# STUDENT ETHICAL AWARENESS AND BUSINESS PROGRAM MATRICULATION: EVIDENCE FROM THE U.S.

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**ABSTRACT**

*An ethics survey of business students was conducted over a five semester period in a variety of business courses at a regional state university in the Midwest. The business program has adopted an across the curriculum approach to ethical instruction, and has also mandated a one-semester ethics course for all business majors. The purpose of the study was to prove or disprove the hypothesis that students completing the courses required by the business curriculum show a measurable increase in ethical awareness. The results of the survey revealed no significant correlation between class level (i.e. sophomore, junior, senior) and increased ethical awareness, and the completion of the ethics course only increased ethical awareness for individual (non-business) situations. However, a positive correlation between ethical awareness and two other factors was revealed: Both females and students with higher GPA's appear to be more ethically aware than the general population.*

**JEL:** I21

**KEYWORDS:** Ordered logit model, student ethical awareness

## INTRODUCTION

The past decade has witnessed several high profile business scandals in the U.S., from Enron to the more recent Goldman Sachs and Bernie Madoff cases. The associated institutional breakdown of trust in business has led many to question whether corporate officers and boards of directors are losing legitimacy (Khurana and Nohria, 2008; Molyneaux, 2004). In response, specific organizations and society as a whole have come to recognize that ethical and socially responsible behavior plays a crucial role in good business practices (Nicholson and DeMoss, 2009).

There is a long standing controversy over whether business ethics can be taught, and if so, what methodology is most suitable to the task. Some argue that, desirable as sound business ethics may be, it simply can't be taught in the classroom (Stape, 2002). Business ethics has been caustically referred to as being an oxymoron (Townley, 1992) and, during the 1970's and 1980's, writers as influential as Peter Drucker and Milton Friedman argued that it cannot be taught at all (Nguyen *et. al*., 2008).

A study measuring attitudes towards unethical behavior, love of money, Machiavellianism, and risk tolerance identifies business students as being more likely to engage in unethical behavior than psychology students (Tang *et al.,* 2008). The authors state that corruption and scandals are caused, not by lack of intelligence, but by lack of wisdom or virtue. They also argue that social institutions, as well as business schools, CEO's, corporate culture, and compensation systems have significant impacts on managers' ethical behavior. This corroborates earlier studies which suggest that organizational culture and other organizational factors which occur after formal education play a major role in shaping the way individuals perceive moral responsibility (Frederick and Weber, 1987; Kelley *et al*., 1989). Similarly, Awasthi (2008) conducted a study which revealed that exposing students to a business ethics course

influenced their managerial judgment and managerial intent, but did not directly influence moral judgment. However, the literature casting doubt on the efficacy of teaching business ethics does not recommend abandonment of the discipline, nor does it condemn it as useless. For example, Tang *et al.* (2008) recommend that schools, organizations, and society as a whole need to work together to promote ethical behavior.

The purpose of this study is to determine whether undergraduate business students demonstrate an increase in ethical awareness as they progress through the program and complete a required course in business ethics. The study was conducted over a five semester period from spring 2008 through spring 2010 at a regional state university in the Midwest, with students sampled from courses in accounting, economics, finance, and entrepreneurship. In addition to requiring a one-semester business ethics course, the business program has adopted an across the curriculum approach to ethical instruction.

The paper is organized as follows: Section 2 provides a literature review, section 3 presents the data and methodology, section 4 discusses the empirical results, and the conclusion is presented in section 5.

## LITERATURE REVIEW

There is a body of literature indicating a positive correlation between teaching business ethics and changing student awareness of ethics in business. A study examining undergraduate student learning in business ethics, particularly ethical judgment, indicated that the more students learn about contractualism ethics the less likely they are to engage in unethical behavior (Nguyen *et. al*., 2008). Research also suggests that moral development continues during the college experience and that knowledge gained during this experience has a positive correlation to moral development (King and Mayhew, 2002; Williams and Dewett, 2005). In addition, while commenting on Williams and Dewitt's work as part of their own study, Cox *et. al*. (2009) state that their review of the business ethics literature indicates "business ethics education can be effective in increasing students' awareness of moral issues, promoting students' moral development, and promoting students' ability to handle complex ethical decision making."

