Active Learning – Think, Pair, Share

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February 1, 2017

Cite this resource: Lightner, J., Tomaswick, L. (2017). Active Learning – Think, Pair, Share. Kent State University Center for Teaching and Learning. Retrieved [todaysdate] from http://www.kent.edu/ctl/educational-resources/active-learning-think-pair-share/.

What

Think-Pair-Share (TPS) is a cooperative learning activity that can work in varied size classrooms and in any subject. Instructors pose a question, students first THINK to themselves prior to being instructed to discuss their response with a person sitting near them (PAIR). Finally, the groups SHARE out what they discussed with their partner to the entire class and discussion continues. Students get time to think critically, creating a learning environment that encourages high quality responses (Rowe, 1972). TPS provides an opportunity for students to work in groups towards a common goal, increasing their own and others' understanding in a safe environment to make mistakes (Johnson & Johnson, 1999).

Introduction

TPS was for described in 1982 by Frank Lyman and is an active-learning technique in which students are motivated to participate even if they have little intrinsic interest in the topic (Lyman, 1982; Marzano & Pickering, 2005). Students not only process the topic but practice their communication and problem-solving skills. Preparation is simple and implementation has shown success by increasing student engagement, and improving student learning outcomes across learning environments (Fitzgerald, 2013; Goodwin, 1999; Raba, 2017; Razak, 2016; Sampsel, 2013). Questions posed are typically related to higher order thinking skills. TPS can be a 5-minute activity or something that takes 30 minutes or more. The key to a successful TPS activity is alignment; the question posed must be challenging and align with the instructional goal of the day/week (Wiggins & McTighe, 1998).

Implementation

1) Describe TPS to your students, why you are doing it (how it helps learning) and acknowledge that it may be out of a student's comfort zone to participate.
2) Pose an open-ended question for students to answer (aligned with instructional goal) and ask them to think to themselves for about a minute and write down their thoughts
   Alternative – have students turn in a copy of their thoughts prior to pairing
3) Ask them to turn to the person next to them (groups of 2 or 3 only) & share their thought process / answer with each other
   Alternative – have students take notes on their partner's process/answer
4) Let students know how they should be spending the time throughout
   let them know it is time they should be switching who is talking if they haven't already, let them know when they should be finishing up their thoughts
5) Prompt students to report out on "behalf" of their group
   Summary could include differences in thought process and if the group didn't agree

Frequently Asked Questions

a) My students are not talking to each other, how do I get them to start talking and engage in the activity? You could do an ice-breaker, add an incentive (points for participation), mention that these TPS questions could be on the exam, or demonstrate and practice what they should do. More information can be found by reviewing the techniques within the starting conversations document.

b) Discussion could go on for the entire class, how do we get back to the lecture? It sounds like your students are engaged and that is something to celebrate. Limiting the scope of the question and putting time boundaries on the conversation can help. A quick, "one last point… this has been a useful conversation and it relates directly to ___"

c) How could I use TPS as an assessment? You could have students turn in their responses written during the THINK time, the group's answer from the PAIR time or a reflection following the SHARE time. These can be considered low-stakes if graded for completion or something more substantial if you evaluate their responses in more depth.

d) I feel like I want to do more with the PAIR time, is it appropriate for students to use their phones and computers to answer questions? TPS can be as simple and as complicated as you care to make it. If you want students to be able to use resources to look up something online or even go to the library to work on something, just be sure this complication is necessary and useful for the learning objective.

Other Resources

Central Michigan University TPS and Variations Implementation Guide (link)

Brown University

https://www.brown.edu/about/administration/sheridan-center/teaching-learning/effective-classroom-practices/think-pair-share

and further into that site SERC info:

http://serc.carleton.edu/introgeo/interactive/tpshare.html

U Texas at Austin

https://facultyinnovate.utexas.edu/teaching/prepare/teaching-large/collaboration/think-pair-share

UC Berkeley

http://teaching.berkeley.edu/active-learning-strategies

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