

Towards a Framework of Code Familiarity and Students' Ethical Decision Making in E-Learning Programs

Michelle M. Ramim

H. Wayne Huizenga School of Business & Entrepreneurship, Nova Southeastern University,
Fort Lauderdale, Florida, USA, ramim@nova.edu

ABSTRACT

Ethical decision making was investigated in various disciplines. However, with the growing popularity of the Internet, new ethical challenges emerge. A framework was developed for students' ethical decision making based on their familiarity with code of conduct, their academic experience, and their experience with the use of technology. Results of nearly 360 respondents show that familiarity with code of conduct and academic experience are significant predictors of ethical decision making.

Keywords: Academic experience, code familiarity, e-learning networks, ethical decision making, experience with technology.

INTRODUCTION

With the accelerating popularity of e-learning programs, distance education students are confronted frequently with the need to make morally correct actions when faced with ethical challenges in completing course requirements [10, 24]. According to Kritzinger and Von Solms [19] and Zhang, Zhao, and Nunamaker [34], e-learning is a technology-based learning in which instruction is electronically conveyed synchronously and asynchronously to remote students via a computer network. The central aim of this study was to investigate the contribution of key constructs reported by prior literature to individual's ethical decision making in the context of e-learning programs.

THEORETICAL BACKGROUND

Unethical Conduct

Rawwas, Al-Khatib, and Vitella [28], McCabe [23], as well as Pincus and Schmelkin [27] described an increase in unethical conduct among students in higher educational institutions. Investigators such as Kennedy, Nowak, Raghuraman, Thomas, and Davis [15], Matthews [22], and Saunders [29] also documented an increase in unethical conduct by distance education students at higher educational institutions. According to Rawwas et al., McCabe, as well as Pincus and Schmelkin, substantial numbers of these students acknowledge making unethical decisions that result in unethical conduct in completing degree requirements.

Dorantes, Hewitt, and Goles [8] as well as Fang [9] referred to ethical decision making as the individual's ability to make a decision based on what is a morally correct action, when facing an ethical challenge. Pillsbury [26] as well as Smith, Davy, Rosenberg, and Haight [30] reported that a substantial number of students have acknowledged making unethical decisions that resulted in unethical conduct during their academic experience.

According to Kritzinger and Von-Solms [19], Naude and Hörne [24], as well as Rawwas et al. [28], unethical conduct results from violations of the university's code of conduct such as plagiarism, cheating, utilizing subject matter experts, bribing faculty members, falsification of information, and copying from other students' work. In recent years, unethical conduct resulting from technology-related violations has emerged, including direct cyberincursions such as denial of service (DoS) and distributed denial of service (DDoS) attacks on the e-learning network, e-mail interception, hacking, inappropriate file sharing, unauthorized access to e-learning network resources, and spoofing attacks by students who impersonate their peers to falsify data.

Use of Technology

According to Hamilton [11] and Littman [20], the utilization of technology to support access to e-learning networks and network applications such as e-mail and Web-based online discussion forums has increased significantly in higher educational institutions. The remarkable growth and availability of e-learning technologies also provide new opportunities for students to achieve personal goals such as graduation or obtaining good grades, while engaging in unethical conduct. Separately, some students fail to distinguish between ethical conduct and unethical conduct when accessing e-learning networks applications. Some of which may be attributed to the lack of updated University Code of Conduct policy. A university's code of conduct should be generally updated annually to reflect the introduction of new tools, technologies, services, and applications [24].

Code of Conduct and Familiarity

Chonko, Wotruba, and Loe [4] defined a code of conduct as a set of guidelines for ethical decision making created by an organization. According to Chonko et al., a code of conduct serves to convey the ethical values and standards of an educational institution to its members. Rawwas et al. [28] determined that the existence of an organization's code of conduct will not necessarily ensure ethical decision making. As noted by Chonko et al., a code of conduct is effective when university students are familiar with this code and use it to guide their decisions and actions. Chonko et al. found that familiarity with an institution's code of conduct is a major factor associated with ethical decision making by members of an organization.

To facilitate ethical decision making, higher educational institutions sponsoring online courses generally should provide a code of conduct designed to deter students' unethical conduct. Kidwell, Wozniak, and Laurel [17] found that institutions with codes of conduct report lower levels of unethical conduct than do institutions without codes. Kidwell et al., however, identified inconsistencies in the enforcement of codes of conduct among higher educational institutions and indicated that some higher educational institutions also did not endorse a code of conduct governing student behavior. According to Kidwell et al., university students' familiarity with a code of conduct is a key factor associated with their ethical decision making.

