

Jigsaw Puzzle – Collaborative Learning

Learning Outcome: Students will extract and summarize the main elements of a topic and then teach this topic to classmates.

Summary: Students independently learn about a specific topic, and then teach this topic to other classmates. Critical reading and thinking, group work, and communication are all enforced with this technique. This technique requires 3-5 completely *independent* topics, assigned reading time either in class or outside of class, and time for in-class discussion. Topics should be descriptive, not analytical.

Procedure: (It should be stressed that the students' group members are depending on them to teach this new information.)

1. The class is divided into groups of 3-5 (the same number of groups as you have topics). This is the "home" group.
2. Each member of the home group is assigned a different and topic. These topics can be related, but must be absolutely independent from each other. These topics are new to the class and have not previously discussed.
3. Students are given time to read about or research their topic only. (Reading material is distributed individually. This material can be distributed at the end of the previous class for reading outside of class, or time can be allowed in class on the day of the exercise for reading.)
4. After reading/research, all members assigned to the same topic discuss the topic and determine the most important points. This is the "expert" group.
5. Students are then returned to their original home groups of 3-5 individuals, made up of one expert on each topic. Each expert then teaches his/her specific topic to the other members of their home group.
6. The professor does not summarize or discuss the material again in class, as the purpose of this exercise is for the students to teach each other. However, reading materials can be distributed to all or posted in Blackboard Learn *after the exercise* if desired.
7. A quiz or other assessment to quantitate learning is given if desired.

Example Application: The Jigsaw Puzzle Collaborative Learning technique was used to teach the four major macromolecules (water, proteins, carbohydrates, and lipids) relevant to 'Biology of Food' in a Freshman Seminar course. Each macromolecule can be understood and described completely independently from the others, which is essential for this technique.

Outcome and Impressions: This technique worked beautifully and students seemed to enjoy it. The reading material on all four macromolecules was made available to all students in Blackboard Learn after the exercise was complete. This ensures that no student is penalized on a later assessment for poor effort of an expert in their home group.

Additional Positive Experience: The Jigsaw Puzzle activity was used to understand the various services available to students at UHD. Students were divided into groups of 6. The first person in each group was assigned to read and learn about one or more services: advising, writing center, career services, etc. The second person in each group was assigned the next service, and so on. After researching their topics, students assigned the same topic discussed the topic together and became "experts." The students

returned to their original groups and informed the group members about their assigned services. This application of the Jigsaw Puzzle activity worked very well – the students learned about the many services UHD provides. An individual student is not likely to investigate the services on her own and thus will be unaware of their benefits.

Negative Experience: Students in a Freshman Seminar class were divided in 5 groups of five students each and a chapter from a book was divided in five sections. The students were assigned one of the sections to read, were instructed to extract the main idea from that section, and to discuss it with other students that had read the same text (becoming the “expert” for that particular section). Then, the “experts” re-joined their home groups and related the main idea of each section, rendering an overview of the chapter. This technique did not work very well in this case, *because the pieces of chosen text were interdependent*, and many students had difficulty in extracting the main idea from a written piece of text.

References:

“The Jigsaw Classroom” <https://www.jigsaw.org/>

“On Course” <http://oncourseworkshop.com/>