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Promoting the moral reasoning of undergraduate business students through a deliberate psychological education-based classroom intervention

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Educating business students for ethical professional practice is a growing concern for both the corporate world and business education. Highly publicised scandals have pushed public trust in business to an all-time low, resulting in losses of customers and high employee turnover. Corporate and business education leaders have begun to press for more effective models for promoting ethical development in business education. This study examined the effectiveness of one such model, Deliberate Psychological Education (DPE), in promoting greater cognitive moral reasoning in undergraduate business students. Its significant, positive findings hold promise for the promotion of more ethical business professionals through preparatory classroom intervention.

Introduction

An increasing number of publicised ethical scandals involving American corporate business have motivated business schools and organisations to take a more critical look at their role in the ethical development of students and employees. The public generally perceives corporate business as lacking strong professional ethics, a perception that corporate business recognises as potentially detrimental. Even in 2004, Swanson cited that public trust in business had dropped to unfortunate lows, with CEOs and stockbrokers being trusted by only 23% of the public, just a few points above used-car dealers at 15%. These negative perceptions provide impetus for the world of business to take a serious look at how to encourage positive ethical development

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among its members. Because customer and employee loyalty increases when the business is perceived to be highly ethical (Ethics & Compliance Officer Association, 2007), business organisations stand to increase their profits and reduce costly employee turnover by operating in as ethical a manner as possible (Monson & Bock, 2005).

American corporate and business education leaders have begun to press for the prevention of future problems through the incorporation of a greater degree of ethical training with undergraduate business students (Halbesleben *et al.*, 2005; Swanson, 2004). Schools of business are currently subject to the accreditation standards of the Association to Advance Collegiate Schools of Business (AACSB). At this time, AASCB does not mandate a course in business ethics in all undergraduate business school curricula (Swanson, 2004); however, recent revisions of the standards encourage business schools to prioritise the teaching of ethics and 'move ethics to first and foremost topical importance' (Sims & Felton, 2006, p. 297). Some business schools have adopted a stand-alone ethics course into their academic curriculum; others have actively incorporated ethics training throughout their curriculum. The fact that many still do neither is troubling.

Present business education has been criticised for failing to deter and even for encouraging recent executive misconduct through its limited emphasis on student ethical development (Sims & Felton, 2006). The critics suggest that ethical values are best instilled in early training and that unless students learn to value and apply ethical behaviour during their initial preparation, they cannot be expected to do so in the field. Critics further contend that if current trends continue, incidences of ethical misconduct in business practice as well as negative public perceptions will continue to increase (Swanson, 2004). To promote more ethical reasoning within the field of business, business education programs must better develop students' abilities to confront moral and ethical dilemmas with knowledge, sensitivity and conviction. This paper presents the promising findings of a classroom intervention aimed at promoting the moral reasoning ability of undergraduate business students.

Moral development and business ethics

Much of the recent literature focused on revitalising business education curricula has conceptualised the issue from a cognitive developmental perspective, applying Lawrence Kohlberg's (1984) Moral Development Theory in particular (Fraedrich *et al.*, 1994; Izzo, 2000; Kracher *et al.*, 2002; Mudrack, 2003; Trevino, 1992). Cognitive Developmental Theory is based on the premise that reasoning and behaviour are directly related to the level of complexity of psychological functioning (Richardson *et al.*, 1998). It explains how humans create the meaning-making systems used to interpret and make sense of their experiences (Sprinthall *et al.*, 2001). Faced with increasing environmental demands, individuals develop cognitively through progressive steps toward understanding and adapting to those demands using more complex and, presumably, more functional cognitive processes. In an increasingly complex world, higher levels of cognitive development appear to have some clear advantages. For example, at higher levels of cognitive complexity, teachers

have been shown to be more flexible, more adaptive and responsive to learners, more tolerant of diverse perspectives and more empathic (Reiman & Peace, 2002). Higher levels of complexity in counsellors and counsellors in training have been exhibited through greater empathic communication, more autonomy and interdependence, more flexibility in methods used and a reduction in prejudice (Holloway & Wampold, 1986; Peace, 1995; Rest & Narvaez, 1994; Sprinthall & Thies-Sprinthall, 1983; Stoppard & Miller, 1985). The functional benefits of advanced cognitive development have been demonstrated through a substantial body of outcome research across a variety of contexts (Rest & Narvaez, 1994).

Moral development theory describes the developmental differences in the ways that individuals conceptualise questions of what is right and wrong. Lawrence Kohlberg hypothesised that individuals at lower developmental levels tend to conceptualise and respond to moral dilemmas from an egocentric perspective, while those at higher developmental levels are more likely to consider the impact of their choices on others before acting on them (Rest *et al.*, 1999a). He proposed a six-stage, hierarchical scheme describing the differential considerations that individuals facing moral dilemmas give to self and others along a hierarchy of developmental levels or 'stages'. A 'neo-Kohlbergian' framework subsequently emerged that more explicitly described the complex relationship between moral reasoning and moral action (behaviour). Rest (1994) proposed an interactive four-component model of morality 'that must perform adequately to produce moral action' (Bergman, 2004, p. 25): (1) moral sensitivity (comprehending moral content when present in a situation); (2) moral reasoning (determining what is the moral thing to do); (3) moral motivation (choosing to do what is moral rather than what other values dictate); and (4) moral character (having qualities such as strength of ego, perseverance and the courage needed to act [Rest & Narvaez, 1994; Rest *et al.*, 1999b]). Of these four components, moral reasoning appears to be most amenable to remediation (Rest *et al.*, 1999a).

Evidence suggests that business students function at lower levels of moral reasoning than students from most other majors (McNeel, 1994). That is, they are more likely than other students to make decisions without considering the moral content and implications of their responses to that content. This deficit has been attributed to their necessary immersion in training to perform effectively in a generally 'moral' business climate (Jackall, 1988; Turiel, 1983). Regardless of its antecedents, the deficit may account for the growing incidence of ethical malpractice currently being observed as business students matriculate into actual business practice. Effective interventions to reverse the current trend currently seem to be warranted. Indeed, Mayhew and King (2008) note that 'several reports on higher education have called for colleges and universities to take a more central role in providing moral and democratic education to college students' (p. 17).

