



Collaborative Learning among Heterogeneous Groups in Virtual Mode in Higher Degree Program

ICDE International Conference – 2017, Symbiosis Centre for Distance Learning

BITS Pilani

Pilani | Dubai | Goa | Hyderabad

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Background



- Programmes
 - Division: Work Integrated Learning Programmes, BITS-Pilani
 - Areas: Embedded Systems, Computer Science and Information Systems, Mechanical Engineering, MBA and more
- Course Delivery
 - Technology enabled live virtual classrooms
 - Recorded lectures
 - Moodle-based platform for discussion forums, evaluation support and grading

Objectives and Scope



- Objectives
 - Evaluate the feasibility of a collaborative approach to offering experiential learning to students from diverse backgrounds in a virtual classroom
 - Achieve higher levels of interaction and knowledge sharing among heterogeneous students/student groups
- Scope of work
 - M.Tech (Software Systems)
- Heterogeneous student background
 - Education: B.E./B.Tech Degree holders
 - Work experience: 2yrs-15yrs or more
 - Different technologies/domains/roles in the software industry
 - Location: Geographically dispersed



Methodology

- Course: Internetworking Technologies
- Class strength: 130 students
- Time frame: One semester
- Steps:
 - Design of experiential learning component
 - Formation of student groups
 - Student group work
 - Assessment of student outcomes via presentations and demonstrations
 - Assessment of student learning experience through feedback collection

Methodology



Design of Experiential Learning Component

- A set of 12 different problems published to the students
- Usage of simulators
- Additional reading

Formation of Student Groups

- Students divided into groups of 5-6 members
- Group discussion forums
- Each group to collaboratively decide a problem to work on

Student Group Work

- 4-5 weeks to work on the problem identified

Assessment of Student Outcomes

- Report submission
- Presentations of 30 min
- Demonstration of the simulations
- Viva

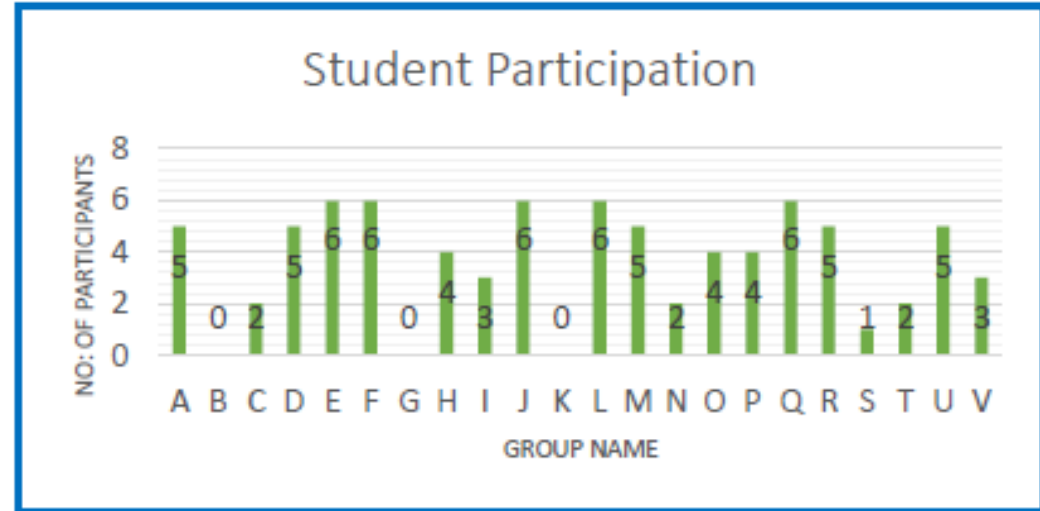
Assessment of Student Learning Experience

- Feedback collection

Observations



- Use of group discussion forums to locate group members and knowledge sharing
- Different methods of execution
 - Equal division of work among group members
 - Emergence of a clear leader in some groups
- Enhanced learner–instructor interaction
- Enthusiastic participation from students



- Student concerns
 - Inability to locate team members
 - Requests for change of assignment topics/presentation slots





Thank you