Wotruba, Chonko, and Loe [33] defined code of conduct familiarity as the individual's acknowledgement that the code exists and is aware of its content. Typically, distance education students and students attending conventional on-campus classes formally agree to follow rules and precepts in their university's code of conduct by signing a formal statement [25]. Though such process typically occurs at the initiation point of the academic program, but rarely repeated in subsequent terms. According to McCabe and Pavela [23], higher educational institutions should increase their efforts in familiarizing students with the code of conduct in order to curtail unethical conduct. They also note that students should become familiar with the code of conduct in order to use this code effectively as a guide for ethical decision making, though they do not offer best practices.

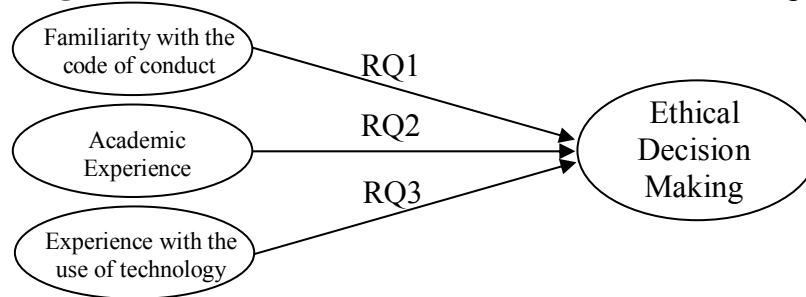
According to Cronan, Foltz, and Jones [6] as well as Harris, Cummings, and Fogliasso [12] in their research on the extent to which a code of conduct contributes to ethical decision making, such extent of contribution remains necessary in order to understand factors that deter unethical conduct. Despite findings by researchers such as Kidwell et al. [17], McCabe and Pavela [23], Naude and Hörne [24], as well as Rawwas et al. [28], issues related to the role of code of conduct familiarity in ethical decision making remain unsolved, particularly, in higher educational institutions with e-learning programs.

PROPOSED FRAMEWORK

The proposed framework is based on an analysis of the following factors that impact students' ethical decision making: their academic experience, their experience with the use of technology, and, their familiarity with university's code of conduct. According to Chonko et al. [4], Hinman [14], and Kennedy et al. [15], each of these factors is associated with students' unethical decision making. Low et al. [21] investigated the contribution of students' academic experience and students' familiarity with their university's code of conduct to their unethical decision making. Smith et al. [30] noted that in order to avoid "future cheating, educators should consider intensified efforts to educate students early in their academic careers as to the standards of conduct expected of all members of the profession" [p. 62]. They also found that "valuable insights might also be gained from future research that examines the influence of ... in-class emphasis of professional conduct, on student cheating" [30, p. 62].

Researchers, including Carswell and Venkatesh [2], Davis [7], as well as Chau, and Hu [3] there is a relation among perceptions, intentions and actual behavior. Venkatesh, Morris, Davis, and Davis [31] noted that in some instances measuring perceptions can play a surrogate role for measuring actual behavior. Furthermore, Kerkvliet and Sigmund [16] noted that in some instances individuals may not be inclined to admit their behavior honestly, consequently, measuring individuals' perceptions may provide a reasonable alternative. Figure 1 depicts the conceptual map for the proposed framework for ethical decision making in e-learning programs.

Figure 1. A framework of students' ethical decision making



The research questions that were investigated in this study are the following:

- RQ1: What is the contribution of *students' familiarity with the code of conduct* to their *ethical decision making* enrolled in post-secondary e-learning programs?
- RQ2: What is the contribution of students' *academic experience* to their *ethical decision making* in post-secondary e-learning programs?
- RQ3: What is the contribution of students' *experience with the use of technology* to their *ethical decision making* in post-secondary e-learning programs?

METHODOLOGY

Participants

A sample size of 360 students was utilized, consisting of students enrolled in a business school at two higher educational institutions in the U.S. that utilized WebCT™ as their e-learning environment. The sample consisted of students, both male and female, in the age range of 18-65 years old, and with English as a primary learning language.

