



# RAMCO INSTITUTE OF TECHNOLOGY

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## Department of Computer Science and Engineering

Academic Year 2024 – 2025 (Odd Semester)

**Degree, Semester & Branch:** V Semester B.E. CSE 'B'

**Course Code & Title:** CCS375 Web Technologies

**Name of the Faculty member (s):** Mrs.B.Vijayalakshmi, AP (SG)/CSE

### Innovative Practice Description

- Unit / Topic:** Unit V / Web Application Frameworks

- Course Outcome:** CO5

- Topic Learning Outcome:** 5b

- Activity Chosen:** Collaborative Learning

- Justification:**

Collaborative learning encourages students to debate and discuss various features of the different web application development frameworks. These discussions help them develop a nuanced understanding of each framework's use cases. Collaborative efforts among students enhance their technical expertise while fostering essential soft skills and analytical decision-making capabilities, equipping them for practical web development issues.

- Time Allotted for the Activity:** 30 Minutes

- Details of the Implementation:**

- The general overview and various features of different web application development frameworks- React and Angular were given to the students.
- The entire class was divided into 9 groups of 5-6 students in each group.
- The team members are instructed to explore the two frameworks and find out the similarities, unique features of each framework and application structure.
- The team members were informed to refer the resources like tutorials and official documentation of the frameworks.
- The members discussed among their team and shared their own findings with others in the group which is shown in Figure 1a & 1b.
- After the allotted discussion time of 10-minute duration, from each team one representative was asked to present the key features for the given topic to the entire class.
- The representative from each team shared the key features such as how angular differs from react framework, various use cases, state management & various developer tools for the framework. Figure 2 shows the students presentation.

- CO – PO / PSO mapping:

CO	PO1	PO2	PO3	PO5	PO8	PO9	PO10	PO11	PO12	PSO1
CO5	1	3	3	3	3	1	2	2	2	3

(1 – Low      2 – Moderate      3 – High)

- PO / PSO mapped:

Innovative practice	PO2	PO3	PO5	PO9	PO10	PO12	PSO1
	2	2	2	1	2	2	3
Justification for correlation	The students analyses how various frameworks are used for web application development	Students develop ideas for usage of particular framework	Students use different frameworks for application development	The students as a team discuss and present their findings	The students communicate the features of different web development frameworks	The students learn about the updates on the frameworks	The basics of HTML tags are needed in developing the web applications

- Images / Screenshot of the practice:



**Figure 1a. Students Discussion**



**Figure 1b. Students Discussion**



**Fig. 2: Sharing the key ideas**

- **Reflective Critique:**

- ❖ **Feedback of practice from students and other stakeholders:**
  - Students enjoyed the interactive nature of the activity and found the group discussions and presentations highly engaging.
  - Students are more likely to stay motivated and complete tasks when they collaborate, as the group relies on their input.
- ❖ **Benefit of the practice:** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)
  - Through collaboration, the students can share knowledge about the strengths and weaknesses of Angular and React, enriching each other's understanding.
  - Working together fosters a sense of accountability and enthusiasm. Collaborative learning helps students improve communication, teamwork, and problem-solving skills, which are invaluable for future careers in web development.
- ❖ **Challenges faced in implementation:**
  - More time required to present the findings of all teams.
  - Some students felt they needed more time to fully understand the details of the frameworks.

**References:**

- <https://www.bell-foundation.org.uk/resources/great-ideas/collaborative-activities/>
- [https://www.ritrjpm.ac.in/images/computer-science/2022-2023/Unit\\_1\\_collaborative%20learning.pdf](https://www.ritrjpm.ac.in/images/computer-science/2022-2023/Unit_1_collaborative%20learning.pdf)