



One-Day Online Workshop Report
on
“Opportunities & Challenges in Electric Vehicle (EV) Technology”
Organised by
Department of Electrical and Electronics Engineering
13 -11-2021

Organized in association with: ISTE Students Chapter

Submitted by: Dr Pratap Ranjan Mohanty, Associate Professor., Dept. of EEE

Resource Person: Mr. Ashhar Ahmed, Co-Founder & Director, SkillShark EduTech, Hyderabad, INDIA

Attendance: 154 participants from different institutions

The session was started at 11 AM. The workshop was initiated by Dr. A V Pavan Kumar, HOD-EEE Department. The resource person **Mr. Ashhar Ahmed**, was introduced by Dr. Pratap Ranjan Mohanty, Assoc. Prof., Dept. of EEE. The resource expert addressed the opportunities & challenges in the research area of Electric Vehicle (EV) technology.

At the beginning of the presentation, the eminent resource person highlighted the present status of automotive sector in INDIA. The Indian automobile industry is the fourth largest in the world with an annual turnover of \$100 billion and employs 32 million people. Two-wheeler industry in India is the largest in the world. India is also the largest tractor manufacturer. India is the eight largest commercial vehicles manufacturer in the world. The automobile sector currently contributes about 50% of the manufacturing GDP in India (26% of the industry GDP and 7.1% of overall GDP). The automobile sector contributes approximately 13% of excise revenue to the government.

The prominent speaker focused on the to make a better sense about transportation industry. Transportation is linked with people, animals and Goods. The key elements of transportation industry are infrastructure, vehicles, operation and policy. This function of the industry basically related to passenger, medical and freight. The important modes are air, rail, road, water, cable, pipeline and space. The transportation industry has large impact on economy, planning and environment. Also, the speaker classifies the automobiles based on the use, capacity, make & model, fuel use, body style, wheels, drive and transmission.

The prominent speaker highlighted the potential EVs for India. He briefed about Micro Electro Mobility, 2W for Personal Commute, 2W for Delivery use, 3W as Passenger vehicle, 3W for Logistic, 4W for Logistic and Last Mile Delivery etc. Besides, he underlined the challenges for EVs in India. The EV technology suffers with improper Ecosystem, limited Renewable Resources, limited Charging Infrastructure, least Production Units for EV battery cells, lack of awareness and understanding in society and tiniest skilled Workforce for EV Industry.

In addition, the resource expert pointed out regarding E-Mobility in India. He talked about Govt. supporting E-Mobility startups, ready blueprint for 10 million e-mobility jobs, Niti Aayog's e-mobility plans and Union budgets etc. Further, the future of mobility in India based on “**National Electric Mobility Mission Plan 2020**” is being discussed. According to plan there is an opportunities of 6-7 million HEV sales, 9500 million litter of fuel saving, 2 million



