MES's Pillai College of Engineering, New Panvel

A REPORT ON
PROJECT BASED LEARNING (PBL)

Class: Third Year
Department: Information Technology
Sem:VI
Academic Year:2019-2020

Objective—In Project Based Learning, the project is the vehicle for teaching the important knowledge and skills students need to learn. The project contains and frames curriculum and instruction. It requires critical thinking, problem solving, collaboration, and various forms of communication. To answer a Driving Question and create high-quality work, students need to do much more than remember information. They need to use higher-order thinking skills and learn to work as a team. Project-based learning is an instructional approach designed to give students the opportunity to develop knowledge and skills through engaging projects set around challenges and problems they may face in the real world.Project-based learning (PBL) is a student-centered pedagogy that involves a dynamic classroom approach in which it is believed that students acquire a deeper knowledge through active exploration of real-world challenges and problems. Students learn about a subject by working for an extended period of time to investigate and respond to a complex question, challenge, or problem. It is a style of active learning and inquiry-based learning. PBL contrasts with paper-based, rote memorization, or teacher-led instruction that presents established facts or portrays a smooth path to knowledge by instead posing questions, problems or scenarios.
PBL is **"learning by doing."**

Separate topics are assigned to all students in groups (maximum 3 students per group) of the same year to enable healthy competition among the different teams. The students work in groups and assign and distribute various aspects of work so as to realize the project based on a timeline of about 2 to 3 months. Queries and doubts are clarified by interactions with the PBL coordinators and subject experts. Student groups submit the PBL report during their demonstrations on a specified date in front of the faculty members.

The truth is, many in education are recognizing we live in a modern world sustained and advanced through the successful completion of projects.For most modern workers, it will be a series of projects that mark their career rather than years of service to a specific organization. **"Solving real-world issues that matter is important to us as adults—and it's important to our students."**

Judges for the PBL Demonstrations

All Computer and IT Engineering Faculty of the concerned class.

PBL Coordinators

Division A	Prof.Krishnendu.Nair
Division B	Prof. Aju Palleri

Methodology

1. Create a groups (3 students in each group)
2. Identify the Problems which is done by teachers.
3. Provides solution to the problems.
4. The students work in groups and assign and distribute various aspects of work so as to realize the project based on a timeline of about 2 to 3 months.
5. Queries and doubts are clarified by interactions with the PBL coordinators and project area experts.
6. Prepare the project report.
7. Present the same to the concerned experts

Structure

Project-based learning emphasizes learning activities that are long-term, interdisciplinary and student-centered. Unlike traditional, teacher-led classroom activities, students often must organize their own work and manage their own time in a project-based class. Project-based instruction differs from traditional inquiry by its emphasis on students' collaborative or individual artifact construction to represent what is being learned.

Project-based learning also gives students the opportunity to explore problems and challenges that have real-world applications, increasing the possibility of long-term retention of skills and concepts.

PBL Topics:

Sr. No.	Division A	Division B
IT1	Assistive device for disabled people	Real-Time Detection and Mitigation of Distributed Denial of Service (DDoS) Attacks in Software Defined Networking (SDN)
IT2	Drone route planning	IoT based Health monitoring system for pregnant women
IT3	Early Flood Monitoring System using IoT Applications	Extraction of Legal Documents for Assistance to lawyers.
IT4	Smart Doctor Android Application for Breast Cancer risk prediction and diagnosis	Emotion Recognition from Facial Expression using Deep Learning
IT5	Web Application vulnerability detection	Web based Career Guidance System
IT6	Health and Fitness assistant for disabled people	A simple security policy enforcement system for an institution using SDN controller
IT7	Students Grievance Support System	Touch-free smartphone
IT8	Predicting employees performance using Data Mining Techniques	Career building system for students based on hybrid recommendation
IT9	Prediction of employee attrition	Prediction of Diabetes in Healthcare
IT10	Music recommendation system using Machine Learning	Handwritten Character Recognition of Devanagari Script using Computer Vision and Deep Neural Networks.
IT11	Automatic Translation and Enforcement of Cybersecurity Policies Using A High-Level Definition Language	Automatic number plate detection and recognition
	Message filtering system in online social network	QA with Wiki: improving information retrieval and machine comprehension

IT12

IT13	Predicting readmission risk from doctors' notes	AntiAccident and Anti-Theft system for vehicles.
IT14	Web application for home remedies	IP Address grabber and tracker
IT15	IoT Based Alarm Clock	Identification of textual similarity from image contents using semantic analysis
IT16	Online Anti-phishing detection system using Machine Learning	PhishFarm: A Scalable Framework for Measuring the Effectiveness of Evasion Techniques against Browser Phishing Blacklists
IT17	Fake profile detector using deep learning	Pathology Image Analysis Using Segmentation Deep Learning Algorithms
IT18	IoT Based Home security management	Multi-objective Based Approach for Microblog Summarization
IT19	Identification of text similarity based on context	MANDIFARM: Portal for farmers to sell produce at better rate
IT20	Decision making system for best crop suggestion	Student Attendance with Fingerprint Reader
IT21	VLEARN-Personalized E-Learning Recommendation System	Human identification for freestyle walksusing Posture based GAIT feature
IT22	Medical Image Enchancement using Deep Learning	Facial recognition door using Raspberry pi
IT23	Sentimental Analysis using Hybrid feature extration	Accident detection and alerting system using GPS and GSM
IT24	Distinct feature extraction for Video based GAIT phase classification	Detection of Deep Fake Video Manipulation
		Sensing activities and locations of senior citizens towards automatic daycare report generation.

Schedule of Mock

Review	Date	Venue
1	**2nd to 6th March 2020**	S 107/S108, S 110/S111

Submission of report

Review	Date	Venue
1	**7th to 13th April 2020**	S 107/S108, S 110/S111[Planned] (Due to lockdown submission of reports to guide was done after discussions via google meet.)

Photos: