

Think-Pair-Share Activity

Subject: SS

Class: II ECE-A

Academic Year: 2016-17

Semester : I

Topic: Analysis of Linear Systems

1. Think Pair Share Activity (TPS)

Think-Pair-Share (TPS) is a collaborative learning strategy where students work together to solve problems or answer a question about assigned reading. This technique requires students to think individually about the topic or answer a question; and share ideas with colleague students. Discussing responses with peers serves to maximize participation, direct attention, and engage students in reading comprehension. The three phases in TPS are structured as

Think - the instructor poses a question, to which students individually write their answers,

Pair - students work on a well defined task with their neighbor(s), and

Share - students engage in a class-wide discussion, sharing their answers and reasoning, and debating alternate solutions.

Goals of the Think Pair Share:

- To activate students prior knowledge
- To Enhances oral communication skills
- To make students active learners

Outcomes:

- Observe the use of concept of convolution in time and frequency domain for simple mathematical computations of systems.
- Analyze the characteristics of linear systems such as distortion less transmission system

Implementation: The implementation of a Think Pair Strategy for Signals and Systems (A.Y: 2016 – 17); Class: ECE A; Year: II; Sem: I) course is presented below

Subject: Signals and Systems

Class: II ECE-A

Think phase: The instructor posed a question, such as “Illustrate the concept of convolution in time and frequency domain”. The students worked individually on the task, for about ten minutes.

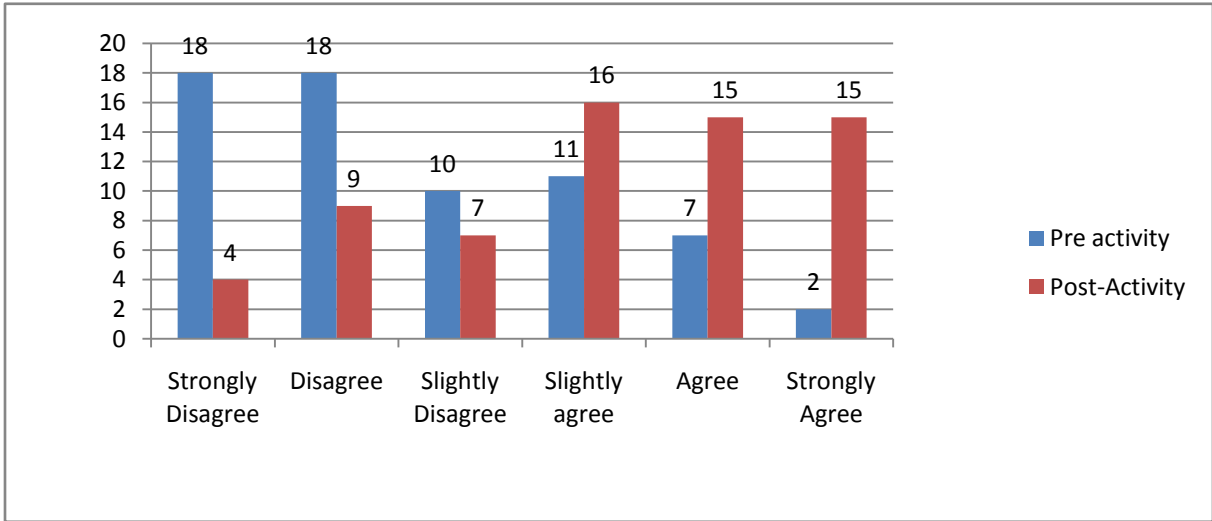
Pair phase: The instructor gave a task related to the Think phase, such as check your neighbour’s solution, or work with your neighbour to write the detailed answer for the given question. The students worked with one of their neighbours to complete the task, in five to ten minutes. The instructor walked along the aisles, encouraging discussion and answering queries.

Share phase. The instructor facilitated a class-wide discussion related to the tasks in the Think and Pair phases. Student’s responses in the Think and Pair phases formed an important part of the discussion in this phase.