Although the body of ethics education literature has grown substantially during the past decade, very little outcome research has been conducted to determine what methods of ethics education are most effective. Interventions have shown value in assisting business students in being able to identify certain ethical problems, but they have fallen short in helping those students reason through and respond to the problems with

greater ethical sensitivity (Halbesleben *et al.*, 2005). With regard to the apparent insufficiency of current pedagogical approaches to ethics education, Macfarlane (1998) has questioned whether students of business are given sufficient opportunities for reflecting on the ethical considerations during their course of study. Ponemon and Gabhart (1994) have suggested that promoting ethical development requires educational models that are designed to be specific to that objective. Deliberate Psychological Education (DPE) (Mosher & Sprinthall, 1971) is one such model that has proven successful in facilitating moral reasoning development across a diverse field of contexts and student groups. Until now, its utility for promoting the moral reasoning of undergraduate business students has not been evaluated.

Deliberate Psychological Education

Deliberate Psychological Education has been used to promote cognitive developmental growth within a variety of professional populations, including school counsellors, nurses, teachers, physicians, therapists, accountants and dentists. This model is based upon the integration of cognitive developmental principles into the curriculum, using strategies that reflect research on promoting cognitive complexity specifically linked to moral content.

Research studies integrating and evaluating the impact of DPE on moral reasoning development have been performed within varied contexts. For example, the integration of DPE into a four-month program for law enforcement trainees ($n = 64$) showed significant moral reasoning gains as measured by the DIT (Morgan *et al.*, 2002). Deliberate Psychological Education with parents of elementary school children ($n = 19$) showed similar significant gains ($F [1,35] = 16.56$, $p = .003$) and an effect size of 1.13 (Royal & Baker, 2005). Additionally, two separate research studies with mentor teachers achieved significant positive gains in moral reasoning ($t = 2.81$, $p < .01$ [$n = 46$]; $t = 3.66$, $p < .01$ [$n = 13$]) (Reiman & Thies-Sprinthall, 1993; Reiman & Peace, 2002). Reiman and Peace's (2002) study describes gains in learning and performance in addition to the moral reasoning developments. This study provides a clear and thorough review of how DPE elements can be integrated into an educational program and it highlights the critical nature of the reflective component.

A DPE intervention is comprised of five core components or 'conditions' that, according to its authors, must each be met in full in order for development to occur. The first condition involves the learner engaging in a *qualitatively significant new role-taking experience*. This experience must challenge the learner's current cognitive framework, rendering it inadequate as a framework for his or her understanding and effective response in a prescribed new role. It is the psychological discomfort or disequilibrium resulting from this inadequacy that fuels growth toward greater cognitive complexity (Kohlberg, 1968; Holloway & Wampold, 1986).

The second condition is that the learner receives *careful and continuous guided reflection* as he or she accommodates to the new role in the experience. Sprinthall *et al.* (1996) have suggested that challenging new experiences alone do not promote more complex thinking. For cognitive growth to occur, there must be corresponding

opportunities to reflect on and make sense of the new experience through such activities as discussion, debate and journaling. These activities are intended to promote growth by challenging and assisting the learner in processing new experience at more complex cognitive levels.

A third condition involves the instructor's provision of *a balance* between the real experience and the reflection, discussion and teaching. A careful integration of experience and guided reflection is more effective than excessive amounts of either experience or reflection alone (Sprinthall *et al.*, 1996). Excessive experience can be overwhelming and mis-educative if the learner lacks the capability to understand and manage it. Conversely, excessive reflection can be meaningless to the learner if the learner cannot relate it to his or her real-world experience.

To satisfy the fourth condition, an educational intervention must be *continuous*; that is, it must involve sustained application for a continuous period in order for psychological development to occur (Rest, 1986). Six-to-twelve months duration is generally recommended for developmental interventions, although significant results have been found in programs as short as three months (Schlaefi *et al.*, 1985). While shorter interventions may provide the learner with skills to handle new challenges, longer periods may be necessary to develop the cognitive structures that support appropriate and ongoing application of those skills.

The final condition requires that the learner receive a *combination of support and challenge* in the learning experience. Challenging a learner toward assuming new systems of thought and action must be coupled with supporting him or her through the discomfort of giving up familiar systems (Knowles, 1980). Without sufficient instructor support, a learner facing a new cognitive challenge will likely retreat to the comfort of old patterns of thinking rather than risk the uncertain consequences of assuming new patterns that have been proposed.

A DPE intervention aims to facilitate conditions in a learning environment whereby there is a slight 'mismatch' between the complexity of the learning experience and a learner's currently preferred level of cognitive complexity (Hunt, 1971). Then, with thoughtfully applied instructor direction and assistance, the learner is encouraged to expand his or her range of conceptual responses in the new experience. Over time, it is anticipated that cognitive development will occur as the learner incorporates or accommodates this expanded, more complex view of the experience into an existing cognitive framework. In the current study, it was anticipated that the creation of such a mismatch through curricular content and teaching strategies in a business classroom could potentially increase students' propensity for discerning the ethical implications of business practices and choices upon graduation and entry into a professional role.

Methods

Participants

The participants for the study included 172 undergraduate students admitted to the school of business administration at a small, highly ranked, public university in the

eastern USA. Having completed two years of core undergraduate coursework, the students were in their first semester of the two-year business program. Participants were selected on the basis of their enrolment in one of four sections of a one-credit course focused on business ethics. One section of the course with 46 students was randomly designated as the experimental section; the remaining three sections with a total of 126 students were designated as a comparison group. A single instructor from the business school taught all four sections of the course, with the researcher delivering the DPE intervention to the experimental section. Instruction for all sections was administered during a single academic semester (four months).

The intervention

The DPE intervention was designed to promote students' moral reasoning through the purposeful integration of all five DPE learning conditions into the existing business ethics curriculum. The existing curriculum addressed several but not all of the conditions and did not highlight the promotion of moral reasoning as a specific and primary goal. A comparison of the experimental and control curricula is presented in Table 1.

As can be seen in Table 1, the two curricula shared the assumptions that the challenge of the business school itself demanded a qualitatively significant new student role (DPE condition 1) and that instructor guidance and support were needed to ensure that the challenge was educative and meaningful for students rather than overwhelming for them (DPE condition 2). Continuity (DPE condition 5) was equal for the two curricula, in that both were implemented during the course of a single academic semester. Where the experimental curriculum differed most from the control curriculum was in the degree to which it met the essential conditions relating to careful and balanced guided reflection (DPE conditions 3 and 4).

Students in all course sections were challenged in class discussions to think critically about ethical issues in business practice; however, students in the experimental section (only) were asked additionally to respond in writing to journal prompts over the course of the semester to facilitate deeper introspection about issues examined in and out of the class. The prompts were designed to engage the students' in exploration of not only their thoughts, but also of their feelings about and potential responses to the issues under examination. Initially, the researcher provided written responses to journals aimed at assessing and matching students' current levels of meaning making. These responses focused on accepting feelings, praising and encouraging efforts, clarifying ideas and prompting further reflection. Later, as students became comfortable with the reflection process, 'mismatching' responses were provided that challenged their current meaning making by raising alternative points of view and requiring them to assume new perspectives or extend current ones.

Both the experimental and control sections of the class were engaged in team presentation assignments. The teams (four to five students each) received a case study describing an ethically questionable situation in business practice and were directed to act as 'consultants' in: (1) identifying the key ethical issues in the case, (2) providing

Table 1. Differences between groups

DPE conditions	Curriculum elements	Experimental group	Control group
Role-taking experience	New student role: entrance into undergraduate business program (exposure to new educational challenges and professional contexts)	√	√
	Case study team presentations and critical feedback from peers and faculty	√	√
	Written reflections through journal prompts	√	
	Guided team reflective groups	√	
Support and challenge	Classroom discussion—ethical decision making	√	√
	Classroom presentations and case-study discussion	√	√
	Continuous journal feedback using mismatching	√	
	Guided team reflective group discussion	√	
Reflection	Suggested final step of decision-making model performed within case-study/presentation assignment	√	√
	In-class discussion	√	√
	Student written reflections (journals) throughout course	√	
	Guided team reflective group to facilitate group reflection and perspective-taking	√	
Balance of reflection and role-taking	Review of journal responses and researcher/instructor discussion concerning major themes	√	
	Continual evaluation of experimental group progress through researcher/instructor meetings	√	
Continuity	Semester-long course	√	√

three courses of action for responding to the situation and (3) choosing and justifying their choice of one of several potential options. To assist in this process, all were provided with preparatory readings and a suggested ethical decision-making model drawn from Sucher (2005) focusing on moral inquiry, moral option development and analysis, moral decision making and moral reflection and evaluation. Teams were required to justify their determined course of action in a formal class presentation that was followed by class discussion and feedback.

After their presentation, teams from the experimental section (only) met with the researcher for the specific purpose of guided reflection, while teams in the control sections reviewed the exercise in the context of large group class discussion. The small-group team meetings focused less on the decision students had come to regarding a particular issue and more on their experience within the group, their responses when confronted with differing ethical principles, their views on different group members' perspectives and what they felt were the personal and social outcomes of the decision-making experience. The researcher structured the meetings using reflective questions to stimulate discussion and facilitate cognitive mismatching. The questions focused

on students' connection to different ethical principles that emerged during their deliberations and how they ultimately came to agreement through the ongoing assimilation and accommodation of new ideas. As in the case of the written journal reflections, thoughts, feelings and actions were under mutual consideration during these guided reflective groups.

In addition to filling a direct gap in the existing curriculum's fulfilment of the core DPE conditions, it was anticipated that the structured opportunities for reflection offered in the experimental class would further enhance the significance of the learning challenge for its students (DPE condition 1) as well as the researcher's ability to balance that challenge with an appropriate measure of support (DPE condition 3). As such, the experimental curriculum was clearly distinguised from the existing curriculum on the basis of its provision of both a complete and more comprehensive DPE framework.

Instrumentation

Two standardised instruments, the Defining Issues Test-II (DIT-II) (Rest *et al.*, 1999a), a measure of moral reasoning development, and the Multidimensional Ethics Scale (MES) (Reidenbach & Robin, 1990), a measure of business-specific ethical reasoning, were administered to participants in both the experimental and control sections immediately before and after the delivery of the DPE intervention. Demographic information was collected as part of the DIT-II.

The Defining Issues Test-II.   The DIT, originally designed by Rest (1979) and further refined by Rest *et al.* (1999a) is based on Kohlberg's six-stage scheme of moral development (Kohlberg, 1976, 1984). Used in hundreds of studies, the DIT activates the moral schemas through the presentation of moral dilemmas and assesses these schemas in terms of the degree of importance respondents assign to them in the resolution of moral dilemmas. The DIT-II, an updated version of the original DIT, includes modernised case studies, fewer questions, greater reliability checks and significantly stronger validity indicators than the DIT. It is highly correlated with the original DIT ($r = .79$) (see Davison, 1979; Rest, 1979, 1986; Rest *et al.*, 1999a).

Aggregate scores on the individual components of the DIT-II are used to determine a respondent's percentage of higher stage or 'principled' reasoning (the P-score and N2-score) in determining a response to three ethical dilemmas. Two additional scores, the Type Indicator (T-score) and Utilizer (U-score) lend respective insight into the respondent's developmental stage on the Kohlberg scheme as well as the consistency of his or her answers. Specifically, the P-score represents the proportion of items selected that reflect the respondent's modal level of principled reasoning, while the N2-score adds to it the degree to which the respondent has rejected simplistic thinking (i.e. a preference for lower stage courses of action) (Bebeau & Thoma, 2003).

The T-score profiles participants into one of seven 'types', roughly correlated to Kohlbergian stages of moral development. This score is considered less robust than either the P-score or the N2-score and is most often utilised for understanding

patterns when there is no significant change on the P-score (Bebeau & Thoma, 2003). The U-score is considered to be an indicator of the consistency between a respondent's moral reasoning and proposed action. A high U-score suggests desirable consistency between moral reasoning and action.

The Multidimensional Ethics Scale. The MES is an eight-item, paper and pencil inventory developed by Reidenbach & Robin (1990) for measuring an individual's ethical reasoning in business transactions across three theoretical dimensions: Moral Equity, Relativism and Contractualism. Respondents are asked to rate (on a scale of 1–7) the ethicality of transactions in three hypothetical business scenarios across these three dimensions. Moral Equity pertains to concepts such as justice and fairness. It is considered to be the most complex dimension, integrating lessons from early upbringing and containing the primary decision-making rules for assessing the moral content of business situations. Relativism is concerned with how acceptance of learned guidelines and values in the cultural system affect individual ethical beliefs (Henthorne *et al.*, 1992). Implied within this dimension is that individuals go beyond legal norms alone in determining what is and is not ethical business practice and that they are also influenced by considerations relative to their own culture and traditions (Reidenbach & Robin, 1990). The dimension of Contractualism refers to the influence unwritten contracts and unspoken promises have on ethical business decisions, and it is purely deontological (Ellis & Griffith, 2001). Contractualism suggests that a 'social contract' for ethical practice exists between business and society based on ideals of rights, duty, promise and truth telling (Henthorne *et al.*, 1992).

The three different dimensions of the MES respectively explain 79, 55 and 83% of statistical variance, and with an average of 0.72, suggest strong construct validity. The summated item scores show high reliability with coefficient alphas ranging between 0.71 and 0.92, or an average reliability of 0.80 (Reidenbach & Robin, 1990). The moral equity dimension shows the greatest impact on reliability and, thus, supports the MES authors' contention that relativism and contractualism play a supportive role to it. The MES was selected for application in this study because it is business industry-specific and because recent factor-analytic and psychometric research has provided it with corroborative support (Loo, 2004).

Research hypotheses

A quasi-experimental pre-test/post-test design was employed in this study. The general goal of the study was to determine if a DPE intervention would have a significant impact on moral reasoning development and business ethics development of a class of undergraduate business students in comparison to a class not receiving the intervention. Specifically, it was hypothesised that:

1. The experimental section of the class would show significantly higher pre-test to post-test moral reasoning growth than the control sections as measured by scores on the DIT-II.

2.   The experimental section would show significantly higher pre-test to post-test business ethics development than the control sections as measured by scores on the MES.

Results

Of the 172 participants tested, 156 and 152 results were useable from the DIT-II and the MES, respectively. Results were not considered useable if participants did not fully complete either the pre-test or the post-test. Ten additional participants were eliminated from the DIT-II data due to questionable internal consistency scores (i.e. meaningless item checks). Participant ages ranged from 18 to 35 years; however, the majority were 20 years of age (138; 80.2%). There were 97 males (56.4%) and 73 females (42.2%) (two non-respondents) about equally divided among the four participant groups. Of the participants, 166 (96.5%) were classified as juniors in college and 5 (2.9%) were classified as sophomores (one non-respondent); 164 participants (95.3%) were US citizens and 165 (95.9%) stated that English was their primary language.

   Due to the non-random selection of groups, *t*-tests were conducted to determine if participants in the four class sections were initially different on the pre-test DIT-II (P and N2 scores) and the MES; no significant difference was found. Descriptive statistics for the viable participants on the DIT and MES are presented in Tables 2 and 3.

Table 2.   Descriptive statistics: DIT-II (P & N2)

	Group	Mean	SD	*n*
Pre-test P-score	Experimental	36.2118	16.54346	39
	Control	41.8964	13.45665	89
Post-test P-score	Experimental	45.3333	16.07439	39
	Control	42.5674	14.85722	89
Pre-test N2-score	Experimental	35.0336	18.48830	39
	Control	42.4767	11.88720	89
Post-test N2-score	Experimental	44.7836	16.43718	39
	Control	43.9030	14.07371	89

Table 3.   Descriptive statistics: MES (all 3 scenarios)

	Group	Mean	SD	*n*
Pre-Avgall3scen	Experimental	5.4263	.66800	39
	Control	5.0964	.80469	115
	Total	5.1799	.78359	154
Post-Avgall3scen	Experimental	5.4199	1.01377	39
	Control	5.3112	.91982	115
	Total	5.3387	.94229	154

DIT-II findings

A repeated measure ANOVA (2 × 2) was utilised to evaluate pre-test to post-test differences between the experimental and control groups on the DIT-II. The P-score and the N2-score were analysed separately because the N2-score has more stringent rules for handling missing data and is therefore more likely to purge items. A significant pre-test to post-test interaction was found to have occurred between P-scores and the experimental and control groups (F[1,126] = .003, p < .05). As anticipated, P-scores for the experimental group increased significantly more than those of the control group. Within-subjects effects similarly revealed a significant (F[1, 126] = .003, p < .05) and moderately high (Partial Eta Squared = .068), positive increase in the experimental group's P-scores from the pre-test to the post-test in comparison to those of the control group.

A significant pre-test to post-test interaction also occurred within experimental and control group N2 scores (F[1, 126] = .001, p < .05). Again, as anticipated, the N2-scores for the experimental group increased significantly more than those for the control group from pre-test to post-test. Within-subjects effects followed suit, revealing a significant and substantial (Partial Eta Squared = .068) positive increase in the experimental group's N2-scores from the pre-test to the post-test (F[1, 126] = .003, p < .05) over those of the control groups.

Pre-test to post-test change on the Type Indicator (T) subscale was not significant in this study despite evidence of positive movement in the experimental group. However, as noted previously, the T subscale is less robust than either the P or N2 scores and is most useful when data for those indices is not significant. Since, in this analysis, there was evidence of significant P and N2 interaction, the lack of T-score significance is considered to be of less concern. Utilizer score (U-score) analyses also did not detect any significant interaction. As noted, the U-score reflects the degree of match between those items the participant endorsed as most important and the choice of action selected for that story. This may suggest that the students had not, as of yet, begun exhibiting significant consistency between higher order thinking and requisite action steps.

MES findings

For the MES, student results were analysed through four separate repeated measure Analyses of Variance (ANOVA). The first analysis evaluated participant responses for all three scenarios collectively to determine any changes. The next three analyses of mean scores sought to determine the extent of change within the different MES dimensions (Moral Equity, Relativism and Contractualism) over time. Two of the three related analyses, those for Relativism and Contractualism, showed positive movement from pre-test to post-test; however, contrary to expectation as well as to qualitative indicators, none were significant. It seems that although students in the experimental sections developed significantly along the moral reasoning domain, that development did not translate into significantly greater ethical business perspectives and hypothetical actions.

Supplementary qualitative findings

Students' journal narratives were reviewed in search of prevailing themes that might describe their collective experience in the DPE intervention. The journals were subjected to conceptual content analysis with the intention of identifying and coding frequent words and phrases that reflected common themes in students' expressed views. The coding process was interactive; that is, the thematic codes were developed as themes emerged in the responses and comparative analysis was not conducted in search of predetermined, anticipated themes. Additionally, there was a high level of generalisation applied to the coding of responses. Responses were coded to themes on the basis of implicit as well as exact representation of those themes in order that the greatest possible range of responses could be considered. Primary themes were defined as those themes that were reflected implicitly or explicitly by a majority of the total journal responses. Hand (versus computer assisted) coding has been shown to be most sensitive to implicit meaning (Krippendorff, 2004) and was, thus, the method applied in this analysis.

Six themes emerged that lend support to the finding of significant moral growth among experimental section participants and suggest that their moral growth may have translated into more ethical business perspectives—a finding that was not empirically validated on the MES. The qualitative themes and supportive narratives are presented in Table 4 and described below.

During and following the intervention, students reported an *observed change* in their understanding of moral reasoning and the moral decision-making process. The change primarily involved their discovery that sound ethical decision-making is not a single step but, rather, it is a multiple-step process of inquiry and deliberation. Students reported feeling more confident in ethically challenging situations (*enhanced decision-making*), less uncertain about their own intentions in those situations and more likely to seek advice when unsure. Students also reported the development of a *broadened perspective* with regard to factors that informed their decision-making processes. They had reportedly become more likely to consider the implications of their actions on others and less likely to make ethically sensitive decisions in isolation. In broadening their range of considerations, students also reported greater comfort in objectively *considering multiple options* before determining a particular course of action. They had developed an appreciation for slowing down the decision-making process so as to ensure that a final decision is well informed. During the intervention, a number of students reported the development of *personal ethical principles*. The experience had helped some to define their principles for ethical practice; it had helped others articulate standards that they had already set for themselves. Students further reported that they were *moving toward action* in applying personal ethical standards. Many expressed the realisation that ethical principles discussed were not limited to business and began to monitor and evaluate their application in their day-to-day lives. Finally, students expressed *uncertainty* and concern about their ability to maintain newly identified ethical principles in actual practice. At the same time, they felt that the practice in the classroom would benefit them when faced with real-life dilemmas.

Table 4.   Qualitative themes

Theme	Narrative illustration
Observed change	'I have learned that decision-making is a process and not just one step. This has helped me to be more discerning, cautious and sure about my intentions.' 'This semester has humbled me to the point of realising that I don't always have the best answer to ethical dilemmas. Sometimes it is in the council of others where we truly see the light.'
Enhanced decision making	'I have developed significantly in terms of how I recognise what may potentially be an ethical issue.' 'I never usually stopped to think about my decision making process and how I look at ethical situations, but after taking this course I am much more aware of my cognitive processes.'
Broadened perspective taking	'I realised that the most significant change has been the development of my ethical reasoning from a personal level to a societal level.' 'In this class I have learned to think about other people's lives when making ethical decisions, as well as taking into account that other people have different moral values. I have grown in a way that I really think about the greater good before making decisions.'
Consideration of multiple options	'I now take more time in analysing situations and thinking through various factors, or different perspectives instead of hastily planning what action to take.' 'I approach problems less with a full head of steam and try to focus on evaluating every aspect of the dilemma.'
Personal ethical principles	'This course has challenged me to define my value system and standards, which has actually made me more aware of my decisions and myself.' 'Over the length of this course, I believe that the main benefits I will be taking away with me are awareness, impartiality and dedication to a set of principles.'
Moving toward action	'I am simply more aware about ethical reasoning taking place every single day in my life.' 'It seems that I'm taking a proactive approach to moral reasoning rather than a reactive one.'
Uncertainty	'I don't believe that change has taken place in the normal sense because it takes significant amounts of time or perhaps an evocative experience to allow a person to change their stage of ethical reasoning.' 'My ethical reasoning has not changed much over the course of the semester; however, I have become more aware of my thought process and how I assess ethically trying situations.'

Discussion

The findings of this study offer promising empirical and qualitative support for the proposed utility of promoting the moral reasoning of business students through classroom intervention. Although the utility of DPE has been established in numerous and diverse practice settings, it had not previously been tested with undergraduate business students. Previous research indicates that courses containing explicit moral content, offering consistent supportive learning environments and creating opportunities for critical reflections may enhance the development of moral reasoning (Mayhew & King,

2008). The current study supports such findings, indicating that engaging business students in deliberate exercises to stimulate reflection on the moral aspects of their learning may enhance their ability and potential to reason through ethical courses of action with greater complexity when faced with dilemmas in future practice.

The DIT-II scores indicated that after only one semester of intervention, students in the experimental group increased their incorporation of principled thinking by 10 percentage points. Such an increase suggests that, where previously the students had founded their responses to moral dilemmas on more simplistic or biased reasoning, they now were better able to incorporate multiple perspectives and consider more factors in the decision making process. This was illustrated in the journal of one student who wrote: 'I look at all variables and perspectives now.' Additionally, the significant gain in N2 scores suggests that students were better able to resist and reject the pressures to make simplistic and socially biased ethical choices. As illustration, one student wrote: 'Earlier on in the semester I might have simply settled for a "choose the lesser of two evils" approach, but I think these cases have encouraged me to look in new directions for solutions that actually solve the whole problem.' Generally, the findings of this study indicate that students in the experimental group were, subsequent to intervention, better able to incorporate higher level reasoning into their determination of morality; that is, reasoning based on consensus, due process and the safeguarding of basic rights (Bebeau & Thoma, 2003).