In a work devoted to the subject of teaching ethics, Gilbert (1992) stated that exposure to business ethics is necessary in order to increase student's awareness of the ethical components of business situations as well as to improve their ethical reasoning. Klugman and Stump (2006) posit that teaching ethics enhances student's critical reasoning and therefore makes them better able to effectively deal with ethical dilemmas. Langan (1990) went so far as to state that exposure to business ethics courses prepares students to face ethical dilemmas in the workplace by broadening their knowledge base relative to business ethics, which in turn increases their analytical reasoning skills.

A study involving undergraduate students demonstrated that the more students learn about ethics the less likely they are to report that they would engage in unethical behaviors as depicted in scenarios presented to them (Nguyen *et al*., 2008). Furthermore, research supports a link between changing ethical mores and educational accomplishments (Gundersen *et al.,* 2008). As individuals progress through different levels of cognitive moral development, their ability to deal with ethical dilemmas improves (Christensen and Kohls, 2003; Goolsby and Hunt, 1992; Kohlberg, 1969). As a result, a pattern of increasing ethical standards should develop as individual's progress educationally (Gundersen *et al.,* 2008). Research has also linked business ethics education with changing student attitudes towards ethics in general, as well as with improving their understanding of the complexity of ethical decision making (MacFarlane, 2001).

It is generally agreed that ethics can and should be taught across the curriculum, and many believe such across the curriculum programs to be effective in developing student's moral standards (Gundersen *et al., 2008)*. However, as described by Cox *et al.* (2009), much of the support is based on anecdotal evidence.

Furthermore, several studies cast doubt on the effectiveness of ethics instruction (Cole and Smith, 1995; Wynd and Maget, 1989).

There are various rationales advanced for the belief that ethics cannot, or should not, be taught in schools of higher education. Kultgen (1988) suggests that efforts at ethical instruction are better left to institutions outside higher education. He suggests that the family or religious institutions are more adept at ethical instruction and the development of individual moral values. Others, like McDonald and Donleavy (1995) and Bishop (1992), suggest that many schools give only lip service to the teaching of ethics because they have adopted such programs for appearances sake only. They conclude that such programs are therefore ineffective. This study attempts to further clarify the link between ethics instruction in higher education and student awareness of ethical issues.

## DATA AND METHODOLOGY

The data for this study originated from a classroom survey taken by students attending a regional state university. The survey was conducted in undergraduate classes that were either held face-to-face or delivered via the internet during the semesters of spring 2008, fall 2008, spring 2009, fall 2009, and spring 2010. Students completing the survey were business and non-business majors taking courses in accounting, economics, finance, or entrepreneurship as part of the general education requirement, business core, or business specialization.

The survey respondents were asked questions concerning gender, year in college, cumulative grade point average, major, and completion of the business ethics course. The questionnaire also measured ethical awareness associated with both personal and business situations. Table 1 provides the list of questions as well as sample statistics for each question, and Table 2 reveals the correlations between questions.

Table 1: Survey Summary Statistics (*N*=410)

| Variable | Description | Distribution* |
|---|---|---|
| **Individual Situations** | | |
| Q1 | In preparing your income taxes, you claim charitable deductions that are not valid. | 1-3.90%; 2-4.63%; 3-7.80%; 4-24.63%; 5-59.02% |
| Q2 | You use your computer at work for personal reasons such as shopping online. | 1-7.07%; 2-19.76%; 3-21.95%; 4-30.00%; 5-21.22% |
| Q3 | You tell a potential buyer of your used car that it gets 30 mpg, but in reality the car gets less than 25 mpg. | 1-4.15%; 2-7.32%; 3-7.32%; 4-35.12%; 5-46.10% |
| Q4 | You download music for free off the internet. | 1-11.22%; 2-18.29%; 3-20.24%; 4-28.54%; 5-21.71% |
| Q5 | You give a store clerk $20 to change and she gives you change for $30 and you keep the extra money. | 1-6.34%; 2-6.34%; 3-7.80%; 4-23.66%; 5-55.85% |
| QIS | Sum of Q1 through Q5 | Mean = 19.28, Std. dev. = 0.28 |
| **Business Situation** | | |
| Q6 | A job candidate was rated poorly and would never be considered for a position with your company but you tell her that you will hang onto her resume and consider her for future job openings. | 1-10.49%; 2-30.98%; 3-26.83%; 4-20.73%; 5-10.98% |
| Q7 | You smell alcohol on a valuable employee's breath after his lunch hour. Company policy requires termination for drinking on the job. Instead, you give him a verbal warning and tell him never to get caught again. | 1-5.12%; 2-15.12%; 3-21.46%; 4-34.15%; 5-24.15% |
| Q8 | You fill a job in your department with someone you personally pick rather than posting the position for all employees to see. | 1-5.37%; 2-11.95%; 3-24.63%; 4-30.00%; 5-28.05% |
| Q9 | You make copies of copyrighted materials and distribute them in a business meeting. | 1-5.37%; 2-10.00%; 3-24.88%; 4-27.56%; 5-32.20% |
| Q10 | Your boss calls from out of town and instructs you to forge his signature on a purchase order and bring it to the purchasing manager for processing. | 1-7.07%; 2-18.05%; 3-23.41%; 4-23.66%; 5-27.80% |
| QBS | Sum of Q6 through Q10 | Mean = 17.30; Std. dev = 3.89 |
| QTS | Sum of QIS and QBS | Mean = 36.58; Std. dev = 7.26 |

