

ABSTRACT

Title of Document: ASSESSING UNDERGRADUATE
STUDENTS' PERCEPTIONS OF ETHICS
INSTRUCTION IN A COMPUTING
CURRICULUM

Alfreda Dudley Sponaugle, Ph.D. 2008

Directed By: Dr. Zane Berge, Professor, Education

The topic of ethics in the computing curriculum is essential to the credibility of computing programs. Over 20 years ago, CSAB (formerly the Computing Sciences Accreditation Board) deemed that the inclusion of ethics is necessary for the educational development of students in the computing curriculum. CSAB "...is the lead society for accreditation of programs in computer science, information systems, and software engineering, and is a cooperating society for accreditation of computer engineering. In this capacity, CSAB has responsibility for the proposal of accreditation criteria and for the selection and training program evaluators." (www.csab.org) The Accreditation Board for Engineering and Technology (ABET) approves all criteria. (www.abet.org)

The problem, however, is that there is no documented literature to provide education on the successful or lack of successful implementation of ethics in the computing curricula. In addition, there is very little information on students' experiences with a computer ethics course. The purpose of this study is to examine the experiences of students with a computer ethics course offered at University X and

provide a baseline study to increase awareness and provide direction in the development of computer ethics in the computing curricula.

This study assesses students' perceptions of an ethics' course content and structure. Students' perceptions are based on their experiences with the course content and application. The researcher examines and interprets students' responses using a quasi-experimental design. The instruments used in the experiment are pre and post evaluation surveys distributed to students in the researcher's ethics courses. The pre evaluation survey is distributed before the beginning of the ethics course. The post evaluation survey is distributed on the last day of the ethics course.

The research looks at the data in terms of correlation between student perceptions of the ethics course pedagogy and the following elements:

- Student major, rank, gender, ethnicity
- Previous computing and ethics experience

The researcher is seeking to obtain information concerning:

- The impact of course pedagogy on students' perceptions of ethics instruction;
- The correlation between knowledge of computing issues and students' perceptions of ethics instruction; and,
- The correlation between students' major, rank, gender, and ethnicity and students' perceptions of ethics instruction

The significance of the study is that it is a baseline for future development and research in this area. The major findings of this research indicated students self-reported that: the current pedagogical methods used in the course was instrumental in increasing awareness of ethics in computing; the four-step analysis approach for

decision-making was instrumental in increasing awareness in ethics; and, exposure to the computer ethics course increased the importance of ethics in computing.

The results of this research provide important insight on assessment of teaching and ethics course and ethical concepts in the computing curriculum.