



Exploring Ethical decision making in Engineering

Cheating in College and its Influence on Ethical Behavior in the Workplace

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Background

- Engineering students report higher rates of cheating than most other students
- No studies have explained these differences

Discipline	Bowers (1964)	McCabe (1997)
Business	66 %	91 %
Engineering	58 %	82 %
Social Sciences	52 %	73 %
Natural Sciences	47 %	71 %

- Students who cheat in high school are more likely to do so in college (Bowers, 1964)
- Students who cheat in college are more likely to:
 - Cheat in post-baccalaureate schooling (Baldwin, et. al., 1996)
 - Engage in unethical work-place behavior (Nonis & Swift, 2001 and others)

Work Experience Study

- Goals of study
 - To explore the decision-making process used by students when tempted to engage in unethical behavior in both college and workplace settings
 - To examine the influence of past unethical behavior and context on ethical decision-making

Methods

- Mixed methods: forced-choice items plus open response questions
- Surveys completed in selected courses (86 % response rate)
- Behavioral sciences IRB approval (voluntary and unmonitored participation)

Sample

- Two technically-oriented private schools
- 30 engineering undergraduates with average of 6.8 months of full time employment during past academic year

Instrument

- 13-item questionnaire
- Background (class level, GPA, workload)
- Frequency of high school cheating
- College cheating and violation of workplace policies
 - Frequency of temptation for several contexts
 - Specific situation which caused temptation
 - Pressures and hesitations in the situation
 - Ultimate decision

Results

Setting and Context

- Setting is not significant factor ($p=0.11$) in decision to engage in unethical behavior
 - 38% did cheat in the situation they described
 - 35% did violate workplace policies in the situation they described
- Context is important in decision
 - College: 15% cheated on an exam versus 45% cheated on homework
 - Workplace: 55% falsified records versus 70% improperly used supplies

Influence of Past Behavior

- High school cheating can predict unethical behavior in both the classroom and workplace settings

Frequency of high school cheating	Didn't cheat in college	Didn't violate workplace policies
Never	70 %	50 %
Frequently	40 %	10 %

Temptation, Pressure, and Hesitation

- Frequency of temptation is positively correlated with decision
 - College setting ($r=0.29$), workplace setting ($r=0.37$)
- Temptation is different across settings
 - Temptation in college is more frequent than temptation in the workplace ($p<0.001$)
- Temptation is different across contexts
 - Cheating on homework was most tempting, cheating on team project was least tempting
 - Using company resources improperly was most tempting, taking credit for work from others was least tempting
- Pressures are common across settings
 - Insufficient resources, importance of success, projection of blame
- Hesitations are common across settings
 - Conscience, moral obligation, risk of detection
- Other decision-making variables (i.e., past behavior) vary by setting

	College setting		Workplace setting	
	Pressures	Hesitations	Pressures	Hesitations
High Temptation	Cheating works Grade pressure Material too hard	None Fear of getting caught	Everyone does it Wanted to look good	Negative consequences Fear of getting caught
Low Temptation	Blank Others needed help Lack of motivation	Would lose respect Shame or guilt	Blank Seemed harmless	Work had to get done It is wrong Shame or guilt

Implications

- If an accurate model of the decision-making process regarding cheating in college can be developed and if interventions can be postulated based upon this model, the tendency of individuals to make ethical decisions in college and eventually the workplace could be enhanced