



RAMCO INSTITUTE OF TECHNOLOGY

RAJAPALAYAM

Department of Artificial Intelligence and Data Science

Academic Year: 2023- 2024 (Even Semester)

Active Learning Best practices: Explore & Engage- Cooperative Learning Technique

Degree, Semester & Branch: II Sem. B.Tech. Artificial Intelligence and Data Science

Course Code & Title: - AD3251 & Data Structures Design

Name of the Faculty member: Ms.K.Amuthachenthiru/Assistant Professor-AI & DS

Theme of discussion: Heap

Topics Covered: Unit- IV

Date and Time: 22.05.2024 & 11.35 A.M to 12.20 P.M

Course Outcome: CO3

- Topic Learning Outcome: TLO1
- Activity Chosen: Explore & Engage

Active Learning Best practices: Explore & Engage

Topic:

What is a Heap Data Structure?

• A Heap data structure is a binary tree with the following properties :

1. It is a **complete binary tree**; that is, each level of the tree is completely filled, except possibly the bottom level. At this level, it is filled from left to right.
2. It satisfies the heap-order property: The data item stored in each node is greater than or equal to the data items stored in its children.

• Examples:

(a)

(b)

(c)

• In the above examples **only (a) is a heap**. (b) is not a heap as it is not complete and (c) is complete but does not satisfy the second property defined for heaps.



Learning Outcomes

- **Critical Thinking:** Students will enhance their critical thinking skills by analyzing and interpreting information presented on the map, identifying patterns, and making connections between different elements.
- Through the use of this "Map with Flip," students will engage in problem-solving activities that require them to find solutions, make decisions, and apply their knowledge to overcome challenges.

Procedure:

1. Introduction (5 minutes)

Purpose: Explain the objective of the activity: to explore a chosen topic online and engage in a discussion afterward.

Instructions: Briefly describe the topic or provide a prompt/question to guide exploration.

Setup: Ensure everyone has access to their devices (computers, tablets, smartphones) and the internet.

2. Exploration Phase (20 minutes)

Individual Exploration: Allow participants to conduct research or explore relevant websites, articles, videos, or other online resources related to the given topic.

Guidelines: Encourage participants to take notes, gather insights, and formulate questions based on their findings.

3. Group Discussion Preparation (5 minutes)

Preparation: Ask participants to prepare one insightful question based on their exploration. This could be about something they found interesting, confusing, or thought-provoking.

Note Taking: Participants should jot down key points or interesting facts to share during the discussion.

4. Discussion Phase (15 minutes)

Group Discussion: Facilitate a structured discussion where each participant presents their question or shares their findings briefly.

Encourage Interaction: Encourage participants to respond to each other's questions or insights, fostering a dialogue.

5. Wrap-Up and Reflection (5 minutes)

Summary: Recap key insights or questions raised during the discussion.

Reflection: Invite participants to reflect briefly on what they learned or found most valuable from the activity.

6. Closure (Optional, 5 minutes)**

Conclusion: Provide a brief conclusion, thanking participants for their engagement and summarizing the importance of exploring topics online and discussing findings.

At the end of the session, student from each group shared the knowledge what they learnt.

Glimpses:



ReflectiveReport

Challenges and strategies:

- One of the main challenges of implementing the "Map with Flip" activity is the limited time available within a class period. Completing the activity within the allotted time can be a challenge
- To overcome time limitations, identify the key concepts, features, or areas of the map that are most relevant to the learning objectives. Focus on these areas during the activity to ensure students gain a solid understanding of the core content.

Observations:

Using Map with Flip is one of the most common study methods, and it is the one many students are most familiar. Map with Flip help students to engage in active recall or a process wherein students actively engage in learning by stimulating our memories and creating lasting connections to the material. Map with Flip are a very useful revision

activity for many reasons. They work across all subjects, they can be used with the recall of facts, topics, keywords and more. They are a very simple technique for learners to use – low effort but high impact.

Students Response:

- Bright students were actively participated to prepare the topic wise questions and concept notes.
- Slow learners expect to assist the topic towards searching online and also understanding the questions
- Most of the students were enjoyed the session.

Students response ensures the students could improve listening, communication, creativity and problem-solving skills.



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FEEDBACK

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Course Code & Title: - AD3251 & Data Structures Design

Name of the Faculty member: Ms.K.Amuthachenthiru/Assistant Professor-AI & DS

Theme of discussion: Introduction to OOP & Inheritance

Topics Covered: Unit- IV

Date and Time: 22.05.2024 & 11.35 A.M to 12.20 P.M

Feedback collected in class and also through online

Gform Link : <https://forms.gle/Q2eVg3fWgGPoTCJCA>

Feedback Questions:

1. Did the active learning method used in the session engage your interest in the topic? **Yes** **No**

2. How did the active learning method enhance your understanding of the topic?

Excellent **Good** **Satisfactory**

3. Did the active learning method encourage active participation and communication?

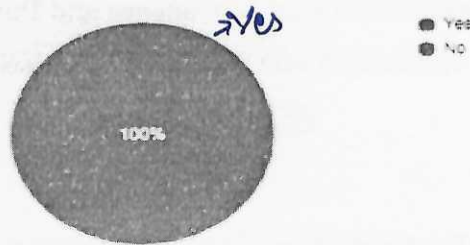
Yes **No**

4. Did the active learning method prompt you to think more deeply or critically about the topic?

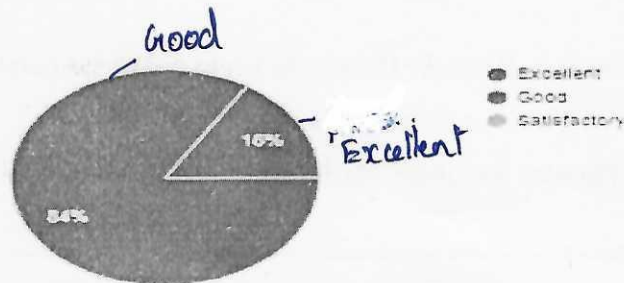
Yes **No**

Feedback Analysis:

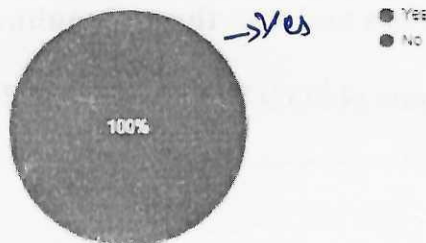
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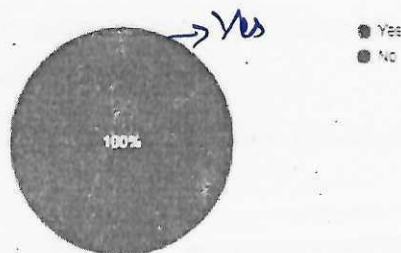
2. How did the active learning method enhance your understanding of the topic?



3. Did the active learning method encourage active participation and communication?



4. Did the active learning method prompt you to think more deeply or critically about the topic?



Wade

HOD/AD