*This table shows the description of each of the questions contained in the survey and the distribution of the responses to each of the questions.*
**Coding applied to all survey questions is as follows: 1–Definitely not an ethical issue; 2–Probably not; 3–Maybe (not sure); 4–Probably; 5–Definitely an ethical issue.*

Table 2: Spearman Rank Correlation Matrix

| | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Q1 | 1.00 | | | | | | | | | |
| Q2 | 0.39 | 1.00 | | | | | | | | |
| Q3 | 0.57 | 0.38 | 1.00 | | | | | | | |
| Q4 | 0.24 | 0.35 | 0.36 | 1.00 | | | | | | |
| Q5 | 0.53 | 0.39 | 0.59 | 0.36 | 1.00 | | | | | |
| Q6 | 0.17 | 0.21 | 0.27 | 0.31 | 0.27 | 1.00 | | | | |
| Q7 | 0.24 | 0.32 | 0.24 | 0.25 | 0.31 | 0.30 | 1.00 | | | |
| Q8 | 0.27 | 0.30 | 0.31 | 0.25 | 0.39 | 0.26 | 0.30 | 1.00 | | |
| Q9 | 0.40 | 0.36 | 0.39 | 0.34 | 0.35 | 0.27 | 0.30 | 0.39 | 1.00 | |
| Q10 | 0.21 | 0.23 | 0.18 | 0.20 | 0.22 | 0.17 | 0.29 | 0.22 | 0.36 | 1.00 |

*This table shows the correlation between any two questions contained in the survey. The closer the number to 1 the more correlation between the two questions.*

Table 3 summarizes the characteristics of the respondents. The explanatory variables include the student's class level (Year), cumulative grade point average (GPA), whether or not the students major is business (Business), gender (Gender), and whether or not students have completed the Business Ethics class (Ethic). In total 436 students were surveyed, 410 of which produced valid questionnaires. The majority of the respondents were majors in business (approximately 73 percent), and nearly three-quarters were in their junior or senior year. As business ethics was only recently added as a requirement in the college, only 13% had completed this course at the time of the survey.

Table 3: Demographic Summary Statistics (*N*=410)

| Variable | Description | Distribution (%) | Coding |
|---|---|---|---|
| Year | 1. Freshman | 9.02 | As described |
| | 2. Sophomore | 17.07 | |
| | 3. Junior | 35.12 | |
| | 4. Senior | 38.54 | |
| GPA | Cumulative Grade Point Average | | As described<br>Mean = 2.96<br>Std. dev. = 0.47 |
| Business | 0 if non-business major | 27.07 | |
| | 1 if business major | 72.93 | |
| Gender | 0 if female | 47.80 | As described |
| | 1 if male | 52.20 | |
| Ethic | 0 if not taken Business Ethics Class | 86.83 | |
| | 1 if completed Business Ethics Class | 12.93 | |

*This table shows the demographic statistics of the respondents whose completed surveys are utilized in the study.*

Given the discrete, ordered, and multinomial nature of the survey data, the responses of the ethical awareness survey were modeled using an ordered logit model. It is assumed that the error term, $\varepsilon_i$, follows a logistic distribution. The assumption that the $\varepsilon_i$ are normally distributed would result in an ordered probit model. Further, the model was used to evaluate the factors that influence the degree of ethical awareness which may be modeled as a linear function of the observable explanatory variables, $x_i$, and unobservable factors, $\varepsilon_i$, according to Greene (2003) as

$$y^* = x_i\beta_i + \varepsilon_i \quad (1)$$

where $y^*$ is a continuous latent variable which is not observable, given that the respondents are only provided with $j$ possible choices and will choose the one that best reflects the degree of their ethical awareness regarding the respective situation. The respondent's ethical awareness concerning each situation can be segregated into thresholds $\alpha_j$, where $j = \{1, 2, 3, 4, 5\}$. Each student ranked his/her ethical awareness by classifying their response to each situation as definitely not an ethical issue,

probably not an ethical issue, maybe an ethic issue, probably an ethical issue, and definitely an ethical issue. Hence, we observe:

$$\begin{array}{ll} y_i = 1 \text{ (definitely not an ethical issue)} & \text{if } y_i^* \le \alpha_1 = 1 \\ y_i = 2 \text{ (probably not an ethical issue)} & \text{if } \alpha_1 < y_i^* \le \alpha_2 \\ y_i = 3 \text{ (maybe an ethical issue)} & \text{if } \alpha_2 < y_i^* \le \alpha_3 \\ y_i = 4 \text{ (probably an ethical issue)} & \text{if } \alpha_3 < y_i^* \le \alpha_4 \\ y_i = 5 \text{ (definitely an ethical issue)} & \text{if } \alpha_4 < y_i^* \le \alpha_5 \end{array} \quad (2)$$

where the unknown $\alpha_j$s are estimated along with the $\beta$s. The $\alpha_j$s are restricted such that $\alpha_1 < \alpha_2 < \alpha_3 < \alpha_4 < \alpha_5$, which is required for positive probability estimates. If the error term, $\varepsilon_i$, is assumed to be logistically distributed, the probabilities that the students rank the degree of ethical issue are given as:

$$Pr_{ij} = Prob\langle y_i = j | x_i \rangle = F\left(\alpha_j - x_i\beta\right) - F\left(\alpha_{j-1} - x_i\beta\right) \quad (3)$$

where $i$ = 1 to 410 and $j$ = 1 to 5. $F(\cdot)$ is defined as a cumulative logistic distribution function with mean zero and standard deviation $\sigma = \pi/\sqrt{3}$. The maximum likelihood parameter estimates (MLEs) are obtained by maximizing the log likelihood function with respect to $\beta$ and $\alpha$,

$$L(\beta, \alpha) = \sum_{i=1}^{I} \sum_{j=1}^{J} \delta_{ij} ln\left(Pr_{ij}\right) \quad (4)$$

where $\delta_{ij}$ is an indicator variable equal to one if student $i$ ranks the degree of $j$, and zero otherwise. Further, the constant term in the linear regression model is set to zero without any loss of generality in the estimation. As is the case with binary models, the marginal effects of the exogenous variables on the probabilities are not equal to the coefficients, thus only the signs are unambiguous. Accordingly, the marginal effects are computed by taking the first derivative of the probabilities in equation (3) with respect to $x_i$.

## DISCUSSION AND EVALUATION

The results of the ordered logit model are analyzed in terms of the overall significance of the model and the influence of each explanatory variable on ethical awareness. Table 4 presents the estimated ordered logit model for the degree of ethical awareness of the five predetermined scales. *QIS* in column 2 represents the cumulative scales of ethical awareness for each individual situation. *QBS* in column 3 represents the cumulative scales of ethical awareness for each business situation, and *QTS* in column 4 represents the cumulative scales of ethical awareness for both individual and business situations.

For the estimations of all three situations, *QIS*, *QBS*, and *QTS*, the Likelihood Ratio tests show the regression models are highly significant, with the significance of the Chi-square statistics at the one percent level or higher. The results indicate that the explanatory variables are significantly related to the dependent variables in all three situations.

For the ethical awareness estimate of individual situations, the variable representing the cumulative grade point average of respondents (*GPA*) is positive and significant ($p < 0.01$), thus suggesting that students who perform better in academics have more awareness of the given individual situation. The variable *Gender*, which is a binary variable with 1 indicating male and 0 for female, is negative and significant ($p < 0.05$), implying that female respondents have relatively more ethical awareness toward the individual situations. The positive and significant coefficient of *Ethic* ($p < 0.1$) suggests that students who have taken the Business Ethics class are more ethically aware with regard to individual situations.

