



RAMCO INSTITUTE OF TECHNOLOGY

Approved by AICTE, New Delhi & Affiliated to Anna University
NAAC Accredited with 'A+' Grade & An ISO 9001: 2015 Certified Institution
NBA Accredited UG Programs: CSE, EEE, ECE and MECH

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Academic Year 2025 – 2026 (Even Semester)

Degree, Semester & Branch: II Semester B. Tech. AI&DS - 'A' & 'B'

Course Code & Title: CS25C06 & Digital Principles and Computer Organization

Name of the Faculty member (s): Mrs. M. Santhikala

Unit / Topic: Module 3 / Build a parallel order

Course Outcome: CO3

Activity Chosen: Flipped Classroom

Justification:

A flipped classroom is a pedagogical model that reverses traditional instruction by delivering educational content, such as pre-recorded lectures, outside the classroom. A flipped classroom is a pedagogical model that reverses traditional instruction by delivering educational content, such as pre-recorded lectures, outside the classroom.

Time allotted for this activity: 45 Minutes

Objectives:

- To help students understand concepts clearly through self-learning before class.
- To use classroom time for active learning, discussions, and hands-on practice.
- To improve conceptual understanding of the topic.
- To promote critical thinking and problem-solving skills.
- To encourage student participation, collaboration, and interaction.

Implementation:

1. Plan:

- Instructor explain about the concepts with the help of PPT.
- Students were divided into 5 groups and explain the about the activity. Select two students from each group and assigned to prepare for presentation.
- Course instructor sent the video link to the students.
<https://youtu.be/NO7Gt8IDSGA>
- Students were asked to watch study the video, and prepare the concepts on Parallel adder

2. In-Class Activities:

- The assigned students explain the concepts of parallel order and ask few questions to recall the concepts.

CO/ PO and PSO mapping:

S No	Topic	PO1	PO2	PO8	PSO1	PSO2
1	Build a parallel order	3	2	3	3	3

Glimpses of Activity:

A section:



B Section:



- Feedback of practice from students and other stakeholders:**
 - The in-class activity improved their practical understanding of full adders and carry propagation.
 - Group discussion encouraged peer learning and collaborative problem solving.
 - Students felt more confident in designing combinational circuits using logic gates.
 - The activity made learning interactive and engaging compared to traditional lectures.
- Benefit of the practice:**
 - Students gain experience in designing and analyzing parallel adders, strengthening their digital logic and computer architecture skills.

- Group activities help students learn from peers, improving teamwork and communication skills.
- Students take responsibility for preparing before class, developing independent learning habits.
- **Challenges faced in implementation:**
 - Some students needed more time to understand carry propagation logic.
 - A few students faced difficulty in completing the pre-class preparation.
 - Beginners required additional guidance during circuit implementation.

References:

1. <https://bokcenter.harvard.edu/flipped-classrooms/>
2. https://en.wikipedia.org/wiki/Flipped_classroom
3. <https://omerad.msu.edu/teaching/teaching-skills-strategies/27-teaching/162-what-why-and-how-to- implement-a-flipped-classroom-mode>



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DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Academic Year 2025 – 2026 (Even Semester)

FEEDBACK Active Learning Best practices: Flipped Class Room

Degree, Semester & Branch : B.Tech, V & AI / DS

Course Code & Title : CS25C06 & Digital Principles and Computer Organization

Name of the Faculty member : Mrs. M. Santhikala, AP/AD

Theme of discussion : Build a Parallel order

Date and Time : 26.02.2026 & 01.55 pm to 02.40 pm. (A Section)
26.02.2026 & 09.00 am to 09.45 am. (B Section)

Feedback collected in class and also through online

Feedback Link: <https://forms.gle/vJus6Cck1vZbnWhKA>

FEEDBACK QUESTIONS:

1. The flipped classroom method helped me understand the topic better

Yes No

2. The activity improved my analytical thinking skills

Yes No

3. Comparing CPUs from different manufacturers improved my practical knowledge

Yes No

4. The activity was engaging and interesting

Yes No

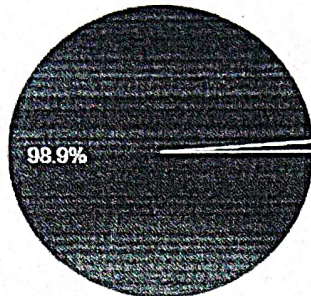
5. Did the plan provide opportunities for active participation and collaboration?

Yes No

Feedback analysis:

1. The flipped classroom method helped me understand the topic better

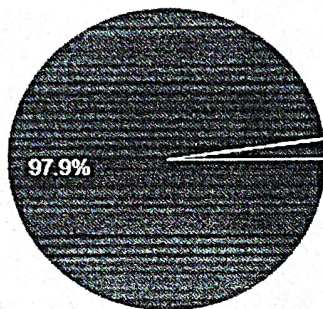
94 responses



- YES
- NO

2. The activity improved my analytical thinking skills

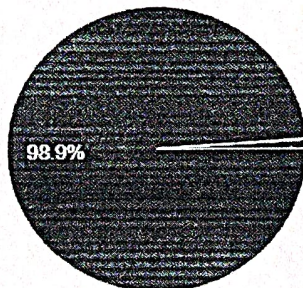
94 responses



- YES
- NO

3. Comparing CPUs from different manufacturers improved my practical knowledge

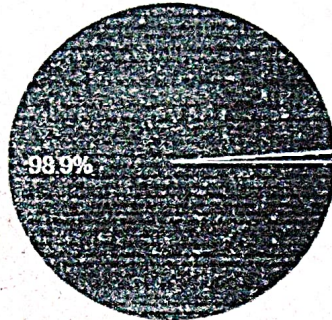
94 responses



- YES
- NO

4. The activity was engaging and interesting

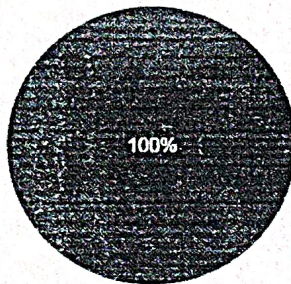
94 responses



- YES
- No

5. Did the plan provide opportunities for active participation and collaboration?

94 responses



- Yes
- No

AC Southwell
6/3/21
Faculty in-charge

W. M. ...
6/3

HOD/AD