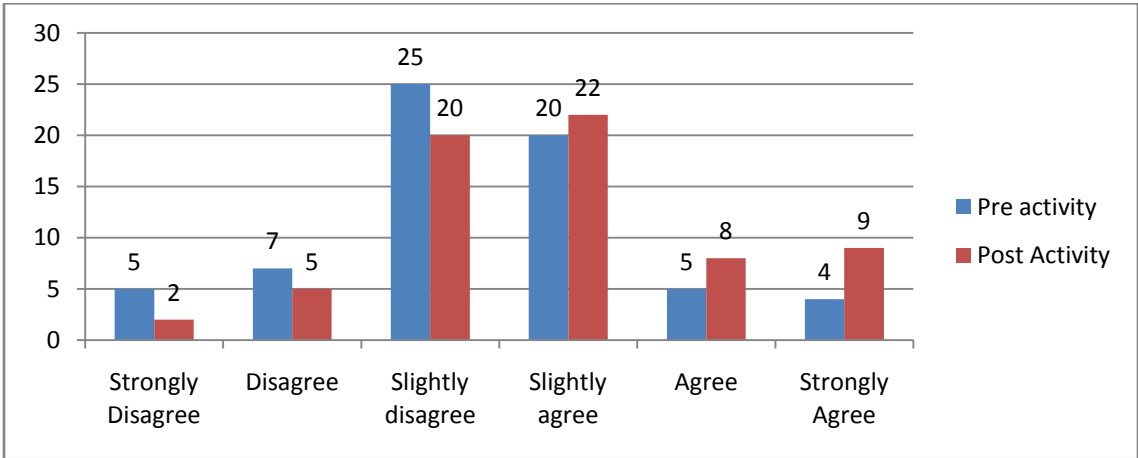
Assessment:

The students took a survey about their class participation and confidence at the beginning and at the end of the activity. The consolidated survey report is as shown in Table

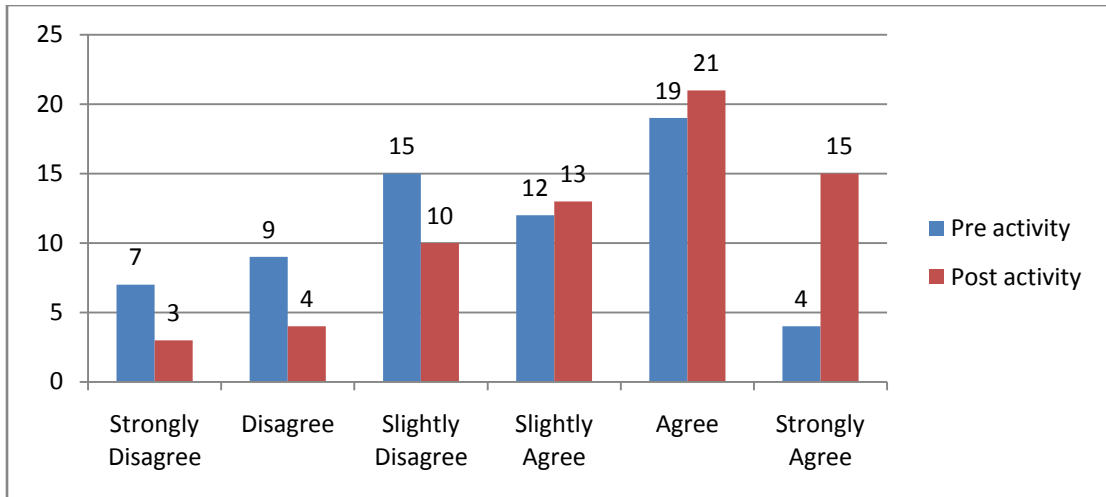
S. No	Description	Pre activity survey						Post activity survey					
		Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1	I enjoy sharing my thoughts and observations during SS class discussion	18	18	10	11	7	2	4	9	7	16	15	15
2	I feel confident in my abilities in SS	5	7	25	20	5	4	2	5	20	22	8	9
3	I feel confident in my ability to contribute to concept discussion in SS class	7	9	15	12	19	4	3	4	10	13	21	15
4	I often participate in class discussion in SS class	7	9	15	19	10	6	1	6	13	22	16	8
5	I am comfortable in contributing to	4	7	15	17	19	4	2	5	10	23	20	6