As anticipated, the enhanced reflective component of the DPE intervention appeared to make a powerful contribution to the positive findings. While the importance of reflection within educational realms has often been noted (Schön, 1983, 1987), it is considered to be an ambiguous concept—its exact definition remaining in flux (Jay & Johnson, 2002). The DPE model applied in this study would seem to offer practical insight into the nature of reflective activity that may be needed to stimulate more ethical thought and action in the business realm. Foremost in its effectiveness may be the fact that the promotion of *student reflection was given a place of primary emphasis in the experimental* section, whereas, in the control sections it was considered but not emphasised among other aspects of the learning process. In guided discussions and journal exercises, students in the experimental class were challenged by the researcher to recognise the existence of ethically problematic situations, to evaluate and take personal ownership of knowledge claims within situations of uncertainty and to defend their points of view by developing and articulating commitments to ethical principles (King & Kitchener, 1994). Through the researcher's *purposeful application of constructive mismatching principles*, it is proposed that the educative potential of these challenges was optimised for the students. The effectiveness of mismatching may have been further enhanced by the fact that there was frequent, scheduled, interchange between the researcher and course instructor for the purpose of *ongoing evaluation of students' responses to the challenges of the intervention*. Through such interchange, the challenges of the intervention could be accurately balanced with support necessary to prevent the experience from becoming overwhelming and miseducative. According to the course instructor, the intrusion resulting from DPE intervention (i.e. the team-guided reflection groups, journals

and evaluative dialogue with the researcher) was minimal when compared to the significant developmental benefit that was found to have occurred for the participants (experimental) in this study.

The MES was applied in this study to determine whether detected growth in participants' moral reasoning would translate as expected into more ethical business perspectives. The non-significance of findings on the MES could indicate that the expected translation did not occur; however, that conclusion contradicts the substantial body of developmental research (introduced previously) relating developmental growth to more effective functioning and may be premature in light of several alternative explanations.

As one alternative, the unexpected finding could be attributed to qualitative differences in the constructs being measured by the DIT and MES. Despite the claims about their similarities, the dilemmas used in the two assessment instruments differ contextually; the DIT focuses on issues of macromorality (global issues) (Rest *et al.*, 1999a) while the MES uses dilemmas more closely related to specific contexts and everyday happenings (micromorality) (Rest *et al.*, 1999a). In some contrast to Kohlberg's original notion regarding the consistency or 'structured wholeness' of stage-specific reasoning (Kohlberg, 1984), it has more recently been proposed that individual patterns of moral reasoning may show variability or 'segmentation' depending upon the specific context of a presenting moral dilemma (Beck *et al.*, 1999, p. 440). Drawing from this hypothesis of moral segmentation, it is plausible to suggest that moral perspectives taken when participants were confronted with MES dilemmas specific to their immediate business context could have differed from those taken when they were confronted with the broader, less familiar dilemmas presented in the DIT. Even among more familiar dilemmas, external influences such as religious views, ideological values, cultural mandates, gender roles and institutional pressures may variably influence the perception of those dilemmas by individuals (Lind, 2000). However, the literature with regard to moral segmentation is emergent and, at best, inconclusive. Further research may provide greater clarity regarding the development of moral reasoning across a range of specifically situated contexts that have been linked to moral segmentation.

A second explanation for the unanticipated finding in the study may have been related to the abbreviated length or 'continuity' of the intervention. As indicated previously, meeting the condition of continuity in a DPE intervention typically requires 6 to 12 months of sustained intervention. Given that the intervention in this study occurred over a single academic semester, newly acquired moral reasoning perspectives were still 'fresh' and formative and may not yet have been fully incorporated into students' responsive decisions and action evaluations when they were confronted with hypothetical dilemmas—a phenomenon sometimes referred to as 'decalage' in developmental literature (Morgan *et al.*, 2002). The fact that T-score gains for students in the experimental section were positive (though not significant) in two of three MES criteria further suggests that those gains may have continued toward significance if the intervention had either continued through another semester or been integrated into other coursework within the curriculum.

The finding that moral reasoning development was not accompanied by a positive change in ethical business perspectives is, perhaps, most strongly contradicted in the journal reports of the participants themselves. As noted and illustrated previously, six change-related themes emerged in the journal reports of students in the experimental section related to their own sense of ethical growth, their assumption of a broader perspective, their openness to multiple options, their development of a sense of personal ethics, their commitment to an ethical course of action and their uncertainty and concern about being able to translate ethical principles from classroom to practice. In short, these students *felt* changed by their experience in ways that were largely consistent with the direction of the significant and non-significant statistical findings. The importance of the supplementary qualitative findings that a theory-to-practice translation occurred must not be overlooked.

Conclusion

This study lends useful insight into the question of how to most effectively respond to the growing problem of unethical business practice in the USA. Although ethics education alone may not solve the problem entirely, it is hailed as a critically important element in repairing the tarnished social contract between business and society (Swanson, 2004). Deliberate Psychological Education in particular holds demonstrated promise as an effective pedagogical framework for preparing business students to enter the business profession with more complex moral reasoning capacities. At the very least, its significant impact on the moral reasoning development of business students in the current study provides viable justification for further research in this area.

Future studies are needed to verify that DPE interventions of longer duration will, as proposed, have even greater impact on ethical perspectives and behavioural change in business practice. By more favourably satisfying the developmental learning condition of continuity, DPE interventions of at least two semesters may provide for more thorough 'anchoring' of students' newly acquired capacities for moral reasoning and more effectively encourage their translation into more ethically sensitive behavioural considerations. However, this study measured moral reasoning only at the beginning and end of the DPE experience. Post-testing at intervals beyond the completion of the course would provide an opportunity to examine the long-term retention of the intervention; that is, to explore the stability of the gains in moral reasoning specific to this model of DPE (Rest *et al.*, 1999b).

The current DPE was implemented within a specific course dedicated to business ethics. In view of its apparent benefits, research to further develop and refine DPE integration into courses specific to business ethics content and process is recommended. At the same time, the addition of a dedicated ethics course may not be possible in all undergraduate business education programs and for those programs interventions to promote moral reasoning will have to be disbursed among all courses within the program curriculum. Given its successful history of application in a broad range of learning contexts and environments, future research could determine DPE

to be an effective pedagogical framework for business ethics education whether applied to a single business ethics course or integrated comprehensively into multiple courses.

The developmental learning conditions relating to guided reflection were the primary independent variables for this study. Their nature and scope were intensified in the experimental course section, while the three remaining conditions were largely assumed to be constant for both the experimental and control sections. Given that deliberate refinement of the reflection conditions alone produced significant empirical results and corroborating qualitative feedback, additional refinements of other learning conditions are recommended in future studies in an effort to further optimise student benefit.