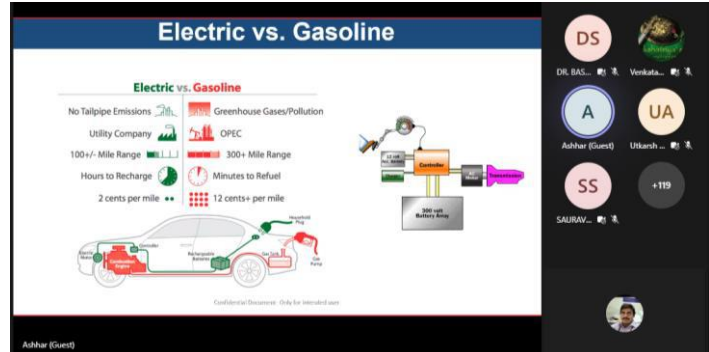
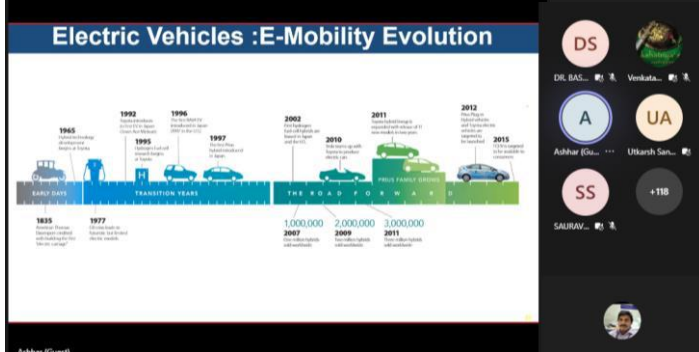
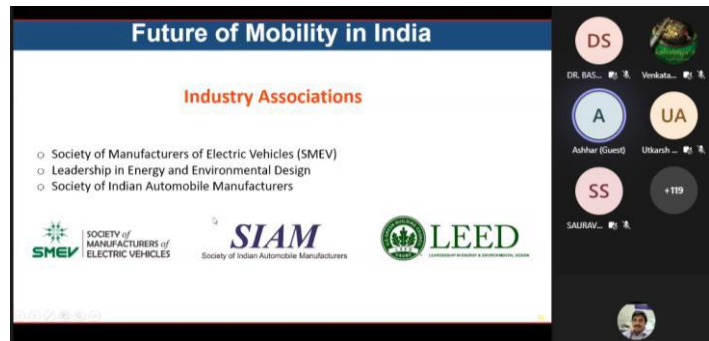
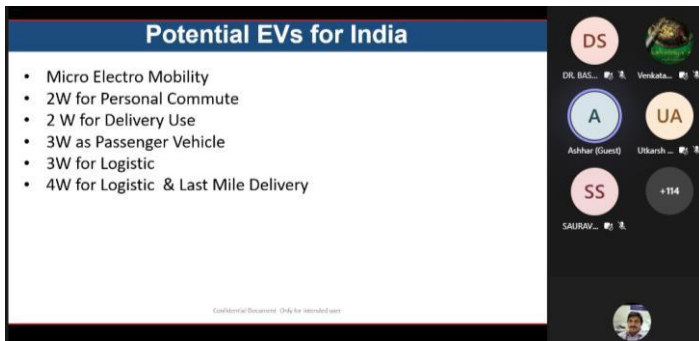
tonnes reduction in pollution and 65K direct & 3Lac indirect jobs. The **FAME India Scheme** for the faster adoption and manufacture of Hybrid and EVs is visualized through the presentation. The speaker focused on the history & evolution of EV technology. He made a better differential sense between Electric & Gasoline vehicle. Also, he explained the basic design of HEV/EV and focused on the technical challenges. At the end, the eminent speaker picturized the technical & entrepreneurship scope of in EV sector ahead.

Feedback: The participants were moreover passionate to know the opportunities and scopes ahead in research, market and entrepreneurship aspects.

The session was concluded followed by a vote of thanks, which was given by Dr. Pratap Ranjan Mohanty, Assoc. Prof.

Participation Certificate: Participation E-Certificates are distributed to all the active participants through their email.

Photos:





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Future of Mobility in India

- 6-7 Million Hybrid & Electric Vehicle Sale
- 9500 Million liters of estimated fuel savings
- 2 Million tonnes reduction in pollution
- 65,000 Direct & 3,00,000 indirect jobs

National Electric Mobility Mission Plan 2020

E-Mobility in India

- Government Supporting E-mobility Startups
Startups in EV ecosystem cheered by govt's push for e-mobility in budget
- Blueprint ready for 10 million e-mobility jobs
Government plans to create specialized workforce to support its e-mobility mission, which will generate new jobs.
- Niti Aayog's E-mobility Plan
Only electric vehicles to be sold by 2030
- Union Budget
Electric Two-Wheeler Manufacturers Welcome Announcements

Sample e-certificate

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Certificate of Participation

This is to certify that Dr./Mr./Mrs. SAURAV KUMAR SINGH
of COLLEGE OF ENGINEERING ROORKEE, ROORKEE
has attended a one-day online workshop on “**Opportunities & Challenges in Electric Vehicle (EV) Technology**”, Organized by **Department of Electrical & Electronics Engineering**, in association with **ISTE Students Chapter** at Madanapalle Institute of Technology and Science, Madanapalle on 13th November 2021

