gathered. As might be expected, two of the most frequently represented titles relate directly to business ethics—*Journal of Business Ethics* (33.3%) and *Teaching Business Ethics* (8.3%) (see Table 3). Marketing and advertising-related titles include *Marketing Education Review* (8.3%), *Journal of Marketing Education* (5.6%), and *Journal of Current Issues and Research in Advertising* (2.8%). The general business titles include *Journal of the American Academy of Business*, *Journal of Education for Business*, and *Business and Society Review* (2.8% each). The other ethics-related titles included *Business and Professional Ethics Journal*, *Journal of Agricultural and Environmental Ethics*, and *Journal of Mass Media Ethics* (2.8% each). It is interesting to note that the articles in the accounting journals were distributed over five different titles with 2.8% each.

Using the journal information included in *Ulrich's*, 75.0% of the articles were published in refereed publications. Of the journals identified in Table 3, the peer-reviewed publications are as follows:

- *Journal of Business Ethics*
- *Teaching Business Ethics*
- *Journal of Accounting Education*
- *Journal of Mass Media Ethics*
- *Issues in Accounting Education*
- *Public Administration Review*
- *Journal of Air Transportation*
- *Journal of Marketing Education*
- *Business and Professional Ethics Journal*
- *Technology and Society Magazine, IEEE*
- *Journal of Education for Business*
- *Journal of Agricultural and Environmental Ethics*

Table 3
Journals

Journal name	Number of articles	% of total
Journal of Business Ethics	12	33.3
Teaching Business Ethics	3	8.3
Marketing Education Review	3	8.3
Journal of Marketing Education	2	5.6
Journal of Current Issues and Research in Advertising	1	2.8
Journal of the American Academy of Business	1	2.8
Journal of Education for Business	1	2.8
Business and Professional Ethics Journal	1	2.8
Business and Society Review	1	2.8
Public Administration Review	1	2.8
Journal of Agricultural and Environmental Ethics	1	2.8
Journal of Mass Media Ethics	1	2.8
Technology and Society Magazine, IEEE	1	2.8
Journal of Accounting Education	1	2.8
Management Accounting Quarterly	1	2.8
CPA Journal	1	2.8
Ohio CPA Journal	1	2.8
Issues in Accounting Education	1	2.8
Journal of the American Taxation Association	1	2.8
Journal of Air Transportation	1	2.8
Total	36	100.0

As the focus of this research is ethics education, the journal titles were considered in order to identify those with a focus on education. The education focus was based on the use of the terms "education" or "teaching" in the journal titles and *Ulrich's* journal descriptions, which do not identify the educational foci of journals in all instances. Thus, 30.6% are identified as focusing at least in part on teaching or more broadly on education.

Of the total number of articles based on original research, two-thirds are based on the study of students (see Table 4). Of the total, 47.2% are based on the study of undergraduate students, while only 5.6% address only graduate students. Approximately 14% are based on the study of both undergraduate and graduate students. Nearly 17% are based on the analysis of perceptions of faculty and/or administrators, with 5.6% focusing on alumni. The remaining 11.1% include one article involving both undergraduates and faculty and other research studies that involve the analysis of curricular data or content/bibliometric analysis of previously published research.

5.3. Research methodologies of articles

With regard to the research methodologies associated with gathering and analyzing data, three-quarters of the studies were based on survey research (see Table 5). Of the remaining articles, 16.7% reflect content analysis, and only three use some other methodology, particularly interview, curriculum analysis, or case study research (2.8% each). Examples of the category of content analysis included bibliometric analysis, analysis of the vocabulary or

Table 4
Study participants

Status of study participants	Number	% of total
Undergraduate	17	47.2
Graduate students	2	5.6
Undergraduate and graduate students	5	13.9
Faculty and/or administrators	6	16.7
Alumni	2	5.6
Other	4	11.1
Total	36	100.0

logic represented in published literature, and analysis of the content of assignments completed by students. Curriculum analysis refers to the analysis of course catalogs or course content, with regard to ethics offerings by institutions or disciplines. Three of the studies were based on the use of more than one methodology. In those instances, the second methodology was that of content analysis in two of the studies and conducting interviews in the third. Only one study employed more than two methodologies, namely a combination of content analysis, interview, and survey research.

