



Department of Instrumentation and Control

Innovative Teaching Method: Role Play 17.08.2023

Class:	BE (Instrumentation & Control Engineering) Subject: Automotive Instrumentation
Name of Method :	Role Play
Learning Objective: <ol style="list-style-type: none">1. Students will understand the complete Internal Combustion (I.C) Engine2. Students will understand the role of Sensors, latest Technology in Automotive sector	
Outcomes: On completion students were able to <ol style="list-style-type: none">1. Demonstrate the working of Spark Ignition System, Compression Ignition System2. Identify the role of Sensor its working and its Application in Automotive.3. Demonstrate the working of ADAS System, Accident Prevention system using camera as sensor in Automotive	
Description: Role play, including acting out scenarios to problem solve, story making through dramatic play and practice in coping with real life situations will support student's social-emotional growth and development. Role play helps to develop the skills to handle problematic social interactions. In the role play, each student was assigned the application (with role of each component) was discussed with students. Each student was assigned particular role of the act. Students presented their role with its function, structure, role and its importance. Total Four groups were formed Group A (Total 05 Students) was assigned the Role Play on "Demonstration of four stroke Spark Ignition (S. I) Engine" – Team Leader was Mr. Jayesh Ahirrao Group B (Total 05 Students) were assigned the Role Play on "Demonstration of ADAS System, its working with Application". – Team Leader was Ms. Khushi Datir Group C (Total 05 Students) were assigned the Role Play on "Demonstration of Compression Ignition (C.I) Engine". – Team Leader was Ms. Savi Khairnar Group D (Total 04 Students) were assigned the Role Play on "Demonstration of Accident Prevention using camera as sensor". – Team Leader was Mr. Mustafa Shaikh Complete working of Compression Ignition Engine, Spark Ignition Engine, and Working of Sensor with application, Working of ADAS System, Advanced Driver Automatic System, Demonstration of Accident Prevention using camera as sensor was carried out through Role play . Then Students were assigned the role of: Air filter, Inlet Valves, Fuel Injectors, Exhaust Valves, Piston & Crank shaft, Combustion Chamber, Connecting rods, Carburetor, Spark Plug, Sensor, and Controller. All four groups executed very well the Role Play. This is how every student plays his/her role.	

Impact of Innovative Method: This activity helps students to enhance communication skills, interpersonal skills, understanding the concept, self-confidence, team work, self-learning, analytical skills & participating in front of audience.

Rubrics used:

Skills/Criterion/Category	4 Points	3 Points	2 Points	1 Points
Objective of the Role-play	Objective of the role-play was very clearly understood.	Objective of the role-play was clearly understood.	Objective of the role-play was understood.	Objective of the role-play was not clearly understood.
Content delivery by each participant.	Participant delivered all the contents as per role.	Participant delivered most of the contents as per role.	Participant delivered some of the contents as per role.	Participant delivered none of the contents as per role.
Props (creativity while playing role)	Participant used several props that accurately fit the period, shown considerable work/creativity and made the role-play best.	Participant used 1-2 props that accurately fit the period, and made the role-play better.	Participant used 1-2 props which made the role-play good.	Participant used No props OR the props chosen distracted from the role-play.
Overall of the Impact	All information appeared to be accurate and in chronological order.	Almost all information appeared to be accurate and in chronological order.	Most of the information was accurate and in chronological order.	Very little of the information was accurate and/or in chronological order.

Roll no.	Name of student	Objective of the Role-play	Content delivery by each Participant.	Props	Overall of the Impact	Total (20)
1	Jayesh Ahirrao	4	4	4	4	16
2	Poonam Pomnar	4	4	3	3	14
3	Gitanjali Nikam	4	3	4	4	15
4	Vaishnavi Khandare	3	3	3	4	13
5	Komal Dinde	4	4	3	3	14
6	Khushi Datar	4	4	4	4	16
7	Tejal Jagdale	4	4	4	3	15
8	Sanika Naik	4	4	4	4	16
9	Mohini Kulthe	3	3	3	4	13
10	Lalit Chavan	4	4	3	4	15
11	Savi Khairnar	4	4	4	4	16
12	Pooja Jadhav	3	3	3	4	13
13	Prapti Gundecha	3	4	3	3	13
14	Sajid Shaikh	4	4	3	4	15
15	Aditi Jagtap	4	3	4	4	15
16	Mustafa Shaikh	4	4	4	4	16
17	Kajal Pomnar	4	4	4	3	15
18	Anushka Nikam	3	3	4	3	13
19	Avantika Benke	3	4	3	3	13



Group A : Demonstration of four stroke Spark Ignition (S. I) Engine



Group B: Demonstration of ADAS System, its working with Application



Group C: Demonstration of Compression Ignition (C.I) Engine



Group D: Demonstration of Accident Prevention using camera as sensor

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H. O. D.