Coordinator: [Signature]
H. O. D of EEE: [Signature]
Principal: [Signature]

ISTE, NAAC Accredited With A+ Grade

MITS/EEE/WORKSHOP/2021/05/18

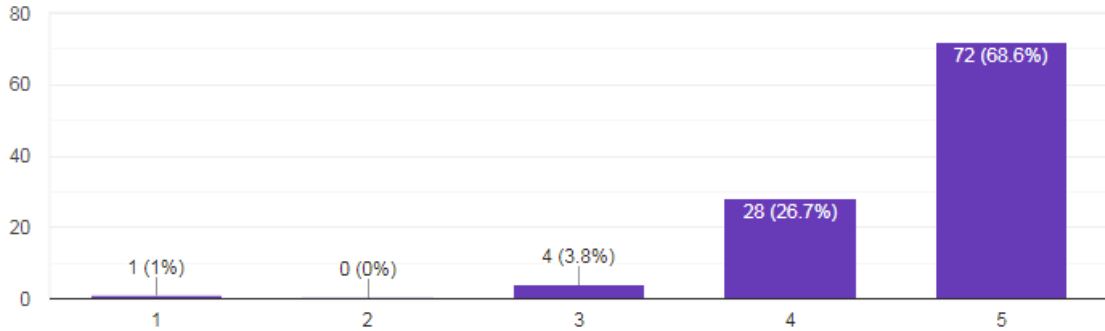
Feedback Analysis

Link for feedback: <https://forms.gle/jQsJ5LKJzRQMyWwt8>



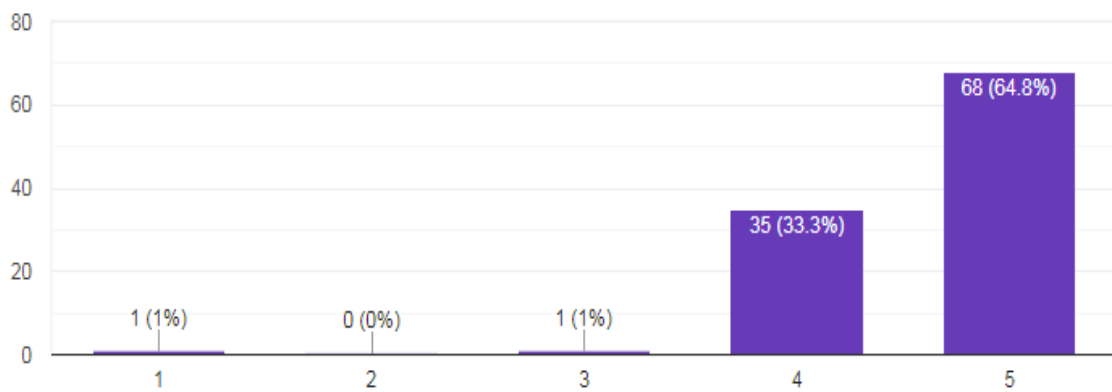
1. The interactive session was scheduled at a suitable time

105 responses



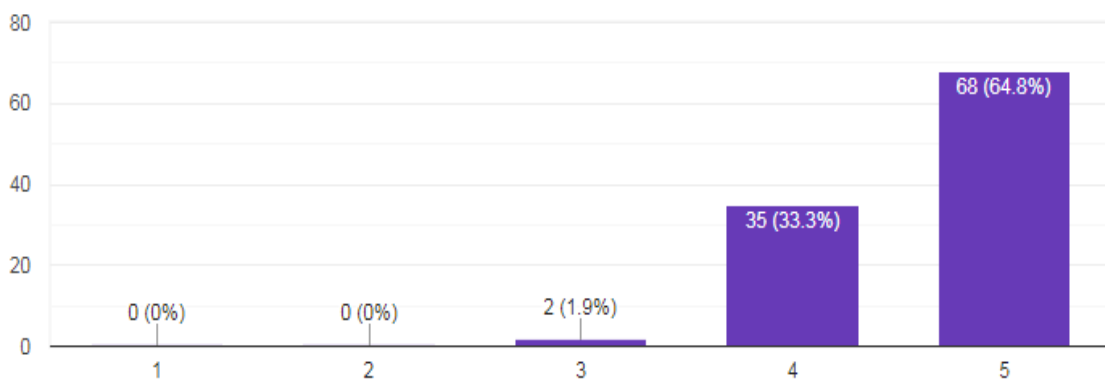
2. The interaction was useful and resource person explanation.

