Work in Progress – Introducing Graduate Students to Ethical Deliberation and Case Analysis in Research Ethics

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Abstract - This paper describes a work in progress focused on graduate education activities that will immerse graduate students in Research Ethics. The project aims to develop ethical awareness and basic skills in moral deliberation. Because these workshops will verify common concerns in Research Ethics, it is expected that they will also produce results valuable to other institutions. The ethical deliberation workshop is the second in a series of four workshops introducing the students to the basic issues in Research Ethics. The moral deliberation workshop will be followed by a Case Analysis Workshop which includes the analysis of famous cases of Research Ethics misconduct as well as hypothetical cases that are likely to be encountered in the student’s career. The hypothetical cases include situations related to fabrication, falsification and plagiarism.

Index Terms – Case analysis in ethics, Ethics, Research ethics, Research misconduct.

INTRODUCTION

In a world of global changes and global impacts, responsible research conduct in Science and Engineering is crucial. This paper presents work in progress as part of an NSF sponsored project at the University of Puerto Rico at Mayaguez: Graduate Education in Research Ethics in Science and Engineering (GERESE). This project deals with issues related to Research Ethics and creative ways to teach those issues to our graduate students, to help them become ethically motivated and committed researchers in science and engineering.

Taking into account the history of Research Ethics, Jorge Ferrer holds that Research Ethics gravitates around a double axiological axis. The first deals with issues surrounding the commitment of any academic endeavor to the pursuit of truth. The second arises from the social responsibility of the researcher to the whole academic enterprise. This double axiological axis provides a basis for how the issues in Research Ethics are framed in the moral deliberation and case analysis workshops that have been developed as part of our project and also guide the design of our educational plan for them.

Previous work in moral psychology [1] shows that interactive exercises such as case analysis, along with other interactive activities, produce improvements in moral behavior well into adulthood. Moreover, case analysis is a learning strategy that has been used in various disciplines to stress the importance of specific concepts and to create a learning environment where each subject has the opportunity to apply a general and often multifaceted framework to real life situations.

This paper describes the activities on the Moral Deliberation (MDW) and Case Analysis Workshops (CAW), where ethical concepts and deliberation methods are presented. The main objectives of these workshops are:

• The Introduction of ethical theory and principle to aid in moral reasoning and moral judgment in Research Ethics
• Students learn to integrate ethical considerations into a rational decision-making framework common in the business environment
• Students learn to integrate ethical considerations (principles, concepts, theories, and values) into day-to-day decision-making in research activities

METHOD

The general educational plan is based on four skills for ethical empowerment [2] which are ethical awareness, ethical evaluation, ethical integration and ethical prevention. The educational activities to develop these skills are organized in a series of workshops that include a Graduate Awareness Workshop, a Moral Deliberation Workshop, a Case Analysis Workshop and a capstone activity called Ethics Banquet. The Methodology followed in the Case Analysis workshop is described below.

All the workshops are integrated and progressive in terms of knowledge in Research Ethics. After the awareness where students learn the epistemological basis and concepts in ethics, the students are presented with two main lines of thought in moral deliberation which are consequentialism and deontologism. After that, a holistic approach is presented that takes into consideration that “all the variables of a moral act are important to establish a moral judgment.”[3] The general scheme that implements this approach consist of the following steps: (1) Determination of the facts, (2) Identification of morally problematic situations, (3) Identification of possible courses of action, (4) Identification of moral disagreements and problems in each course of action, (5) Determination of the values at play and the hierarchy of principles and duties (6) Consequences.
weighting, and (7) Decision justification [4]. These steps form the basis for our Case Analysis Workshop.

The Moral Deliberation Workshop (MDW) has 3 hours duration. After a brief review of the topics discussed in the Ethical Awareness Workshop (EAW), the idea of moral deliberation is introduced. Moral problems are complex and are not always amenable to simple black and white solutions. Many ethical problems allow more than one ethically justified course of action. Once the need for deliberation and reasonable justification of moral options are established, the students are introduced to the basic methodologies of ethical deliberation. Deontological and teleological approaches are presented (Kant, Ross, and Mill). We espoused a moderate deontological approach, following the seven steps listed in the previous paragraph. The Workshop ends with a case analysis exercise. The students are divided in small groups to complete the ethical analysis of assigned cases.

The MDW will be followed by a Case Analysis Workshop (CAW). The students will be presented with a series of cases, both real and hypothetical, that address various problems of research misconduct. Among the cases presented are: (a) Problems dealing with research misconduct (fabrication, falsification and plagiarism) (b) Situations dealing with experiments on human and animal subjects, (c) Social responsibility related to Research Ethics, (d) Responsibility in the research environment. Each one of the cases will be presented and discussed first in small groups and later in a plenary session. The groups will present the assigned case including the following points: all the morally relevant facts; the moral conflicts identified that required deliberation; the methodology followed to reach a decision, and the consequences of each possible course of action. Finally the students will describe what they believe to be the morally preferable course or courses of action.

The workshop will conclude with a role playing exercise. Groups will be asked to generate a case. Some of them will play the assigned roles, while the rest of the members of the group will do an analysis and discussion of the case applying the deliberation methodologies previously learned. Moreover, each group will present an evaluation of the case indicating the morally justified courses of actions that they have identified.

ASSESSMENT OF THE STUDENT LEARNING

The assessment activities for the MDW consisted of two parts, one qualitative and one quantitative both of them before (pre-test) and after the workshop (post-test). The qualitative part was performed by providing the students a case for them to analyze before the workshop to identify their skills previous to the instruction. At the end, the same case was analyzed using the methodology discussed. The quantitative part measured student learning by providing them 4 statements and asking if they agree or not with them. The statements are: (Question 1) To deliberate means defending once opinion in an ethical conflict; (Question 2) It is possible to reach the same degree of certainty in all areas of knowledge; (Question 3) The basic criterion for utilitarian deliberation is to pursue the greater good for the individual; and (Question 4) Deontological deliberation does not allow the use of persons merely as means. The percentages of correct answers in the pre/post tests are: Q1: 42/68; Q2: 68/92; Q3: 33/79 and Q4: 12/92. The results show that most of the students learned the concepts and improve with respect to their previous knowledge.

CONCLUSION

We have found that the integration of theoretical aspects of ethical deliberation and practical aspects of case analysis have an important impact in learning and applying the ethical concepts. In addition, the distribution of topics in various workshops has provided our students the opportunity to learn in a creative and different way to the usual classroom setting. This has also interest many of the student to continue learning about Research Ethics and its implications in that formal classroom setting as well.

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IN TEXT REFERENCES


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