Survey

A Web based survey was utilized to assess the contribution of the factors of students' familiarity with the code of conduct, their academic experience, and their experience with the use

of technology to their ethical decision making in higher educational e-learning programs. Validated questions for the instrument were adopted, by minor revisions to the survey questions' text to fit the focus of this study from Brown and Choong [1], Carswell and Venkatesh [2], Chonko et al. [4], Hasan [13], Kennedy et al. [15], Kreie and Cronan [18], Smith et al. [30], as well as Wilfong [32].

Participants were asked to indicate their level of agreement with statements related to their familiarity with the students' code of conduct (FCC) at their higher educational institution using a five-point Likert-type scale (1= strongly disagree to 5= strongly agree). For the measure of academic level (ACE), participants were asked to indicate their academic experience by selecting one of the five academic levels: freshman, sophomore, junior, senior, and graduate. Additionally, participants were asked to indicate their experience with the use of technology (TEX) via a five-point Likert-type scale (1= novice to 5= expert). For the measure of students' ethical decision making (EDM), participants were asked to indicate their judgment about the severity level of several elements of students' conduct in e-learning programs using a five-point Likert-type scale (1= very unethical to 5= not at all unethical). Survey items are presented in Appendix A.

Data Analysis and Results

A total of 360 responses were collected were collected over a period of four weeks representing approximately a response rate of over 40%. Following Mahalanobis distance analysis, four cases were eliminated from further analyses due to demonstration of multivariate outliers. Thus a total of 356 usable responses were used in the remaining analyses. Results demonstrated a roughly equal gender distribution, with slightly more females than males. Most of the participants were between the ages of 18 and 30. Results also demonstrated that about two-thirds of the participants were undergraduate students while the rest, approximately one third of the participants, were graduate students. Finally, most of the participants had been in higher education between three and seven years. The results provided evidence that all three variables have high Cronbach's α (.878, .930, and .922 for FCC, EDM, and TEX respectively), demonstrating high reliability for the measures.

Ordinal Logistic Regression was performed using SPSS to determine the contribution of each of the three aforementioned independent variables (FCC, ACE, and TEX) to the probability of the dependent variable (EDM). Regression results for predicting the probability of students' ethical decision making using the three independent variables demonstrated an overall significant model with Log Likelihood of -290.3885, chi-square (χ^2) to the three degrees of freedom (df), $\chi^2(3) = 12.618$, and significance level of $p=0.006$. Results of this analysis, including coefficients (estimates) and significance levels, are presented in Table 1.

Table 1: Results of the Ordinal Logistic Regression Analysis (N=356)

			No. of obs	=	356
			LR $\chi^2(3)$	=	12.618
			Prob > χ^2	=	0.006
			Pseudo R ²	=	0.0176
Log likelihood =	-290.3885				
Variable	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
FCC	-0.358	0.114	9.80	0.002	-0.582 -0.134
ACE	0.134	0.113	1.41	0.023	-0.087 0.355
TEX	0.028	0.159	0.03	0.859	-0.284 0.340
_cut1	-2.027	0.854			
_cut2	0.701	0.847			
_cut3	4.019	0.973			

The results provided evidence that students' familiarity with the code of conduct and students' academic experience were significant predictors of students' ethical decision making, while their experience with the use of technology was not a significant predictor. Also, results demonstrated a negative significant ($p=0.002$) contribution of the students' familiarity with the code of conduct to predicting the probability of their ethical decision making. Thus, the finding was interpreted as meaning a unit increase in students' familiarity with the code of conduct, controlling for students' academic experience and their experience with the use of technology, was associated with an $\{\exp(-.358)-1\} * 100 = -30.1\%$ increase or 30.1% decrease in the odds of students' making a decision that was less ethically driven. The scale for ethical decision making in this study was based on a five-point Likert-type scale (1= very unethical to 5= not at all unethical), while one indicated that a respondent was making a decision that is more ethically driven (since they marked the unethical behaviors as 'very unethical') and five indicated that a respondent was making a decision that is less ethically driven (since they marked the unethical behaviors as 'not at all unethical'). Thus, a higher score on the ethical decision making scale signifies that these students' decisions appear to be less ethically driven. Similarly, results demonstrated a positive significant ($p=0.023$) contribution of the students' academic experience to predicting the probability of their ethical decision making. This finding was interpreted as meaning a unit increase in students' academic experience, controlling for students' familiarity with the code of conduct and their experience with the use of technology, was associated with an $\{\exp(0.134)-1\} * 100 = 14.34\%$ increase in the odds of students' making a decision that was less ethically driven. Finally, results demonstrated a positive non-significant ($p=.859$) contribution of the students' experience with the use of technology to predicting the probability of their ethical decision making. Such finding can be interpreted as meaning a unit increase in students' experience with the use of technology, controlling for students' familiarity with the code of conduct and their academic experience, is associated with a non-significant $\{\exp(.028)-1\} * 100 = 2.84\%$ increase in the odds of students' making a decision that was less ethically driven.

