Agni College of Technology
Approved by AICTE / UGC, New Delhi, Accredited by NAAC & NBA, Affiliated to Anna University, Chennai.
ISO 9001:2015 Certified Institution: Estd.2001
OMR, Thalambur, Chennai - 600 130. Phone: 044 6740 9441 Mobile: 9445024081 www.act.edu.in

DEPARTMENT OF MECHANICAL ENGINEERING

GAMIFICATION-BASED LEARNING

Academic year	: 2022-2023
Degree	: B.E. Mechanical Engineering
Year & Semester	: II/IV
Course Code & Title	: CE3391/ Strength of Materials
Name of the Faculty Member	: Dr.K.Raghupathy
Date	: 22/03/2023
Innovative Practice	: Gamification Based Learning
Topic	: Shear Force Diagram & Bending Moment Diagram
Total Students Participated	: 16

OBJECTIVE OF GAMIFICATION BASED LEARNING

Gamification-based learning in Strength of Materials was implemented to create an engaging and interactive classroom environment. The primary objective of this activity was to enhance students conceptual understanding of stress, strain, bending, torsion, and material behavior by incorporating game-based learning elements. By using Quizizz, students were motivated to actively participate in learning activities, assess their understanding in real time, and improve their problem-solving abilities in a fun and competitive manner. This approach also encouraged self-assessment, instant feedback, and active recall of engineering concepts..

METHODOLOGY

1. The faculty member prepared multiple-choice and numerical questions covering important topics from Strength of Materials.
2. Quizizz platform was used to conduct the gamified learning session.
3. Students participated individually using mobile phones or computers.
4. Questions were displayed with time limits to improve quick thinking and conceptual clarity.
5. Instant feedback was provided after each question.
6. Scores and rankings motivated students to perform better and actively engage in the session.
7. Faculty discussed correct answers and clarified misconceptions after the quiz.

OUTCOMES

1. Gamification improved student engagement and attentiveness during Strength of Materials classes.
2. Students developed a better conceptual understanding of core topics through active recall and instant feedback.
3. The activity enhanced problem-solving speed and accuracy.
4. Students showed increased motivation, participation, and interest in learning complex engineering concepts.
5. The approach supported interactive learning and improved overall classroom dynamics.

Student Participation

- Total Students: 16

RELEVANCES TO Pos

PO1	PO 2	PO 3	PO 4	PO 5	PO 8	PO 9	PO 10	PO 11	PO 12

Participant Name List

S. NO	REGISTER NO	STUDENTS NAME
1	312821114002	Divya N
2	312821114003	Gokul P
3	312821114004	Guna S
4	312821114005	HariRaghavan C
5	312821114006	Kalaiselvan R
6	312821114007	Kannan S
7	312821114008	Karthick K
8	312821114010	Reshav Raj
9	312821114011	Sibi Raynord U
10	312821114012	Sivasakthi J
11	312821114013	Yuvaraj A
12	312821114301	Gokul S
13	312821114302	Meera T M
14	312821114303	Mohammed Jameel S
15	312821114305	Umar Faruk N
16	312821114306	Yuvaraj M

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Simulation-Driven Concept Learning Method conducted on 22.03.2023 by Dr.K.Raghupathy for Strength of Materials Course

Simulation-Driven Concept Learning Method conducted on 22.03.2023 by Dr.K.Raghupathy for Strength of Materials Course

The valuable feedbacks can be provided in the below link for the above innovative teaching method.

https://docs.google.com/forms/d/1fvirVL5EZzbF30W2KpIC2nAHBIuWuImTe2mOJ68D2xE

Faculty In charge

HoD/Mech