For the ethical awareness estimate of business situations, only the *Gender* variable is significant at the 10 percent level or better. As is the case with individual situations, female respondents are relatively more aware of possible ethical issues in the given business situation. For the ethical awareness estimate of the two situations combined, both *GPA* and *Gender* are statistically significant at the one percent level or better. Similar to the estimates for individual situations, both cumulative grade point average and gender have a positive influence on over all ethical awareness.

Table 4: Ordered Logit Model: Explanatory Variables Coefficient Values

| Explanatory variables | QIS | QBS | QTS |
|---|---|---|---|
| Year | 0.08 (0.10) | -0.05 (0.10) | 0.02 (0.10) |
| GPA | 0.94 (0.22)[a] | 0.33 (0.21) | 0.70 (0.22)[a] |
| Business | -0.001 (0.20) | 0.01 (0.21) | 0.03 (0.21) |
| Gender | -0.45 (0.19)[b] | -0.66 (0.20)[a] | -0.65 (0.20)[a] |
| Ethic | 0.43 (0.25)[c] | 0.16 (0.25) | 0.37 (0.25) |
| Log likelihood | -1088.39 | -1103.70 | -1320.03 |
| LR test | 42.70 | 20.62 | 35.78 |
| Pseudo-$R^2$ | 0.10 | 0.05 | 0.08 |

*This table shows the results of the ordered logit model with three general situations as explanatory variables, including individual situation, business situation, and the two situations combined. Standard errors are in parentheses where [a] indicates significant at 1%; [b] indicates significant at 5%; and [c] indicates significant at 10%.*

The marginal effects of the explanatory variables that are statistically significant to the probability of observing a positive ethical attitude are reported in Table 5. In an ordered logit model, a unit change in the explanatory variable will have marginal effects on each situation of the ethical awareness scales. For example, the marginal effect of a variable with a positive sign would imply a shift in the probability distribution of the scale variable to the right, i.e. toward a more positive view of an ethical issue, but the marginal effect on each situation will be different in magnitude and direction. For instance, the *GPA* variable has a marginal effect of 0.05 for individual situations and 0.08 for the combined situations. Therefore, students with a higher GPA are 5 percent more ethically aware of individual situations and 8 percent more ethically aware of both individual and business situations.

Table 5: Marginal Effects of Significant Variables at Means

| Explanatory variables | QIS | QBS | QTS |
|---|---|---|---|
| GPA | 0.05 | | 0.08 |
| Gender | -0.02 | -0.16 | -0.08 |
| Ethic | 0.02 | | |

*This table shows the marginal effects of the explanatory variables that are statistically significant to the probability of observing a positive ethical attitude from the estimation presented in Table 4.*

The marginal effects of female respondents on the ethical awareness scale are 2 percent, 16 percent, and 8 percent higher than male respondents for individual, business, and combined situations, respectively. Students who have taken the Business Ethics class are 2 percent more ethically aware on individual situations than those who have not taken the class.

Table 6 presents the estimated ordered logit model for the degree of ethical awareness for each of the ten situations, and Table 7 presents the corresponding marginal effects of the significant explanatory variables. Students who are at higher year in college are more ethically aware of situation 1 (*Q1*), while students who are at a lower year in college are more ethical aware of situation 6 (*Q6*). Further, students who maintain a higher cumulative grade point average tend to be more concerned with ethical issues in all situations except situations 6 (*Q6*), 7 (*Q7*), and 10 (*Q10*). Students who major in business are less

ethically aware in situation 6 *(Q6*), but more ethically aware in situation 10 (*Q10*). Female students are more likely concerned with an ethical issue in situations 2 (*Q2*), 4 (*Q4*), 6 (*Q6*), 7 (*Q7*), and 8 (*Q8*).

