



**Department of Information Technology
Academic Year 2025 - 2026 (Odd Semester)**

Degree, Semester & Branch: V Semester B.Tech. IT

Course Code & Title: CS3591 & Computer Networks

Name of the Faculty member (s): Mrs.M.Thulasi devi, AP/IT

Innovative Practice Description

- **Unit / Topic:** Unit II / Quality of Services
- **Course Outcome:** CO2
- **Topic Learning Outcome:** TLO20
- **Activity Chosen:** Learning by Teaching
- **Justification:**
 - In Unit II, students must comprehend Quality of Service mechanisms in computer networks. This peer-led workshop methodology cultivates collaborative learning while simultaneously developing presentation abilities, critical thinking, and peer mentorship capabilities among participants.
- **Time Allotted for the Activity:** 10 Minutes
- **Details of the Implementation:**
 - The topic Quality of Services was assigned to Mr.Dinesh kumar seven days prior to the scheduled presentation date.
 - She conducted comprehensive research and developed an interactive presentation, which was delivered in the class.
 - The presentation spanned approximately 10 minutes, incorporating real-world networking scenarios and practical applications.
 - Students engaged in collaborative discussions examining multiple QoS parameters including latency, throughput, jitter, and packet loss through industry case studies.
 - The peer-led workshop implementation is documented in Figure 1.

• CO – PO / PSO mapping:

| CO | PO1 | PO2 | PO3 | PO4 | PO5 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| CO2 | 3 | 3 | 2 | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 3 |

(1 – Low 2 – Moderate 3 – High)

• PO / PSO mapped:

| Innovative practice | PO1 | PO2 | PO3 | PO4 | PO5 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|--------------------------------------|---|--|--|--|--|---|---|---|--|--|--|--|--|
| | 3 | 3 | 2 | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 3 |
| Justification for correlation | The students could be able to use and apply basic concept of transport layer protocol | The students could be able to review the real time problem with the transport layer protocol | The students will be able to address various problems related to transport layer | The students will be capable of understanding the various uncertainties in transport layer | The students will be capable of developing or applying various frameworks for managing transport layer | In practice, the students will adhere to ethics in various protocols in transport layer | The students will work as part of a team and individually to illustrate their competencies in the transport layer | The students will illustrate their abilities in communication and problem-solving as they engage with the transport layer | The students will be able to identify the task required to build TCP and UDP | The student will identify the technological advances made in the past and update the concepts in transport layer | The students could be able to apply computing skills to the transport layer protocols. | The students will have the ability to provide IT solutions concerning the transport layer. | The students could be able to develop software application for transport layer protocols |

- **Images / Screenshot of the practice:**



Figure 1: Learning by Teaching Handled by DINESH KUMAR S

- **Reflective Critique:**

- ❖ ***Feedback of practice from students and other stakeholders:***

- Students demonstrated enhanced retention of QoS concepts and technical terminology through active participation
- Participants reported increased self-assurance when discussing network performance metrics and quality parameters
- The interactive workshop format was perceived as an effective pedagogical approach that strengthened comprehension, analytical thinking, and public speaking abilities

- ***Benefit of the practice:***

- Participants experience accelerated mastery of subject matter through the process of explaining concepts to peers
- The methodology cultivates essential professional competencies including articulation, active listening, and knowledge synthesis
- Students develop metacognitive awareness by identifying knowledge gaps and reinforcing understanding through peer instruction

- ❖ ***Challenges faced in implementation:***

- Motivating passive observers to actively participate required strategic intervention and emphasis on collaborative learning benefits
- Limited participation scope restricted the opportunity for broader student involvement in presenting roles, necessitating rotation strategies for future sessions

References:

- ❖ <https://www.ritrijpm.ac.in/departments/rit-information-technology/it-innovative-practices.php>
- ❖ <https://www.ritrijpm.ac.in/images/B.Tech-IT/2023-2024/IP/5.Learning%20by%20Teaching.pdf>
- ❖ <https://arxiv.org/abs/1703.04174>

Signature of Faculty Member

HOD

