

Peer Instructional Review Sessions

Binh Tran
Georgia Gwinnett College, btran5@ggc.edu

Author Biography

Dr. Binh Tran is an Assistant professor of Information Technology in the School of Science and Technology at Georgia Gwinnett College (GGC). At GGC, he teaches courses in computing, information systems, computer networking, advanced networks, systems administration and cloud technologies. He believes that as a professor it is his duty to not only teach students the material concepts and progress them through their course of study, but to develop them to become professionals and prepare them for acquiring that first job in the field through continuous mentorship. He embeds industry certifications, resume review, interview preparation and career advice into all his courses readying students for industry success.

Goal of Activity

The goal of the peer instructional review session is to allow students to prepare for a midterm exam or final exam with a strategy designed to enhance learning and information retention (Koh, Lee, & Lim, 2018). The concepts that the students retain are intended to be used in future coursework and to add to their overall knowledge base. The underlying premise of this approach is that by using the active learning strategy of teaching others, the peer instructors will retain more of the information.

Description of the Activity

Prior to a midterm or final exam, students are divided into groups of three or four. Each group is assigned one or two chapters which they will master and teach to the rest of the class. Groups must be prepared to answer questions from their peers and the instructor regarding their assigned chapters. Depending on the nature of the class and the chapter topics, a brief outline is provided by the instructor to the student groups to serve as a guide for their preparation. Students are given an appropriate time frame—normally a few days—to prepare and either meet outside of the normal class period to practice their final presentation, or during class if it coincides with a face-to-face meeting of a hybrid class.

During the peer instructional review session, each group has about fifteen to twenty minutes to present the chapter content and highlight the most important concepts to their peers. There is a five to ten-minute question and answer session where students can ask the peer instructors questions. The instructor ensures that all important concepts are covered by asking additional questions of the peer instructors. Students then rate their peer instructors as a group on their overall performance as a graded assignment. In turn, the next group gives their presentation and the process continues until all groups and all content chapters have been presented.

Reflection of the Activity

The activity requires students to prepare and know the content well enough to be able to teach the concepts and to answer questions, allowing the peer instructors to better retain those concepts. It enables the students and the peer instructors to see potential areas that need further clarification, allowing them to focus their studies on the areas specific to their levels of understanding.

The instructor may also identify areas where the students lack full understanding and can modify their teaching methods in the future. For example, the instructor can create other active learning assignments and labs to address common learning gaps highlighted by this activity.



Images: Student-led peer instructional sessions.

Student Feedback

I found the Peer Instructional Session super useful and only had to do minimal studying to do well on the exam because I know what areas to focus on.

Peer pressure forced me to really prepare and know the material since I did not want to be embarrassed by my classmates or the professor.

Only after doing the exercise did I see that teaching is a difficult task. I had no idea of all the prep work that was required to teach effectively until I had to prepare and I was only responsible for 1 chapter!

Initially I did not like the assignment because I am not a good public speaker but that forced me to really know the material to be able to present it helping me retain it for the exam.

The session felt like an informal group study session and I found out clearly what I needed to focus my studies on.

During the exam when the concepts were tested, I realized I recalled them from the peer instructional session especially those that I presented with ease.

I still remember concepts from the chapter that I presented that I used in a later class over a year after giving this session.

Conclusion

As the student feedback suggests, students find that the peer-instruction process makes their studying much more interactive, resulting in better retention of the concepts presented. The activity forces students to take control of their own learning instead of being passive learners and leaving it up to the instructor to do most of the work.

Data from several semesters over several years in an upper level Information Technology course has shown that the midterm exam score averages are approximately 10-15% higher than when presented in the more passive approach.

Many students, even after several semesters, still remember the chapters they were responsible for teaching. This approach may lead to long-term conceptual recollection which is part of the author's goal of the activity for more permanent knowledge retention.

References

- Koh, A. W. L., Lee, S. C., & Lim, S. W. H. (2018). The learning benefits of teaching: A retrieval practice hypothesis. *Applied Cognitive Psychology*, 32(3), 401–410. <https://doi.org/10.1002/acp.3410>