Elita Danilyuk

CS 414

Dave Matthews

September 25, 2022

How Professional and Ethical Dilemmas Apply to Students in Academic Contexts

Professional and Ethical Dilemmas in Software Engineering, by Brian Berenback and Manfred Broy, discusses nine ethical and professional dilemmas and places them in the context of the Institute of Electrical and Electronics Engineers (IEEE) code of conduct. Berenback and Broy state that ethical behaviors refer to how people ensure that decisions and actions stand up to moral and professional principles; the principles support all laws and regulations and are the foundation for the people's culture and values, thus, defining right from wrong. In software engineering, ethical dilemmas occur when someone has to decide between competing values. I have grouped the nine ethical and professional dilemmas discussed by Berenback and Broy into groups of four and have split fictionware versus vaporware. The first grouping consists of those with unrealistic goals, mission impossible, red lies, and fictionware. The next group consists of those lacking functionality, mea culpa, rush job, and sweep it under the rug. Lastly, lack of

planning is grouped by, not my problem, non-diligence, canceled vacation, and vaporware. I think the professional and ethical dilemmas presented by Berenback and Broy apply to students in the academic context through the grouped causes of unrealistic goals and the lack of planning and functionality.

I think the dilemmas related to unrealistic goals apply the most to students in an academic context, especially within software engineering. Many students, mainly within group projects, set standards for products and deliverables which are unreasonable. Common unrealistic goals students place within projects are infeasible promises, like features or deadlines; this is the 'fictionware' dilemma. Another common unrealistic goal is setting an illogical schedule for a project. For example, in the case of the dilemma 'mission impossible.' If a team or individual goes forward with a project through mission impossible, it often goes into a stage of 'red lies.' This dilemma occurs when students meet with teachers or 'clients,' and the students know they will not deliver the project on time. This group of 'unrealistic goals' dilemmas are common within professional and academic settings. Students often get into ethical dilemmas when they do not set realistic goals and expectations for a project.

Not only do students commonly set unrealistic goals for their projects, but they also lack the understanding of the importance of planning. One of the problems students run into through the lack of planning is the 'not my problem'

dilemma; this happens when students only worry about their base tasks and do not put in the effort to improve their product. Avoiding 'not my problem' is achievable by planning extra time for product improvement and being concise in student responsibilities. On the other hand, the 'non-diligence' dilemma occurs when students do not carefully look through requirements; this results in a lack of planning in the future. This lack of planning can lead to the 'canceled vacation' dilemma. The canceled vacation happens when outside pressures, like the lack of planning, cause the student to sacrifice their time to meet a deadline; this is a common dilemma faced in academia. Additionally, when students feel severe pressure and lack proper planning, they face the 'vaporware' dilemma. This dilemma is less common but does occur when students simply do not complete or do a project.

Contrarily, another group of dilemmas students experience (rush jobs, mea culpa, and sweep it under the rug) are due to the lack of functionality within projects/deliverables. The 'rush jobs' dilemma is an example of a lack of functionality because students do not put enough effort into a project, or there is other pressure to finish a project on time, resulting in a product of poor quality. Another similar example is the 'mea culpa' dilemma. This dilemma often occurs in student projects and work when they deliver something that is missing functionality or has known flaws. These dilemmas can lead to or result in the 'sweep it under the

rug' dilemma; this happens when known flaws arise, and the student ignores them to push the project to completion. Students often feel pressure from factors outside of their projects; this results in a lack of functionality due to efforts to complete a project on time.

The combination of the unrealistic goals, lack of planning, and lack of functionality that students often face results in students finding themselves in the ethical and professional dilemmas discussed by Berenback and Broy. Students often do not have the understanding or experience to create goals within a project's scope; this can lead students to fall into dilemmas such as mission impossible, red lies, and fictionware. Due to the lack of proper planning, students often find themselves in ethical dilemmas of not my problem, non-diligence, and canceled vacation. Through the combination of unrealistic goals and the lack of planning, or simply the lack of functionality, students commonly result in the dilemmas of rushed jobs, mea culpa, and sweeping it under the rug. The goals, planning, and functionality are important factors to consider when delivering a final product; students should put more consideration into them to avoid the dilemmas stated by Berenback and Broy.