Table 6: Ordered Logit Model: Explanatory Variables Coefficient Values

| Explanatory variables | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | 0.21 | 0.11 | 0.04 | -0.04 | 0.01 | -0.29 | 0.15 | -0.07 | -0.08 | 0.15 |
| | (0.10)[b] | (0.09) | (0.10) | (0.09) | (0.10) | (0.10)[a] | (0.09) | (0.10) | (0.10) | (0.09) |
| GPA | 1.33 | 0.68 | 0.62 | 0.59 | 0.41 | 0.18 | -0.17 | 0.35 | 0.59 | 0.05 |
| | (0.25)[a] | (0.20)[a] | (0.22)[a] | (0.21)[a] | (0.21)[c] | (0.20) | (0.19) | (0.21)[c] | (0.20)[a] | (0.20) |
| Business | 0.05 | 0.24 | -0.34 | 0.29 | -0.12 | -0.37 | -0.09 | -0.22 | 0.18 | 0.46 |
| | (0.23) | (0.20) | (0.22) | (0.20) | (0.22) | (0.20)[c] | (0.20) | (0.20) | (0.21) | (0.21)[c] |
| Gender | 0.18 | -0.40 | -0.01 | -0.75 | -0.27 | -0.38 | -0.61 | -0.39 | -0.24 | -0.28 |
| | (0.21) | (0.18)[b] | (0.20) | (0.19)[a] | (0.20) | (0.19)[b] | (0.19)[a] | (0.19)[b] | (0.19) | (0.18) |
| Ethic | 0.34 | 0.38 | 0.04 | 0.32 | 0.21 | 0.18 | 0.02 | 0.10 | 0.16 | 0.05 |
| | (0.35) | (0.28) | (0.27) | (0.28) | (0.27) | (0.26) | (0.24) | (0.24) | (0.25) | (0.28) |
| Log likelihood | -439.28 | -613.88 | -500.89 | -625.55 | -494.11 | -614.70 | -599.12 | -598.35 | -589.01 | -622.22 |
| LR test | 43.37 | 27.45 | 14.32 | 35.45 | 8.24 | 18.00 | 13.87 | 11.75 | 13.77 | 11.73 |
| Pseudo-$R^2$ | 0.10 | 0.07 | 0.03 | 0.08 | 0.02 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 |

*This table shows the results of the ordered logit model with all ten survey questions as explanatory variables. Standard deviations are in parentheses, where [a] indicates significant at 1%; [b] indicates significant at 5%; and [c] indicates significant at 10% .*

Table 7: Marginal Effects of Significant Variables at Means

| Explanatory variables | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | 0.002 | | | | | -0.06 | | | | |
| GPA | 0.01 | 0.05 | 0.08 | 0.09 | 0.08 | | | 0.08 | 0.09 | |
| Business | | | | | | -0.08 | | | | 0.10 |
| Gender | | -0.03 | | -0.11 | | -0.08 | -0.15 | -0.09 | | |
| Ethic | | | | | | | | | | |

*This table shows the marginal effects of the explanatory variables that are statistically significant to the probability of observing a positive ethical attitude from the estimation presented in Table 6.*

## SUMMARY AND CONCLUSION

The objective of the study was to test the hypothesis that students completing required business courses have higher ethical awareness. The data used to test the hypothesis was obtained from surveys that asked students to rank the degree to which they believed an ethical issue was associated with a particular situation. The responses were then analyzed using an ordered logit model to determine what variables significantly affect student ethical awareness.

There is modest support that students who have completed an ethics course are more ethically aware. However, the completion of the ethics course only significantly affects ethical awareness as measured by the questions relating to individual situations, and not for those relating to business situations. Furthermore, there appears to be no correlation between class level and ethical awareness. Thus, student understanding of ethical awareness does not significantly improve as they progress toward graduation. However, the study reveals that students who perform better academically, as evidenced by a higher GPA, possess better ethical awareness relative to individual situations. In addition, females possess relatively more ethical awareness in both individual and business situations than their male counterparts. Overall, it appears that most of the differences in ethical awareness between students are the result of factors unrelated to the curriculum, although a stand-alone ethics course does appear to have a modest impact.
It should be emphasized that this is an exploratory study conducted on campus in one small upper Midwestern university. It is possible that results gathered elsewhere, or results gathered using different sampling tools, may produce different results. However, the results suggest further study of the

relationship between gender, GPA, and ethical awareness may prove a useful addition to the literature. Furthermore, it would be of interest to probe the link between other non-curriculum related variables and ethical awareness. Further research is also needed to determine potentially effective ways to teach ethics.

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