Think-Aloud-Pair-Share

Method	Think-Aloud-Pair-Share
Introduction	
Think Aloud Pair Share is a problem solving method which helps students tackle problems in depth by setting them up in pairs, alternating the role of problem solver and listener, to discuss in detail a specific problem or challenge. It can really help students develop both problem-solving and listening skills. The basic idea is that through their verbal reasoning they explore and eventually solve problems for themselves and that by having a fellow student act as listener and then alternating roles, they come to a much better understanding of the issue or challenge under discussion. Recording these sessions can provide a very useful learning resource for full class use whereby students analyse how the problem solver tackled the problem, what resources they used with which to solve it and how helpful the listener was by asking them relevant and helpful questions. This is a method that normally takes up just one class period and is suitable for small and large groups. This is a cooperative learning method that can promote and support higher level thinking. This method gives students the opportunity to thoughtfully respond to questions, reading, concepts, solving a problem, or brainstorming in written form and to engage in meaningful dialogue with other students about these issues. It is usually a short activity designed to engage students in thoughtful consideration of a topic, and may serve effectively as a warm-up to instruction and class discussion on a new course material.	
Aim	To help students develop and practice their verbal reasoning skills, their ability to solve problems, to analyse data and their listening and probing skills,
Target group:	This method can be used in practically any discipline or at any level. Obviously the level of discussion and the expected outcomes can evolve according as students become more familiar with the content and context of the specific subject. It is worth considering this method even with very early stage students to help them practice the skills of argumentation and listening early on in their learning path.
Intended learning outcomes	
• improved skills in relation to verbal reasoning and analysis • better presentation and listening skills • enhanced understanding of methodologies or concepts	
Description	
Start by setting the students up in pairs and allocate space and time for them to ‘solve’ the problem Then present the problem or set of problems to be solved, consider whether you want to give all pairs of students the same problem to discuss or different but related problems, there are advantages and disadvantages to each.	

Divide the time evenly so that you notify them fairly and in time when the role of listener and problem solver need to be switched. After the allocated amount of time, allow enough time for each set of pairs to summerise their discussions within a limited period of time. Select samples or whole discussions for class reflection. In addition to engaging with course content, students can reflect before speaking, and share their ideas in a low-risk situation before participating in full class discussion. Thus, both the quality of class discussion and students' comfort in contributing to class discussion may improve. If recording these sessions, explain how and where the resultant recordings will be used. This method also allows instructors to assess students' initial knowledge and to modify instruction to bolster understanding and clear up misconceptions.	
Preparation	Prepare the 'problem' well, explain the terms and conditions of the exercise and be clear about the expected outcomes.
Required resources and equipment	Nothing additional to comfortable and appropriate seating are required for this method to be successful. If recording, then a suitable recording set-up needs to be put in place.
Success factors	It is important that the roles are exchanged reasonably regularly, that an emphasis is put not only on the importance of verbal reasoning but also on the skills of good listening.
Advantages	This method is a good way of involving all students in considering a problem or challenge. It can be used to break up a lecture to allow students to reflect on challenging content. It allows students to negotiate meaning with each other or discuss their proposed solutions. The strategy provides a diagnostic point to ensure students are on track. Discussion can result in more student learning than some other strategies. Students verbalise their thinking, they are able to construct or reconstruct knowledge in a way that makes sense to them.
Disadvantages	If all students engaged in this activity at the same time it can be a bit difficult to manage, consider having students take turns to go through the process and maye therefore be very time consuming. It is easy for talkative students to dominate. To be effective, the pairs must be able to work without interfering with one another.
Additional information	The academic could offer a participation grade somehow tied to a short product or other output students produce from their discussion. Or he or she might find ways to increase student awareness of the likelihood their group might be called upon to share their answer with the entire class. They might also

	consider using some of the think-pair-questions on exams and making it clear to students that that is the case. Here are some examples of problems that can be suitable for the application of this method: • identify the most important circumstances that brought about a specific historical event • what are the main environmental factors that have a bearing on a specific biological development. what changes need to come about to tackle a specific social or environmental problem like plastics in the sea This short video gives a good overview of the method as well as several tips and suggestions for getting the most out of it. Think Pair Share Explained: Lecture Clip: Opportunity Cost (Think - Pair - Share) In this article by Fitzgerald[i] ii you will find an overview of the traditional Think-Pair-Share cooperative learning technique. This study by Sampsel[iii] addresses the think-pair-share cooperative learning technique and its effects on students' confidence in their abilities to do mathematics and their willingness to participate in class discussion. The study found that students' participation increased, the number of long explanations given by students increased, and students comfort and confidence when contributing to class discussion also increased.

[i] Fitzgerald, D. (2013). *Employing think-pair-share in associate degree nursing curriculum*. Teaching & Learning in Nursing. 8, 3, p 88-90.

[iii] Sampsel, A. (2013). Finding the effectives of think-pair-share on student confidence and participation. Bowling Green State University, Honors Project.