

## Diversity and Collaborative Learning

Christopher is a graduate student teaching the lab portion of Dr. Johnson's undergraduate computer engineering course. The students in the course were randomly assigned to lab groups of three or four people during the first week of the class. During each week's lab meeting, each group is given a project that they are supposed to complete together, and for which they all receive the same grade. These projects build on assignments that each student was supposed to complete on her own prior to the lab meeting—assignments for which the students are graded individually. In addition to these assessments, students also had a mid-term exam and a final exam that drew on information from Dr. Johnson's lectures and on the lab material.

After taking the mid-term exam, Christopher was approached by Bill—a bright young student from a small town in the Great Plains—who wanted to see if he could switch lab groups to join a friend's group. Bill complained that one of the other three members of his group was not pulling their weight. According to Bill, this is why it always took their group longer to complete the lab projects than the others. He was also worried that, because of the time crunch his group was always in to complete them, the lab projects were pulling down his overall grade for the course.

Bill's main problem was with Tia, a quiet second-year international student. According to Bill, Tia participated during the first couple of group meetings, but soon stopped. Now, she rarely says anything. Moreover, Bill told Christopher, while all the other students in the lab group participate in an informal study group for the course, Tia has not met with the study group since their first meeting.

"I think she just never really knew what was going on. Whenever she talked, she just seemed confused to me," Bill said. "Her approach to the assignments seems to come out of left field—she approaches the problems completely differently from the rest of us, and we have no idea where she is coming from most of the time. We just have a hard time communicating with one another."

Christopher was a bit surprised at all of this. He had found Tia's individual assignments to be creative and well-done—though she admittedly approached the problems differently from many of the other students in the class. It seemed to Christopher like she knew what was going on. "Does she contribute anything for the group?" he asked.

"Not really ... but sometimes, if we give her a specific task to complete, she will go off on her own and finish it. But then we normally have to spend a lot of time re-working it to fit it in with the stuff that the rest of us do. Sometimes it's better if we just do it over."

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Christopher scheduled a meeting with Dr. Johnson for the following afternoon to discuss a number of things related to the course. In the meantime, he decided to grade the group's mid-term exams.

Overall, the members of the group scored about what the class average was expected to be. Bill scored high marks—higher than the marks on the lab projects, and right in line with his scores on the individual assignments. Tia’s results on the mid-term were mixed. She did very well on with the questions that dealt only with material from the book and Dr. Johnson’s lectures; but her work on the questions that assessed the lab skills was somewhat weaker than the work by the other members of her group. “Bill seems to be right,” Christopher thought to himself. “She doesn’t seem to be getting things like I thought she was.”

At his meeting with Dr. Johnson, Christopher mentioned Bill’s interest in switching groups and his reason for this. “It seems like Tia is not contributing to the group, and is pulling it down,” Christopher told Dr. Johnson. “I don’t want Bill to get a lower grade in the course because someone else isn’t pulling their weight. So, I don’t see any problems with letting him switch, but I wanted to run this past you first.”

“No, we really can’t do that,” Dr. Johnson jumped in. “We couldn’t let everyone switch groups at this stage, so we can’t make an exception for one student. Besides, if they want to make it in the real world, they are going to have to learn how to work with others—even those who don’t pull their own weight.”

#### **Questions for Discussion:**

1. What factors (positively or negatively) impact student performance in peer collaborations?
2. When using formal student collaborations as part of a course, what responsibilities do the instructor and teaching assistant have to the students to help manage those collaborations? From the information available in the course, does it seem like Christopher is meeting his responsibilities? Is Dr. Johnson?
3. How should Christopher respond to the information Bill has provided him? How should Dr. Johnson respond? What other information might be useful?
4. What problems can arise if instructors do not pay attention to issues of diversity in (formal and/or informal) student collaborations? Should instructors try to actively promote diversity within such student collaborations? Why or why not?
5. What special ethical considerations arise when students are required to work with individuals who are different from them in terms of their ethnicity, cultural background, gender, religion, etc.? What are the potential benefits/problems of such forced collaboration? How can we prepare students to effectively communicate and work with students from diverse backgrounds?
6. Is it fair to give the same grade to all of the students in a group for a collaborative project, despite the fact that they may not have all contributed equally to the results? Are there alternative ways to assess these group activities that are *ethically* superior? If Dr. Johnson used a different approach for assigning grades, how would this influence your thoughts about the case?
7. What (if any) stereotypes may have influenced how you thought about the case and the characters in it?

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