

Toward an Understanding of Ethics Education's Influence on Undergraduate Construction Students' Ethical Sensitivity to Professional Issues of the Construction Industry

**Kenneth S. Sands II, Ph.D., Annie R. Pearce, Ph.D.,
Christine M. Fiori, Ph.D., Denise R. Simmons, Ph.D., and Victoria A. Mouras, P.E.**
Virginia Tech
Blacksburg, VA

The construction industry is inundated with many ethical problems that have supported its negative stigma as an unethical and corrupt industry. This inundation instigates the requirement for ethics instruction by accrediting bodies of construction education with the art of teaching this 'secondary' topic left up to construction educators. Literature offers suggestions; however, not much is understood regarding pedagogical 'best practice' to ensure students are ethically sensitive (aware) to ethical issues related to the construction industry, or whether ethics education has any influence on the ethical sensitivity of construction students. The discussion on ethics pedagogy and student competency of construction ethics is underway and this study seeks to continue this discussion by moving toward an understanding of the relationship(s) between construction ethics education in accredited construction programs and the ethical sensitivity (the ability of an individual to recognize ethical issues of the construction industry) of construction students. This research attempts to move toward an understanding of construction ethics education's influence on students' ethical sensitivity by addressing the research questions of: how is ethics taught in construction programs? What is the ethical sensitivity of undergraduate construction students regarding ethical issues of the construction industry? What is the relationship between ethics pedagogy and the ethical sensitivity of construction students regarding ethical issues of the construction industry? This research utilized a mixed-methods approach and employed two research strands. The first strand included the development of a broad collection of ethics pedagogical techniques used in construction education (independent variable), via the administration of a 'how ethics is taught in construction survey (HETC)' to both faculty and students of purposefully selected construction programs. The second strand included the development and administration of a pen-and-paper Test for Ethical Sensitivity in Construction (TESC) to evaluate construction students' ability to recognize ethical issues that are specific to the construction industry (dependent variable). Programs were selected based on how public curriculum documentation of various construction programs illustrated the teaching of ethics in their program (throughout the curriculum, a single module, a full class). In addition, selection was based on program type; such as, a full construction program, a full civil engineering program, or a hybrid construction engineering and management program (All were either ABET or ACCE accredited). Institutions were given invitations to participate in the study and five programs of building science, construction engineering, civil engineering, construction management, and construction operations and management were observed. Both instruments were administered to 174 student participants and eight faculty participants of selected construction programs across the U.S. Results illustrate various degrees of difficulty students had with recognizing ethical issues of the TESC and how this related to ethical content coverage in construction programs' curricula. In addition, regarding participants of this study, there were significant differences found in student level of ethical sensitivity based on program of enrollment; however, there were no significant differences found based on student recollection of the placement of ethics in their curriculum, professional experience, age, or gender. It appears that ethics education has an influence on the professional ethical sensitivity of construction students and is important for their ethical development; however, more research is necessary to confirm the degree of this influence. Additional research is necessary to identify the most current and critical ethical issues of the construction industry to develop an auxiliary form of the TESC while controlling for other variables such as co-curricular and personal experiences.

Key Words: Ethics, Ethical Sensitivity, Construction Ethics, Undergraduate Education, Test