



Department of Instrumentation and Control

Innovative Teaching Method

Class:	SE
Name of Method :	Role Play
Subject	Sensors and Transducers-I
Staff	Dr. A. K. Patil
Learning Objective: <ol style="list-style-type: none"> 1. Students will understand the complete automation system, role of sensors, PLC and actuator in automation system. 2. Students will understand the input/output of the sensors, PLC and actuators, its specifications and importance. 	
Outcomes: On completion students were able to <ol style="list-style-type: none"> 1. Explain the application bottle filling plant. 2. Identify the sensors used in applications i.e. proximity sensor, encoders 3. Explain the input to the sensors and output of the sensors given to the PLC. 	
Description : In role play, the application (with role of each component) was discussed with the students. Every students were assigned role of one component. Students presented their role with its specifications, input/output of the component and its importance. The theme of the role play was discussed with the students by referring paper https://www.ijtsrd.com/engineering/automotive-engineering/5953/automatic-bottle-filling-system-using-plc/arun-kumarm . Complete automatic bottle filling plant application using PLC was discussed with students. The students were assigned with the roles of sensors, actuators and PLC with rules and regulations. During role play students acted as assigned components and presented their roles. E.g, I am proximity sensor. I sense the presence bottle present on the conveyer. Accordingly I give output to the PLC. I accept the input in digital form and give output in digital form to PLC. Accordingly PLC give command to pump. This is how every student plays his/her role.	
Impact of Innovative Method: This activity helps students to enhance communication skills, interpersonal skills, self-learning, analytical skills.	

Rubrics used:

Skills/Criterion/C ategory	4 Points	3 Points	2 Points	1 Points
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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
1	SURYAWANSHI RUSHIKESH PRAVIN	3	3	3	3	12
2	WAGH VAIBHAV RAMESH	3	4	3	3	13
3	BHANGE NIRMIT RAMESH	4	3	4	4	14
4	HALNOR YOGESH NANDU	3	3	3	3	11
5	HUSAINI MURTAZA BURHANUDDIN	3	4	4	3	14
6	JANGID RITESH PARMESHWARLAL	3	2	3	3	11
7	JOSHI VARADA MUKUND	4	4	3	4	15
8	LANDE SHIVANI KISHOR	4	3	3	3	13
9	LANDE SWAPNIL VITTHAL	3	3	4	3	13
10	MUSALE SHIVANI ABAJI	3	4	3	3	14
11	PATIL CHETAN PRABHAKAR	3	3	3	3	12
12	PATIL PRANAV VIJAY	2	2	2	2	08
13	PATIL VANSHIK KAILAS	3	3	4	3	13
14	WAGH ROHIT KACHARU	3	3	3	3	12
15	WAJE MEENAL RAMCHANDRA	4	3	4	3	14



Class:	BE
Name of Method :	Role Play
Subject	Project Engineering and Management
Staff	Dr. A. K. Patil
<p>Learning Objective:</p> <ol style="list-style-type: none"> 3. Students will understand the complete procurement activities 4. Students will understand the importance and contents of all the various documents like Enquiry, Quotations, and Comparative etc. 5. Students will understand the role of engineers in procurement activities and ethics needed. 	
<p>Outcomes: On completion students were able to</p> <ol style="list-style-type: none"> 4. Identify the procurement activities and its sequence. 5. Explain the need of each document viz. Quotation, Comparative, Purchase order and the clarity of contents. 6. Explain the ethics in procurement management. 	
<p>Description :</p> <p>The role play was conducted as an activity to understand the various aspects of project management. Procurement management is one of the very important part of project management. Students should be able to understand the role of engineer in it. They should be able to prepare the documents required in the procurement.</p> <p>The students were given the task that the company require 30 level transmitters for automation project. They have to perform the procurement activity for the same.</p> <p>Students arranged the role play. They played a role of purchase manager, Project manager, all the various document viz inquiry, quotation, comparative, PO etc. Everybody played an assigned role.</p>	
<p>Impact of Innovative Method: This activity helps students to enhance communication skills, interpersonal skills, leadership, team work.</p>	

Rubrics used:

Skills/Criterion/C ategory	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.
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Roll no.	Name of student	Objective of the Role-play	Content delivery by each participant.	Props	Overall of the Impact	Total
1	BANDAWANE NILESH BHAUSAHEB	15	15	15	15	60
2	BEDIS PRACHI KAILAS	AB				
3	BHAMBAR SUYOG SANJAY	20	15	18	20	73
4	BHUSARI SUMIT NAMDEV	20	15	15	20	70
5	BONDE SANKET NILKANTH	20	20	15	20	75
6	CHAVAN LOKESHKUMAR SHRIKRISHNA	17	18	15	20	70
7	CONTRACTOR ASIFALI AKEEL	20	17	16	20	73
8	DEORE SHIVANI ANIL	16	16	15	20	67
9	DHAVALE SHREEJAY PRAMOD	AB				
10	GADE SHUBHAM HARIBHAU	20	15	10	20	65
11	GAIKWAD PRATIK SHIVAJI	20	20	18	20	78
12	GUNJAL MAHENDRA BALASAHEB	20	20	20	22	82
13	JADHAV MANOJ DHANRAJ	20	20	10	20	70
14	JADHAV NIRMAL MANOJ	20	20	20	20	80
15	JADHAV NISHANT SUNIL	20	20	15	20	75
16	JADHAV SHARAYU SHASHIKANT	15	20	10	20	65
17	KAIRI VISHAL LALBEHARI	20	20	15	20	75
18	KASAR HITESH RATNAKAR					
19	KHAIRNAR SURAJ TATYABHAU	15	15	15	20	65
20	LONE UTTKARSH MILIND	13	17	18	20	68
21	MAGARE SHUBHAM RAVINDRA	20	20	10	20	70
22	NIKAM GAURAV RAJENDRA	20	20	15	20	75
23	NIMBALKAR AKSHAY KALYAN	20	15	15	20	70
24	PAGAR SWAPNIL BHAUSAHEB	20	20	15	15	70
25	PATIL PRIYANKA SHIVDAS	18	18	15	20	71
26	PATIL YOGESH JAGADISH					
27	SATPUTE KUNAL SHAHADDEV	20	15	15	20	70
28	SHINDE VARSHA SOMNATH	AB				
29	TAWADE SNEHA PRAKASH	AB				
30	VADASSERY PRIYANKA VISHWAMBHAR	20	20	15	20	75

31	VADNERE DIPAK ARUN	20	15	15	20	70
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