First, it is recommended that the increased level of support afforded by the researcher be matched with additional exercises in the classroom to increase the level of challenge and, thus, increase the potential for developmental change. For example, 'reverse debates' in which students assume and defend an ethical position *opposite* to that of their own is an exercise aimed at further challenging students beyond their comfortable perspective. Second, in concert with the increasingly recognised influence of affect on moral decision-making (i.e. Haidt, 2001), it is recommended that interventions deliberately highlighting the affective element be integrated into a DPE curriculum. Such integration could involve student-to-student interactions (small groups) in which they share their reasoning processes with others in an effort to persuade. Doing so could trigger those moral intuitions that Haidt (2001) suggests are critical to one's ultimate decision. As a third recommendation, service-learning or integrated service projects could be applied to bolster the 'role-taking' component of DPE. Here participants could, through service to others, be encouraged to take the perspective of others, on not only a cognitive level, but also an affective one—further personalising the experience and influencing potential developmental change. Finally, it is recommended that the application of technology (business simulations), media (television and film) and personal accounts (speakers, panel discussions) be considered as means to help make the 'academic' relate more to 'real life' and further assist the stimulation of cognitions and emotions, which could be integrated into course discussion and reflective activities.

Research indicates that undergraduate business students continue to score significantly lower than students in other academic majors and the American population generally on assessments of moral development (Marnburg, 2001; McNeel, 1994). Reversing this developmental deficit may require that schools of business education pay particular attention to the incorporation of developmental interventions into their academic curricula. The findings of this research demonstrate that through DPE intervention, cognitive moral development can be effectively facilitated within an undergraduate business student population without untenable revision of an existing academic curriculum. It is proposed that the findings hold exciting prospects for future research and education aimed at achieving more ethically sound practice in an increasingly competitive and often aggressive business world.

References

Bebeau, M. J. & Thoma, S. J. (2003) *Guide for the DIT-II* (Minneapolis, MN, University of Minnesota).

Beck, K., Heinrichs, K., Minnameier, G. & Parche-Kawik, K. (1999) Homogeneity of moral judgement? Apprentices solving business conflicts, *Journal of Moral Education,* 28(3), 429–443.

Bergman, R. (2004) Identity as motivation: toward a theory of the moral self, in: D. Lapsley & D. Narvaez (Eds) *Moral development, self and identity* (Mahwah, NJ, Lawrence Erlbaum), 21–46.

Davison, M. L. (1979) The internal structure and the psychometric properties of the Defining Issues Test, in: J. Rest (Ed.) *Development in judging moral issues* (Minneapolis, MN, University of Minnesota), 223–245.

Ellis, T. S. & Griffith, D. (2001) The evaluation of IT ethical scenarios using a multidimensional scale, *The DATA BASE for Advances in Information Systems,* 32(1), 75–85.

Ethics & Compliance Officer Association (2007) *Organization mission, vision and values.* Available online at: www.theecoa.org/AM/Template.cfm?Section=Mission &Template =/CM/HTMLDisplay.cfm&ContentID=1278 (accessed 1 April 2007).

Fraedrich, J., Thorne, D. M. & Ferrell, O. C. (1994) Assessing the application of cognitive moral development theory to business ethics, *Journal of Business Ethics,* 13(10), 829–838.

Haidt, J. (2001) The emotional dog and its rational tail: a social intuitionist approach to moral judgment, *Psychological Review,* 108(4), 814–834.

Halbesleben, J. R. B., Wheeler, A. R. & Buckley, M. R. (2005) Everybody else is doing it, so why can't we? Pluralistic ignorance and business ethics education, *Journal of Business Ethics,* 56(4), 385–398.

Henthorne, T. L., Robin, D. P. & Reidenbach, R. E. (1992) Identifying the gaps in ethical perceptions between managers and salespersons: a multidimensional approach, *Journal of Business Ethics,* 11(11), 849–856.

Holloway, E. L. & Wampold, B. E. (1986) Relation between conceptual level and counseling-related tasks: a meta-analysis, *Journal of Counseling Psychology,* 33(3), 310–319.

Hunt, D. (1971) *Matching models in education* (Toronto, Ontario Institute for Studies in Education).

Izzo, G. (2000) Compulsory ethics education and the cognitive moral development of salespeople: a quasi-experimental assessment, *Journal of Business Ethics,* 28(3), 223–241.

Jackall, R. (1988) *Moral mazes: the world of corporate managers* (New York, Oxford University Press).

Jay, J. K. & Johnson, K. L. (2002) Capturing complexity: a typology of reflective practice for teachers and educators, *Teaching and Teacher Education,* 18(1), 73–85.

King, P. M. & Kitchener, K. S. (1994) *Developing reflective judgment: understanding and promoting intellectual growth and critical thinking in adolescents and adults* (San Francisco, Jossey-Bass).

Knowles, M. (1980) *The modern practice of adult education* (2nd edn) (Chicago, IL, Association Press).

Kohlberg, L. (1968) Moral development, in: D. Sills (Ed.) *International encyclopaedia of the social sciences* (New York, Crowell, Collier & Macmillan), 489–494.

Kohlberg, L. (1976) Moral stages and moralization: the cognitive developmental approach, in: T. Lickona (Ed.) *Moral development and behavior* (New York, Holt, Rinehart, & Winston), 31–53.

Kohlberg, L. (1984) *Essays on moral development. Vol. II: The nature and validity of moral stages* (San Francisco, CA, Harper & Row).

Kracher, B., Chatterjee, A. & Lundquist, A. R. (2002) Factors related to the cognitive moral development of business students and business professionals in India and the United States: nationality, education, sex and gender, *Journal of Business Ethics,* 35(4), 255–268.

Krippendorff, K. (2004) *Content analysis: an introduction to its methodology* (Thousand Oaks, CA, Sage).

Lind, G. (2000) Off limits: a cross-cultural study on possible causes of segmentation of moral judgment competence. Paper presented at the *Annual Meeting of the American Educational Research Association*, New Orleans, LA, 24–28 April.

Loo, R. (2004) Support for Reidenbach and Robin's (1990) eight-item multidimensional ethics scale, *Social Science Journal,* 41(2), 289–294.