105 responses



3. The information in the interaction was presented in a clear and organized manner.

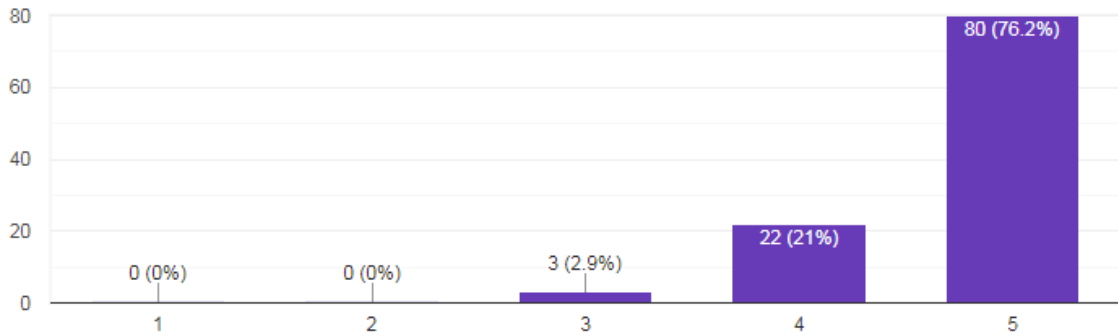
105 responses





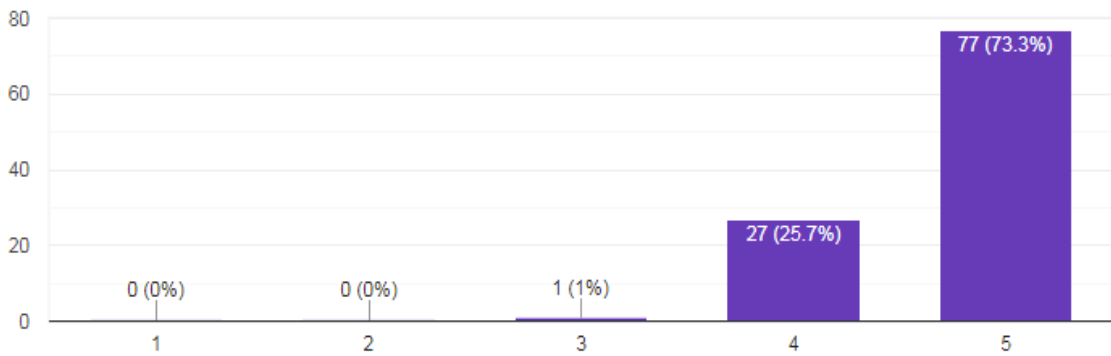
4. The presenter responded to questions an informative, appropriate and satisfactory manner.