5.4. Timeframe in which articles gathered data

In relation to the application of the research methodologies, data were gathered with regard to the timeframe in which each of the studies gathered data. In 72.2% of the studies, the research was conducted at one set point in time, such as the administration of one survey instrument. In 16.7% of the studies, the data were based on a timeframe of one academic semester. Studies based on periods of 1 to 3 years or more than 3 years made up 5.6% each. In addition, data were gathered in relation to the specific number of times the survey or other instrument was administered or applied. While such an analysis did not apply to 22.2% of the research studies, 63.9% represented one application of the survey or other data-gathering instrument. Further, 11.1% of the studies involved two uses of the data-gathering instrument, while only one study was based on three separate uses of data-gathering instruments.

The studies represented the analysis of three measures of consideration or impact. The most commonly represented was that of measuring perceptions or changes in perceptions based on the

Table 5
Research methods

Research method	Number of articles	% of total
Survey	27	75.0
Content analysis	6	16.7
Interview	1	2.8
Curriculum analysis	1	2.8
Case study	1	2.8
Total	36	100.0

application of some treatment, such as course content (61.1%) (see Table 6). The measurement of perceptions included considerations such as respondents' representations of how they would behave in a given circumstance and faculty surveys regarding whether ethics should be taught and whether they teach it in their courses or departments. A far smaller percentage (16.7%) represented measures of reasoning or cognitive development or changes in such. An example is using content analysis of student papers to exhibit such reasoning or learning. Lastly, 22.2% reflected the analysis of individual course content or broader curriculum. One-third of the studies were based on the analysis of more than one measure, such as combinations of measures of perception (how would you behave?) and measures of professional behavior (how do you behave?), or faculty perceptions of whether ethics should be taught and curricular measures of the extent to which it is being taught. Of those with a secondary measure, 33.3% included a secondary measure of perceptions, 41.7% included an analysis of curriculum, 16.7% an analysis of reasoning/cognitive development, and 2.8% a measure of professional behavior. Only one study involved more than two measures—the study including the use of three methodologies used a combination of perceptions, curriculum, and professional behavior. That particular study was published in four parts over time in the same journal.

5.5. Variation in sample sizes

Table 7 illustrates the variation in sample sizes of those studies based on methodological approaches involving human subjects. Slightly more than 8.0% of the total involved sample sizes of fewer than fifty participants. Studies using sample sizes of 51–100 and 101–150 made up 11.1% each. The highest single percentage (13.9%) was based on sample sizes of between 151 and 200 participants, while 22.2% of the studies used samples of 250–500 participants. In addition, 19.4% involved sample sizes of more than 500, with 11.1% being more than 800.

5.6. Populations of study participants

In addition to analyzing the sample sizes considered, this research gathered data in relation to the populations from which the study participants were drawn. In this regard, 11.1% of the studies are based on the study of participants in a single course-either in ethics (8.3%) or some other area (2.8%) (see Table 8). Twenty-five percent included the study of those in a single academic discipline, such as business students, with 5.6% being based on the study of those in single institutions. However, the highest percentage (55.6%) was based on the study of those in multiple institutions, including faculty surveys across institutions and international, com-

Table 6
Approaches in measuring impact

Method of evaluation	Number	% of total
Perceptions or changes in perceptions	22	61.1
Curriculum	8	22.2
Reasoning/cognitive development	6	16.7
Total	36	100.0

Table 7
Sample sizes

Sample size	Number of articles	% of total
0–25	1	2.8
26–50	2	5.6
51–100	4	11.1
101–150	4	11.1
151–200	5	13.9
201–250	3	8.3
251–300	2	5.6
301–400	3	8.3
401–500	3	8.3
501–600	1	2.8
701–800	2	5.6
801 or more	4	11.1
N/A	2	5.6
Total	36	100.0

parative studies. The "other" category included one study of the literature related to ethics and education.

5.7. Demographic characteristics of study participants

In addition, analyses were conducted in order to determine the extent to which the researchers gathered and analyzed data related to demographic characteristics of the study participants and conducted correlational analyses to determine the differences in results based on these characteristics. In total, 19.4% of the studies involved the gathering and correlational analysis of data based on gender. Studies gathering and analyzing data based on race/ethnicity of the study participants made up 11.1% of the total.