DISCUSSION AND CONCLUSIONS

The goal of this study was to construct a framework based on an empirical analysis of the following factors that contribute to students' ethical decision making: their academic experience, their experience with the use of technology, and their familiarity with their university's code of conduct. Evidence from the ordinal logistic regression analysis demonstrated that students' familiarity with the code of conduct was indeed a significant factor and the most influential factor in its contribution to students' ethical decision making. This finding further validates the results reported by researchers such as Chonko et al. [4], Coughlan [5], Harris et al. [12], Kidwell et al. [17], as well as Wotruba et al. [33] that familiarity with the code of conduct is a critical factor in ethical decision making, particularly for students in post-secondary educational institutions with e-learning programs.

Evidence from the ordinal logistic regression analysis also demonstrated that students' academic experience was indeed a significant factor. In fact, the students' academic experience is the second most influential factor in its contribution to students' ethical decision making. Moreover, evidence from the ordinal logistic regression model demonstrated that experience with the use of technology was not a significant factor in its contribution to students' ethical decision making. This finding also indicated that, for this study, students enrolled in e-learning programs indicate having a relatively high experience with the use of technology, which may also explain the non-significance of this factor in its contribution to students' ethical decision making.

REFERENCES

- [1] Brown, B.S., & Choong, P. *A Investigation of Academic Dishonesty among Business Students at Public and Private United States Universities*. International Journal of Management, 2005, 22(2), 201-215.
- [2] Carswell, A.D., & Venkatesh, V. *Learner Outcomes in an Asynchronous Distance Education Environment*. International Journal of Human-Computer Studies, 2002, 56(5), 475-494.
- [3] Chau, P.Y.K., & Hu, P. *J Information Technology Acceptance by Individual Professionals: A Model Comparison Approach*. Decision Sciences, 2001, 32(4), 699-719.
- [4] Chonko, L.B., Wotruba, T. R., & Loe, T. W. *Ethics Code Familiarity and Usefulness: Views on Idealist and Relativist Managers*. Journal of Business Ethics, 2003, 42(3), 237-252.
- [5] Coughlan, R. *Codes, Values, and Justifications in the Ethical Decision-Making Process*. Journal of Business Ethics, 2005, 59(1), 45-53.
- [6] Cronan, T.P., Foltz, C. B., & Jones, T. W. *Piracy, Is Misuse at the University*. Communication of the ACM, 2006, 49(6), 85-90.
- [7] Davis, F.D. *User Acceptance of Information Technology: System Characteristics, User Perceptions and Behavioral Impacts*. International Journal of Man-Machine Science, 1993, 38(475-487),
- [8] Dorantes, C.A., Hewitt, B., & Goles, T. *Ethical Decision-Making in an It Context: The Roles of Personal Moral Philosophies and Moral Intensity*. Proceedings of the Hawaii International Conference on System Sciences. Big Island, HI, U.S, 2006. pp. 1-10.
- [9] Fang, M.L. *Evaluating Ethical Decision-Making of Individual Employees in Organizations-an Integration Network*. Journal of American Academy of Business, 2006, 8(2), 105-112.
- [10] Folkers, D.A. *Competing in the Marketspace: Incorporating Online Education into Higher Education - an Organizational Perspective*. Information Resources Management Journal, 2005, 18(1), 61-77.
- [11] Hamilton, D. *Plagiarism: Librarians Help Provide New Solutions to an Old Problem*. Searcher, 2003, 11(4), 26-28.