Macfarlane, B. (1998) Business ethics and the idea of a higher education, *Teaching Business Ethics,* 2(1), 35–47.

Marnburg, E. (2001) The questionable use of moral development theory in studies of business ethics: discussion and empirical findings, *Journal of Business Ethics,* 32(4), 275–283.

Mayhew, M. J. & King, P. M. (2008) How curricular content and pedagogical strategies affect moral reasoning development in college students, *Journal of Moral Education,* 37(1), 17–40.

McNeel, S. P. (1994) College teaching and student moral development, in: J. Rest & D. Narvaez (Eds) *Moral development in the professions: psychology and applied ethics* (Hillsdale, NJ, Lawrence Erlbaum), 27–49.

Monson, V. E. & Bock, T. S. (2005) Educating for ethical action: MBA student perceptions of peer needs, *Journal of College and Character,* 2. Available online at: www.collegevalues.org/articles.cfm?a=1&id=355 (accessed 4 February 2007).

Morgan, B., Morgan, F., Foster, V. & Kolbert, J. (2002) Promoting the moral and conceptual development of law enforcement trainees: a deliberate psychological educational approach, *Journal of Moral Education,* 29(2), 203–218.

Mosher, R. & Sprinthall, N. A. (1971) Deliberate psychological education, *Counseling Psychologist,* 2(4), 3–82.

Mudrack, P. E. (2003) The untapped relevance of moral development theory in the study of business ethics, *Journal of Business Ethics,* 42(3), 225–236.

Peace, S. (1995) Promoting the development of mentor and novice counselors: applying theory to practice and research. Paper presented at the *International Conference of the Association for Moral Education*, Fordham University, NY, 16–19 November.

Ponemon, L. A. & Gabhart, D. R. L. (1994) Ethical reasoning research in the accounting and auditing professions, in: J. Rest & D. Narvaez (Eds) *Moral development in the professions: psychology and applied ethics* (Hillsdale, NJ, Lawrence Erlbaum), 101–119.

Reidenbach, R. E. & Robin, D. P. (1990) Toward the development of a multidimensional scale for improving evaluations of business ethics, *Journal of Business Ethics,* 9(8), 639–653.

Reiman, A. J. & Peace, S. D. (2002) Promoting teachers' moral reasoning and collaborative inquiry performance: a developmental role-taking and guided inquiry study, *Journal of Moral Education,* 31(1), 51–66.

Reiman, A. J. & Thies-Sprinthall, L. (1993) Promoting the development of mentor teachers: theory and research programs using guided reflection, *Journal of Research and Development in Education,* 26(3), 179–185.

Rest, J. R. (1979) *Development in judging moral issues* (Minneapolis, MN, University of Minnesota Press).

Rest, J. R. (1986) *Moral development: advances in research and theory* (New York, Praeger).

Rest, J. R. (1994) Background: theory and research, in: Rest J. & Narvaez, D. (Eds) *Moral development in the professions: psychology and applied ethics* (Hillsdale, NJ: Lawrence Erlbaum), 1–26.

Rest, J. & Narvaez, D. (1994) *Moral development in the professions: psychology and applied ethics* (Hillsdale, NJ, Lawrence Erlbaum).

Rest, J. R., Narvaez, D., Thoma, S. J. & Bebeau, M. J. (1999a) DIT II: devising and testing a revised instrument of moral judgment, *Journal of Educational Psychology,* 91(4), 644–659.

Rest, J. R., Narvaez, D., Bebeau, M. J. & Thoma, S. J. (1999b) *Postconventional moral thinking: a neo-Kohlbergian approach* (Hillsdale, NJ, Lawrence Erlbaum).

Richardson, B., Foster, V. A. & McAdams, C. H. (1998) Parenting attitudes and moral development of treatment foster parents: implications for training and supervision, *Child and Youth Care Forum,* 27(6), 409–431.

Royal, C. W. & Baker, S. B. (2005) Effects of a deliberate moral education program on parents of elementary school students, *Journal of Moral Education,* 34(2), 215–230.

Schlaefli, A., Rest, J. R. & Thoma, S. J. (1985) Does moral education improve moral judgment? A meta-analysis of intervention studies using the defining issues test, *Review of Educational Research*, 55(3), 319–352.

Schön, D. A. (1983) *The reflective practitioner: how professionals think in action* (New York, Teachers College Press).

Schön, D. A. (1987) *Educating the reflective practitioner* (San Francisco, CA, Jossey-Bass).

Sims, R. R. & Felton, E. L. (2006) Designing and delivering business ethics teaching and learning, *Journal of Business Ethics*, 63(3), 297–312.

Sprinthall, N. A., Peace, S. A. & Kennington, P. A. D. (2001) Cognitive-developmental stage theories for counseling, in: D. C. Locke, J. E. Myers & E. L. Herr (Eds) *The handbook of counseling* (Thousand Oaks, CA, Sage), 109–129.

Sprinthall, N. A., Reiman, A. J. & Thies-Sprinthall, L. (1996) Teacher professional development, in: J. Sikula (Ed.) *Second handbook of research on teacher education* (New York, Macmillan), 666–703.

Sprinthall, N. A. & Thies-Sprinthall, L. (1983) The teacher as an adult learner: a cognitive view, in: G. Griffin (Ed.) *Staff development: eighty-second yearbook of the National Society for the Study of Education* (Chicago, University of Chicago Press), 13–35.

Stoppard, J. M & Miller, A. (1985) Conceptual level matching in therapy: a review, *Current Psychological Research and Reviews*, 4(1), 47–68.

Sucher, S. J. (2005) *Moral reasoning: integrating moral deliberation into decision making* (No. 604054). Boston, MA: Harvard University, Harvard Business School Publishing.

Swanson, D. L. (2004) The buck stops here: why universities must reclaim business ethics education, *Journal of Academic Ethics*, 2(1), 43–61.

Trevino, L. K. (1992) Moral reasoning and business ethics: implications for research, education and management, *Journal of Business Ethics*, 11(5/6), 445–459.

Turiel, E. (1983) Domains and categories in social-cognitive development, in: W. Overton (Ed.) *The relationship between social and cognitive development* (Hillsdale, NJ, Lawrence Erlbaum), 69–106.