105 responses



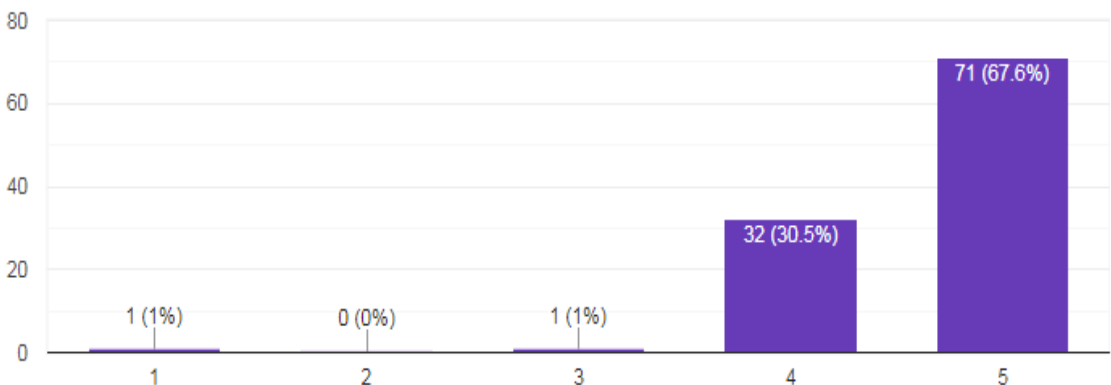
5. your impression of facilities provided by the institute for interaction.

105 responses



6. Overall, the session was informative and valuable.

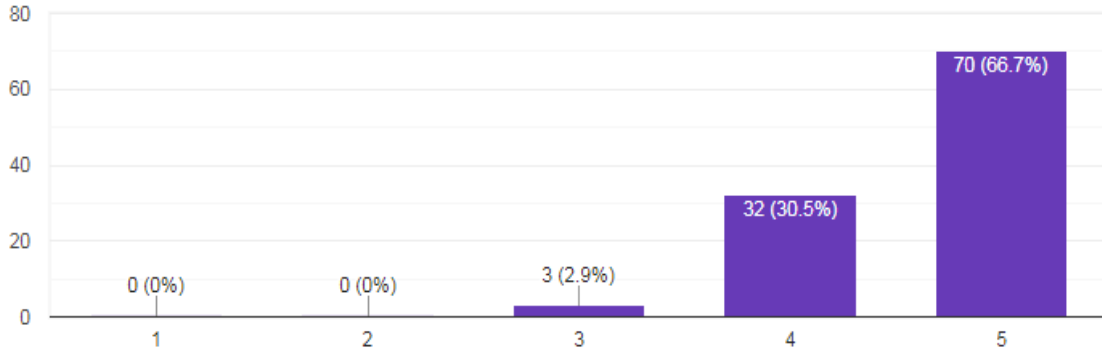
105 responses





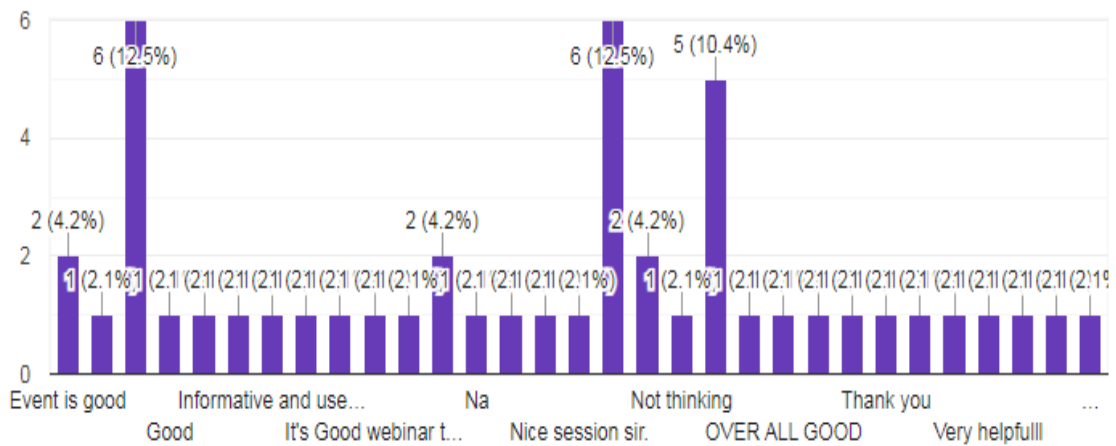
7. In what ways could this interaction have been improved to better suit your needs?

105 responses



8. Any Other Comments

48 responses



Signature of the Coordinator

Signature of HoD