- [12] Harris, J., Cummings, M., & Fogliasso, C. *Ethical Codes and Their Effect on Conduct*. Journal of Consortium for Computing Sciences in Colleges, 2002, 18(1), 259-269.
- [13] Hasan, B.T. *He Influence of Specific Computer Experiences on Computer Self-Efficacy Beliefs*. Computers in Human Behavior, 2003, 19(4), 443-450.
- [14] Hinman, L.M. *Academic Integrity and the World Wide Web*. Computers and Society, 2002, 32(1), 33-42.
- [15] Kennedy, K., Nowak, S., Raghuraman, R., Thomas, J., & Davis, S. *Academic Dishonesty and Distance Learning: Student and Faculty Views*. College Student Journal, 2000, 34(2), 309-315.
- [16] Kerkvliet, J., & Sigmund, C. L. *Can We Control Cheating in the Classroom?* Journal of Economic Education, 1999, 30(4), 331-344.
- [17] Kidwell, L.A., Wozniak, K., & Laurel, J. P. *Student Reports and Faculty Perceptions of Academic Dishonesty*. Teaching Business Ethics, 2003, 7(3), 205-214.
- [18] Kreie, J., & Cronan, T. P. *Making Ethical Decisions*. Communications of the ACM, 2000, 43(12), 66-71.
- [19] Kritzinger, E., & Von-Solms, S. H., & . *E-Learning: Incorporating Information Security Governance*. Issues in Informing Science and Information Technology, 2006 3(1), 319-325.
- [20] Littman, M.K. editor. *Building Broadband Networks*. Boca Raton, FL: CRC Press, 2002.
- [21] Low, T.W., Ferrell, L., & Mansfield, P. *A Review of Empirical Studies Assessing Ethical Decision Making in Business*. Journal of Business Ethics, 2000, 25(3), 185-204.
- [22] Matthews, D.A. editor. *Distance Education: What Is It? Utilization of Distance Education in Higher Education in the United States*. Hershey, PA: Idea Group, 2002.
- [23] McCabe, D.L., & Pavela, G. *Ten Updated Principles of Integrity*. Change, 2004, 36(3), 10-17.
- [24] Naude, E., & Hörne, T. *Cheating or Collaborative Work: Does It Pay?* Issues in Informing Science and Information Technology, 2006, 3(1), 459-466.
- [25] Olt, M.R. *Ethics and Distance Education: Strategies for Minimizing Academic Dishonesty in Online Assessment*. Online Journal of Distance Learning Administration, 2002. pp. 1-6.
- [26] Pillsbury, C. *Reflections on Academic Misconduct: An Investigating Officer's Experiences and Ethics Supplements*. Journal of American Academy of Business, 2004, 5(1/2), 446-454.
- [27] Pincus, H.S., & Schmelkin, L. P. *Faculty Perceptions of Academic Dishonesty: A Multidimensional Scaling Analysis*. Journal of Higher Education, 2003, 74(2), 196-209.
- [28] Rawwas, M.Y.A., Al-Khatib, J. A., & Vitell, S. J. *Academic Dishonesty: A Cross-Cultural Comparison of U.S. And Chinese Marketing Students*. Journal of Marketing Education, 2004, 26(1), 89-100.
- [29] Saunders, G. editor. *The Future of Distance Learning in the Traditional University*. Hershey, PA: Idea Group, 2002.
- [30] Smith, K.J., Davy, J. A., Rosenberg, D. L., & Haight, G. T. *A Structural Modeling Investigation of the Influence of Demographic and Attitudinal Factors and in-Class Deterrents on Cheating Behavior among Accounting Majors*. . Journal of Accounting Education, 2002, 20(1), 45-65.
- [31] Venkatesh, V., Morris, M.G., Davis, G.B., & Davis, F.D. *User Acceptance of Information Technology: Toward a Unified View*. MIS Quarterly, 2003, 27(3), 425-478.
- [32] Wilfong, J.D. *Computer Anxiety and Anger: The Impact of Computer Use, Computer Experience, and Self-Efficacy Beliefs*. Computers in Human Behavior, 2006, 22(6), 1001-1011.
- [33] Wotruba, T.R., Chonko, L.B., & Loe, T.W. *The Impact of Ethics Code Familiarity on Manager Behavior*. Journal of Business Ethics, 2001, 33(1), 59-69.
- [34] Zhang, D.J., Zhao, J.L., & Nunamaker, J.F. *Can E-Learning Replace Classroom Learning?* Communications of the ACM, 2004, 47(5), 75-79.