

Innovative Practice

Faculty Name : Dr. D.Anveshini
Course Name : Computer Networks
Class : III B.Tech I Semester
Academic Year : 2021-2022
Title of the Topic : OSI and TCP/IP Reference Models
Activity Name : Flipped Classroom

Objective of the Activity:

The objective of the Flipped Classroom is to invert traditional teaching by having students first engage with new material outside of class, typically through readings or video lectures, and then using class time for activities that deepen understanding, such as problem-solving, discussions, and collaborative projects.

Pre-Class Preparation:

Video Lecture Links



<https://youtu.be/JHJQ6Ke2mYU?feature=shared>

In-Class Problem-Solving: Group Discussion

Objective: "To explore the OSI and TCP/IP reference models by studying their layers and functions outside of class, and apply this knowledge through in-class discussions and problem-solving activities."

Group Division:

Group A: Introduction to OSI Model

Group B: OSI Model Layers(Physical , Data Link , Network)

Group C: OSI Model Layers(Transport , Session ,Presentation, Application)

Group D: Introduction to TCP/IP Model

Group E: TCP/IP Model Layers and Protocols

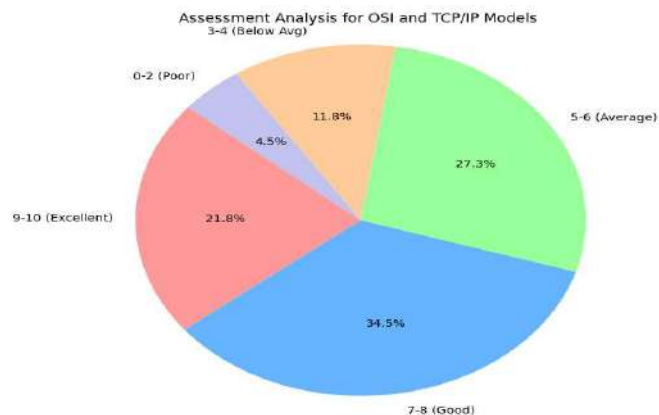
Group F: OSI vs TCP/IP Comparison and Real World Application

Screenshots of the Practice



Assessment Analysis

Marks Range	Number of Students	Percentage
9-10 (Excellent)	24	21.82%
7-8 (Good)	38	34.55%
5-6 (Average)	30	27.27%
3-4 (Below Avg)	13	11.82%
0-2 (Poor)	5	4.55%
Total	110	100%



Conclusion

This flipped classroom activity on the OSI and TCP/IP models helps students understand network protocols and their real-world applications through active learning and peer interaction. By discussing and comparing the two models, students deepen their understanding and connect theoretical concepts to practical examples, fostering a collaborative environment that enhances overall learning.

Signature of the Faculty**Head of the Department**