Project 2 - Higher Education Case Studies

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Higher Education Case Studies

Case 1 – A Case of Cheating? By C. F. Herreid

Sections	Criteria
Overview	The college-level course taught by Professor Margaret Blake has a multicultural student population and utilizes a collaborative learning approach. The student population has minimal experience with team learning, a version of collaborative learning since previous courses have followed a traditional lecture format. The case study describes students at various academic levels, though it focuses on two students in different teams accused of cheating in multiple assessments. Part of the final course score is based on peer assessments, and a previous practice peer-assessment had already identified the two students as struggling with group collaboration. Professor Blake had already performed an intervention with the struggling students but did not address cheating. Previous instances of potential cheating were addressed by instructor presence. Final peer evaluations unveiled the cheating incidents were recurring, acknowledged by most of the students in both teams, and that a previous incident was stopped by instructor presence as previously described. The instructor did not address cheating due to the late acknowledgment of the cheating incidents by peers and peer assessment data.
Needs Analysis	Practice peer-assessment revealed issues between team members in two teams. Student comments and final peer assessment unveiled multiple cheating incidents between two student team members of adjacent groups. The lack of instructor presence during examination has augmented the potential for cheating in the course. Increased teacher presence in the classroom and improvement of teaching

	practices through professional development & faculty observations is recommended to further develop collaborative learning in the classroom. Improving classroom culture can potentially reduce cheating incidents and increase the student learning experience. Increasing the frequency of peer assessment can aid in identifying potential issues between team members.
Task Analysis	The instructor needs to improve collaborative learning instructional practices and strengthen classroom management. Data collection and analysis on the course can aid in forming the relationship between content and activities. In a topic analysis, the instructor and other relevant faculty need to discuss course content and instructional design to align and identify best practices and activities for the student population and collaborative learning. As a procedural analysis, the instructor should define clear course expectations and develop a classroom culture that promotes honesty and highlights the importance of failure in science to move forward. Similarly, for critical incident analysis, the instructor should increase the frequency of peer assessment to identify and address potential issues and reinforce expectations as needed.
Learner Analysis	The audience includes 24 students in a college-level physics course. Students had minimal experience with team learning, collaborative learning methods. Collaborative learning teams were formed heterogeneously based on individual data like major, grade point average, courses in science and math, and year in school. The stakeholder in this case study is Professor Margaret Blake, faculty in the same department, and relevant administration.

	Student experience and knowledge levels can be gauged through grade records, surveys, questionnaires, and interviews.
Goals & Objectives	**Goal**: The instructor will build on established collaborative teaching practice, design clear expectations for classroom culture, increase formative peer assessment, and improve instructional practice to increase student learning achievement and experience in the course. **Objectives:** 1. Identify best practices in collaborative learning by reviewing available case studies and observing other successful faculty leading team learning groups in different settings. 2. Analyze and reflect on data collected from student learning experience surveys by increasing the frequency of surveys to redirect team learning instruction as needed. 3. Develop clear classroom expectations, highlighting the importance of failure and success in science, by working with other faculty and students to revise current expectations and stimulate student-centric learning values. Improving classroom culture should promote collaboration and minimize instances of cheating. Identifying best practices in student-centric learning by improving instructional practices should translate into improved student learning experiences. The cost of professional development for teachers and increased stipends for curriculum redevelopment to reflect best practices will improve the overall student learning experience and academic achievement.

Case 2 – Paul Seymour, Assistant Professor: A Dilemma Case in Teaching. By C.F. Herreid

Sections	Criteria
Overview	Dr. Paul Seymour is an accomplished researcher and prolific writer, published ten times at different peer-reviewed journals, including Nature and Science. Dr. Seymour had the privilege to study under renowned scientists like physiological ecologist Torkel Gustafeson and geneticist Mary Craxton. Dr. Seymour has previous teaching experience as a teaching assistant for research seminars. Following his experience in a collaborative discussion-based class, Dr. Seymour was inspired to adopt the instructional design in his class. After analyzing student surveys on the student experience in the course, Dr. Seymour determined that students were unhappy with the discussion-method format of the class. The Department chair and other faculty, being aware of the issues in his class, have commented on his teaching practice. The department chair is particularly concerned about the negative impact on Dr. Seymour's grant writing responsibilities.
Needs Analysis	Dr. Seymour's Molecular Evolution course at the Chicago State University struggles with the instructional design method selected. Student survey responses show negative results and general unhappiness with the discussion method chosen for the class. The department chair and other faculty are aware of Dr. Seymour's plight and have voiced their opinions. Dr. Seymour is reflecting on whether this institution is the correct setting for this instructional design. Further, the department chair is concerned with the negative impact of this situation on Dr. Seymour's other responsibilities. Dr. Seymour should consider modifying his teaching practices to closely follow the department's learning environment or a more traditional lecture approach.

	Dr. Seymour should observe previous courses taken by his students as pre-requisites to his course and those of his fellow professors in his department. Dr. Seymour should conduct student interest questionnaires to gauge student goals, objectives, and preferred learning methods for the course. Also, Dr. Seymour should consult with other stakeholders in his department and review literature on best teaching practices for his student population. Dr. Seymour should seek professional development to improve his instructional practices and closely observe faculty members with successful teaching practices. Dr. Seymour's previous positive experience with the discussion method in an Advanced Molecular Biology class influenced his determination to use the instructional design in his course. Perhaps, unfamiliarity with the teaching method added to MCAT anxiety increases the negative experience by students. The negative student response to his instructional method is negatively impacting his other key responsibilities like grant writing.
Task Analysis	What is the task that individuals need to be able to accomplish or perform? Students need to understand and assimilate critical concepts from the Molecular Evolution course. Additionally, since most of the students are pre-med, students should translate the skills gained to pass the MCAT. Dr. Seymour needs to perform a task analysis to form the relationship between the content and activities and rationalize his discussion-based instructional design. The department should discuss the content taught in the course and reevaluate whether the activities and teaching methods utilized to address the content. Dr. Seymour should describe the expectations for each objective in the course in detail and clearly share them

	with his students to aid understanding and adoption of new skills. Additionally, Dr. Seymour should continuously conduct surveys and interviews with students to gauge adoption and buy-in of the discussion-based method.
Learner Analysis	The audience is a molecular evolution class with forty (40) juniors, mostly pre-med students, in the Department of Integrative Biology. Students had previously completed the Organic Chemistry course and were preparing for the MCATs exam. The stakeholders include Dr. Seymour, department faculty, and the department chair. Current student interest level and experience in the class was assessed using a survey. Student interest levels should be gauged often and consistently throughout the length of the course through surveys, questionnaires, and focus groups.
Goals & Objectives	**Goal**: Improve student learning experience in the discussion-based course. **Objectives**: 1. Understand the discussion-based teaching method and effectiveness by reviewing the literature available. 2. Successfully identify the appropriate settings and population for a discussion-based course by reviewing case studies and observing exemplary faculty conducting similar courses. 3. Clearly share expectations and objectives with students by modeling tasks and modifying pacing to the students' needs. Sharing clear expectations and modeling wanted behavior should increase student buy-in and improve the learning experience. The cost of conducting professional development for faculty on the discussion-based method will aid the transition to a potentially beneficial teaching method. Similarly, the cost of hiring an instructional designer to determine the needs, identify goals, and develop a curriculum can theoretically improve student learning outcomes, faculty efficiency, and staff productivity.

References

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