5.8. Years of publication

Data were also gathered in relation to the years of publication for the research articles. The largest percentage of the articles (22.2%) was published in 2005, with one-third being

Table 8
Organizational context

Context	Number of articles	% of total
Single ethics course	3	8.3
Single course (other)	1	2.8
Single discipline	9	25.0
Single institution	2	5.6
Multiple institutions	20	55.6
Other	1	2.8
Total	36	100.0

published after 2003 (see Table 9). However, there appears to be no other pattern in the number of articles published in any other year or span of years.

5.9. Other differences

Statistical analyses were undertaken in order to determine whether there were significant differences in research design, the nature of study participants, course or institutional context from which participants were drawn, methodological approaches, measures of impact, and where and when the research was published, based on the academic disciplines (or subdisciplines) of the authors. No such differences were identified. Similar analyses were conducted in order to determine whether there were differences in research design and methodology, measures, and publication based on the educational level of the study participants. Only two such instances of significant differences were noted. Survey research was the most frequently used methodology in all of the research related to human subjects. This included all of the research related to graduate students, combinations of undergraduate and graduate students, 83.3% of the research of faculty, and 76.5% of the research of undergraduates alone. Content analysis was used far more with undergraduates, particularly in relation to analyzing the content of assignments submitted. In fact, half of the content analysis research was done with undergraduates, along with the analysis of curricula, for example, with a difference represented by a chi-square with a p value of 0.039. The research related to faculty and graduate students was more likely to have been published in journals that are not refereed. In fact, 88.2% of the research related to undergraduates was published in refereed journals. Only 50.0% of that related to graduate students, 60.0% of that related to undergraduate and graduate students, and a third of the research related to faculty was published in refereed journals, as represented by a chi-square with a p value of 0.064, which approaches significance.

Analyses were conducted in order to identify differences based on the research methodologies used in relation to other aspects of research design, such as sample size, the context from which the sample was drawn, and place and type of publication. Significant

Table 9
Years of publication

Year	Number of articles	% of total
1996	4	11.1
1997	4	11.1
1998	2	5.6
1999	3	8.3
2000	4	11.1
2001	1	2.8
2002	4	11.1
2003	1	2.8
2004	4	11.1
2005	8	22.2
2006	1	2.8
Total	36	100.0

differences were noted in relation to the timeframe in which data was gathered and the measures of consideration or impact in the studies. In general, few of the studies based on survey research (18.5%) were conducted in modes other than one-time collections of data. However, half of the studies using content analysis utilized a timeframe of one semester, typically measuring changes in learning or perception over the course of the term. The one study using interviews involved a timeframe of more than 1 year. The one case study used a timeframe of more than 3 years, as reflected by a chi-square with a p value of 0.000. Similarly, the survey research was far more likely to be used to measure perceptions (90.9%), as compared with content analysis. The remaining 9.1% of the research used content analysis to measure perceptions. However, the measures of reasoning/cognitive development or changes in such were evaluated using content analysis (50.0%), survey (33.3%), and case study (16.7%). Interestingly, the majority of evaluation of curricula was done using survey methodology (62.5%), content analysis, curriculum analysis, and interview (12.5%), as represented by a statistically significant chi-square with a p value of 0.014.

The study also categorized journals by discipline to analyze differences in the methodologies used. Survey research was the most frequently used methodology in relation to all of the disciplines of the journals. However, while half of the journals were identified as falling into the interdisciplinary area of ethics, two-thirds of the content analysis research was published in the ethics journals. Only 16.7% were published in accounting journals, with the same percentage of journals in the "other" category. None were published in the journals categorized as marketing and business (general), as reflected by a chi-square with a p value of 0.068, which is approaching significance. This study also considered where the authors published based on their own academic disciplines. Again, as half of the articles were published in ethics journals, all of the management faculty, all of the ethics faculty, and 66.7% of the "other" faculty published in the ethics journals. However, only 22.2% of the accounting faculty and 25.0% of the marketing faculty published in the ethics journals. They were more likely to publish in journals in their own disciplines—55.6% in the case of accounting faculty and 62.5% in the case of marketing faculty, as represented by a statistically significant chi-square with a p value of 0.001. In relation to publication in peer-reviewed journals, 72.2% of the articles were published in refereed publications. However, it is interesting to note that 94.4% of the ethics journals are peer reviewed, as compared with 60.0% of the accounting journals, 40.0% of the marketing journals, a third of the business general publications, and all of the "other" journals. The difference is reflected by a chi-square with a p value of 0.013.

