

# Chapter 11

## Teaching Business and Cyber Ethics to University Students

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### ABSTRACT

*This chapter looks at the gap that exists in university curricula worldwide in teaching Business and IT students ethical values and suggests that education can bridge the gap between ethics and professionalism. The chapter ends by proposing the contents of a course on ethics for Business and IT students that has been tried and tested and can be incorporated into university curricula in order to increase student awareness of ethical issues in the Business and IT-related fields.*

### INTRODUCTION

In the information age, every academic institute at every corner of the globe is opting to offer at least one general education course in information technology, soft or hard. More and more Business and IT students are flocking to join these courses in the hope of sharing in the fortunes of many who are already in the business of designing, developing, programming and inventing and earning millions a year. Universities across the world are competing to offer better and more up-to-date curricula in order to attract the best and the brightest among students. From information systems to electronic commerce to data mining to intelligent agents, cloud computing to nanotechnology, students are being equipped with the knowledge of every powerful tool that is available in the market.

However, do business and IT students possess the understanding of the power at their disposal and the consequences of misusing these tools? Are they simultaneously being equipped with ethical values on how to use these tools?

Every invention man has ever created has been a boon and a bane at certain times throughout the history of humankind. For example, Enrico Fermi's study into nuclear reactions (Fermilab, 2005) turned World War II into one of the most horrific memories that history has ever witnessed in the form of Hiroshima and Nagasaki. Stem cell research, on the other hand, was originally invented to treat diseases but later led to the birth of Dolly, the first cloned sheep and continues to pose as a major ethical battle (McGee, 2001). So what about the field of Information Technology? As the twenty-first century roles into full swing,

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technology is now at its peak, and becoming more and more integrated with every part of the human society, from homes to offices, classrooms to factories. IT professionals worldwide are competing to keep up with the demand for newer and better technology to improve business processes, information security, to protect privacy, to reduce human error and avoid illegal activities.

To prepare these professionals, educational institutes around the world are revamping and introducing rigorous and up-to-date courses every semester, ensuring the professionals of tomorrow are armed with the required tools to battle it out as parts of multinational corporations. However, history has taught us that to arm a person, along with the tools; we must equip them with the right sense of use and direction to avoid catastrophes. How do organizations ensure they are hiring the people with the ability to respect and maintain this privacy? In doing so, how do managers of these organizations ensure they do not cross the line themselves while using surveillance technology to monitor their own employees?

The latest developments in areas such as data mining, information security, intelligent agents, mobile technology and nanotechnology will greatly influence our way of life in the future. Nanotechnology has '*dual-use*', meaning it has many commercial uses, and it has many military uses – aiding the manufacture of far more powerful weapons and tools of surveillance [than those that already exist]. Thus, it represents not only wonderful benefits for humanity, but also grave risks (Treder, 2004). On the other end of the spectrum, cryptography, a technology that was once looked on as 'exotic' is now a commonplace in offices and for private use. While it is used to protect privacy and sensitive data by banks and such, it is also one such technology that has been used by the wrong-doers while organizing crimes such as the London bombings or the September 11 attacks on the World Trade Centre Towers and the Pentagon in United States of America (Levy, 2001).

According to a study, in 2003 alone, there were 137,529 incidences of security breaches reported; and hackers committed an estimated 5,700,000 illegal intrusions (Harris, 2004). While governments are spending millions and millions researching into these technologies, they are spending barely '0.4% of their estimated budgets to research into their societal and ethical implications' (Treder, 2006). Academic institutes involved in teaching students these advanced technologies are focusing even less efforts on imparting ethical implications along with their regular curricula. So how are we preparing the students to ensure they direct their knowledge and skills to benefit humankind? How do we prevent another Hiroshima or Nagasaki or even a September 11 incident in the future? We believe part of the answer lies in establishing a bridge between ethical awareness among students and professionalism in employment; and in incorporating subjects that deal in various IT-related ethical issues into the curricula taught worldwide. While we are equipping our students with the knowledge of every powerful tool, we should also be equipping them with the ability to understand the consequences of misusing these tools. In other words, teaching students ethical values is not enough – they should also be trained to:

- Discuss the fundamentals and ethics of using information, communications and networking.
- Identify the privacy, legal and security issues related to the introduction of information and communication technologies. This will begin to develop a desire to continually seek improved solutions, and a desire to initiate, and participate in, organisational, social and cultural change.
- Explain technical solutions to security and privacy problems arising from the introduction of technology. This will begin to develop an ability to logically analyse issues, evaluate different options and

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