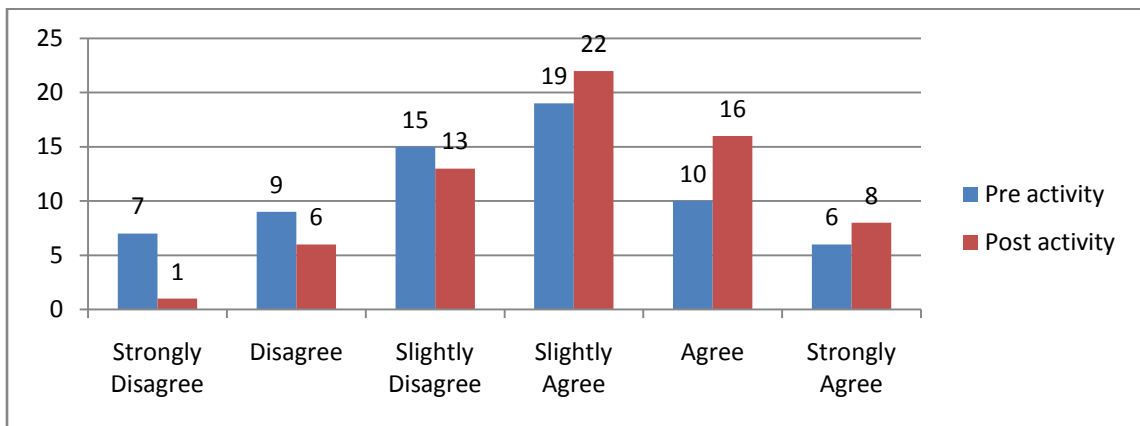
I enjoy sharing my thoughts and observations during SS class discussion



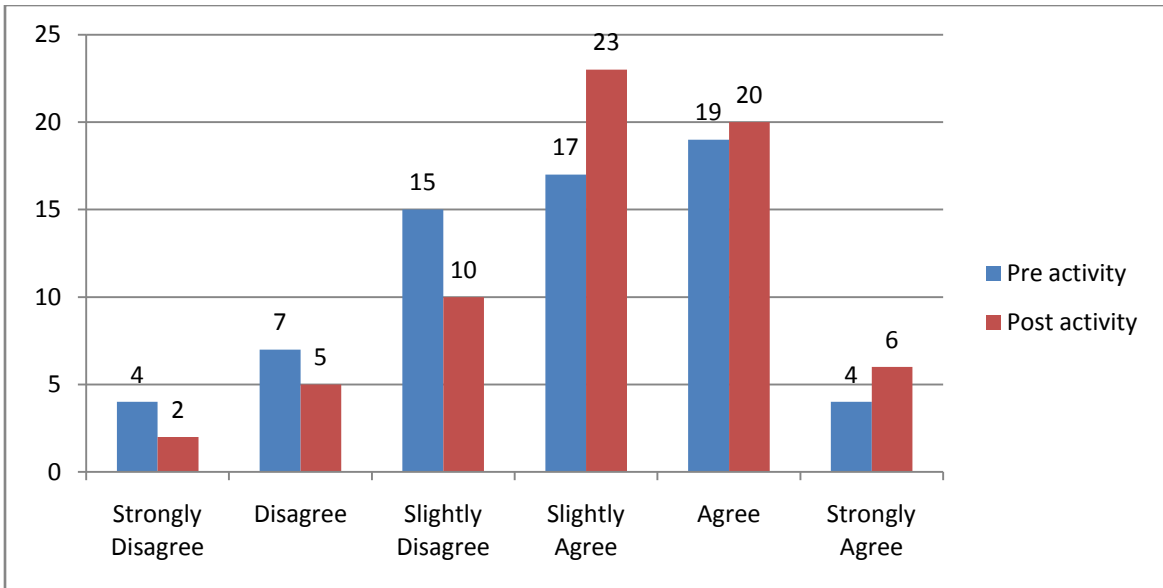
I feel confident in my abilities in SS



I feel confident in my ability to contribute to concept discussion in SS class



I often participate in class discussion in SS class



I am comfortable in contributing to class discussion in SS class



Conducting an TPS activity to the students

Significance of results & reflective critique:

1. The number of students who enjoyed the class is increased.
2. Most of the students agreed that they are confident in contributing for the class room discussion.
3. Students learning ability increased.
4. Students shown interest to participate in classroom discussion often.
5. Students felt comfortable during classroom activities.

Activity Outcomes to PO Mapping:

Activity Outcomes	Mapping to PO'S
• Observe the use of concept of convolution in time and frequency domain for simple mathematical computations of systems.	PO1,PO2,PO3,PO7,PO8
• Analyze the characteristics of linear systems such as distortion less transmission system	PO2,PO3,PO4,PO6,PO7,PO12

Post Implications:

- All the students paid more attention while explaining this activity, due to sharing and pairing all students actively participated.
- The slow learners are also actively participated on par with bright students
- Traditional class room was perfectly converted into student centric classroom.
- With the predefined evaluation process, all students actively participated in each and every stage of the activity.