As indicated, 30.6% of the journals focused on teaching or education, at least in part. Analyses were undertaken in order to determine if there were differences in the research and/or publication of the research based on whether or not the journals related to education. Two such differences were noted. Between 1996 and 1998, 90.0% of the articles were published in journals without an articulated focus on education or teaching, while 41.2% were published in such journals between 1999 and 2004. However, from 2005 forward, 100.0% of the articles have been published in journals which do not focus on education or teaching, as represented by a chi-square with a p value of 0.090, which is approaching significance. Also, with regard to the disciplines of the authors, only 22.2% of the accounting researchers, 20.0% of the management researchers, and none of the economists published in journals related to

education. However, 87.5% of the marketing researchers published in education-related journals, as reflected by a statistically significant chi-square with a p value of 0.010.

5.10. Measurement of effect sizes

With regard to the measurement of the reported effect sizes and the calculation of the predicted effect, it was determined that seven of the thirty-six studies based on original research involved the application of some sort of treatment and the measurement of impact or change on the research participants. While the sample sizes varied, the subjects in each study were all students. The students were primarily undergraduates, although one study involved a combination of undergraduate and graduate students. However, the treatments varied, with four using course content as the treatment and one using a combination of course content and a community service project. One of the studies involved surveying second-year accounting students and subsequently surveying the students as seniors, with the "socialization" period as accounting majors as the treatment applied. Another study of accounting majors considered a more broadly defined societal or organizational context of "pre-Enron" and "post-Enron" and the intervening factors as the treatment. In addition, the seven studies measured a mix of changes in perceptions and decision making ability/cognitive development. Thus, the small number of studies with effect sizes available for comparison and the distinct treatments applied among the seven studies and effect measures limited the value of the statistical analysis of the predicted effects.

6. Discussion

While a number of methodological approaches have been used to study ethics education in business, survey research was used in three-quarters of the studies overall and even more so as a percentage of the research involving graduate students and faculty. In addition, survey research was used to a great extent to measure perceptions. Content analysis was used far more in research related to undergraduates and in the study of learning/cognitive development. Thus, it appears that, despite the enhanced focus on ethics in MBA programs, there has been little research measuring the impact on learning and preparation of MBA students prior to or since the most recent corporate ethics scandals. Similarly, nearly two-thirds of such studies utilized survey methodology to study curricula and course offerings, while approximately one-quarter used some sort of content or curricular analysis. Thus, the research indicates the relatively limited application of methodologies in the study of ethics education in general and in relation to specific measures of consideration or impact, such as perceptions or learning.

Interestingly, in relation to the dissemination of the research results, the research related to undergraduates has been published in peer-reviewed publications to a far greater extent than the research related to graduate students and faculty. Also, the faculty in management, ethics, and the "other" categories published research in the ethics journals. Compared to journals in other disciplines, a far higher percentage of ethnics journals were peer reviewed. Faculty and other researchers in accounting and marketing were more likely to have published research related to ethics education in journals in their respective disciplines than in ethics journals.

Thus, while the research on ethics education in business overall reflects the limited application of methodological approaches, the dissemination of the research reflects statistically significant differences in venues for dissemination across subdisciplines.

Lastly, the limited number of research studies reflecting the application of treatment and the subsequent measures of reported effect sizes limit the value of the statistical analysis of predicted effect sizes of course content in ethics or ethics degree programs. The gaps in the original research limit the ability to posit the impact of ethics education, beyond analyzing individual studies of changes in perceptions, learning, or effect on professional behavior. However, it is interesting to note that of the studies that reflect the application of a treatment such as coursework and the measurement of impact or change on the research participants, the studies involving students in a specific discipline often focused on accounting students. This reflects the focus on ethics in accounting education in the last 3 to 5 years.

7. Conclusion

The research indicates the factors contributing to the complexity of ethical decision making include competition, the emphasis on individual success and contribution to organizational success, and the overestimation of ability to make ethical decisions.

Ethical concerns in organizations and the related educational preparation for ethical leadership and decision making have focused primarily on private sector organizations. However, the importance of educational preparation for ethical decision making has been identified by researchers in a range of disciplines and professions, including LIS. While there has been far less published research related to ethical preparation in LIS, the limited research indicates the complexity of ethical concerns. Based upon the similarities between education in business and in LIS and the availability of published research related to ethics education in business degree programs, this research informs the study of ethics education in other professional disciplines, including library and information science, and provides a basis for measuring the impact of such educational preparation for professional work.

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