II SAHYOG SUMMER SCHOOL

Strengthening Networking on BiomaAss ResearcH and Bio-waste Conversion – BiotechnologY for EurOpe India InteGration (SAHYOG)

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Department of Energy

Tezpur University

Assam, INDIA

OBJECTIVE

- Stimulating the research cooperation between Europe and India in the project field , planned within the project SAHYOG
- Encompasses broad range of recent developments on biomass and bio-waste conversion including sustainability and LCA of biomass energy for rural developement

PARTICIPATION

A well-balanced group of 20 young post-doctoral and doctoral Indian researchers

2 Participants from CSIR-IIP, Dehradun

1 Participant from GBPUAT, Uttarakhand

1 Participant from TERI, New Delhi

1 Participant from JNU, New Delhi

1 Participant from IIT, Bombay

5 participants from Tezpur University, Assam

3 participants from Gauhati University, Assam

3 participants from IIT Guwahati, Assam

1 Participant from NIT Warrangal

2 Participants from CSIR-IICT, Hyderabad

INVITED SPEAKERS

- Dr. Kees Kwant, NL Agency, The Netherlands
- Prof. Ludo Diels, VITO, Belgium
- Dr. Luigi Chiarini, ENEA, Italy
- Dr. Sylvia Tabacchioni. ENEA, Italy

- Prof. Neera Bhalla Sarin, JNU
- Dr PM Sarma, TERI, India
- Dr. HN Chanakya, IISc, Banglore

- Dr. YV Swamy, IICT
- Dr. P Binod, NIIST, Trivandrum
- Dr. Sanjeev Chauhan, PAU, Ludhiana
- Dr. Rajeev Kumar Sukumaran, NIIST
- Prof. D C Baruah, Tezpur University
- Prof. S. Ashok, NIT Calicut
- Prof. VS Moholkar, IIT, Guwahati

SCIENTIFIC THEMES

- Biomass assessment, characterization, production and improvement
- Biomass conversion: Science, Technology, and Biotechnology
- Sustainability and LCA of biomass use
- Biomass, society and rural development

SCIENTIFIC TOPICS

- ✓ Bio based society and economy
- ✓ Biomass collection and characterization for various conversion processes: problems and prospects
- ✓ Feedstocks diversity as a function of various conversion processes: strengths and opportunities
- ✓ New insights into the ecology, metabolism and genetics of hydrogen producing bacteria

SCIENTIFIC TOPICS

- ✓ **Biohydrogen production : an overview from an European perspective**
- ✓ **Genetic improvement of biomass feedstocks for fuel and chemicals production**
- ✓ **Trends of biotechnological interventions in biomass conversion to energy and biomaterials**

SCIENTIFIC TOPICS

- ✓ **Membrane technologies for the bio-economy and process intensification in fermentation processes**
- ✓ **Biomass with solar and wind – hybrid energy systems**
- ✓ **Energy from biomass: from the farmers perspectives**
- ✓ **Conversion of CO_2 to value added products/chemicals**

SCIENTIFIC TOPICS

- ✓ Feasibility and sustainability of biomass based energy supply in India
- ✓ Pricing issues with regard to biomass based power generation
- ✓ Biogas as an option for decentralized rural energy and livelihood security
- ✓ Principle and case studies of LCA for biomass and bio waste valorization

SCIENTIFIC TOPICS

- ✓ Sustainability in biomass production for bioenergy in agriculture, forestry, and agro-forestry
- ✓ Biomass based energy supply for sustainable future
- ✓ Application of Remote Sensing & GIS in biomass assessment
- ✓ Power production from biomass

SCIENTIFIC TOPICS

- ✓ **Biomass-food-agriculture-environment: a synergistic approach required for sustainable development**
- ✓ **A new sustainability paradigm**
- ✓ **Agricultural wastes as an alternative for sustainable development of rural communities: A Business model for India & Europe**

INAUGURAL SESSION

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Keynote address : Prof. Ashok Pandey, Dy. Director Head, DBT Centre for Biofuel, CSIR-National Institute of Interdisciplinary Science & Technology, Trivandrum, India

Guests, speakers and participants in the inaugural session

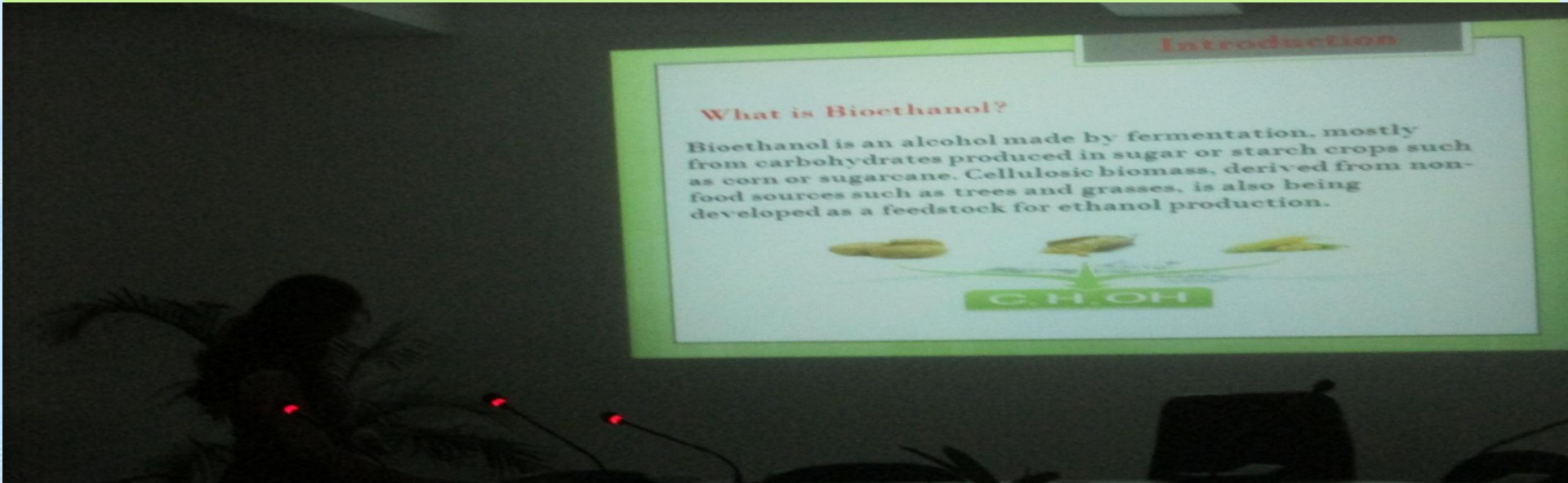
Visit to the Biomethanation Plant site at Balipara, Tezpur


HEAD LEVEL MOVING
MONORAIL, BE CAREFUL
सावधान

VISIT TO NEARBY VILLAGES AND LOCAL SITE

PRESENTATION BY STUDENTS

- **Estimate a plan of woody biomass requirement to support the electricity demand of a typical village in your locality. Consider any feasible route of energy conversion.**



- **Plan the utilization of non-edible sugar based plant biomass available from 100 hectares of crop plant to generate bioenergy.**

- **How would you plan biodiesel production and utilization to support farm mechanization in 50 hectares of crop farm**
- **Prepare a practical plan of electricity generation from crop residue biomass available from 100 hectares of crop plant.**

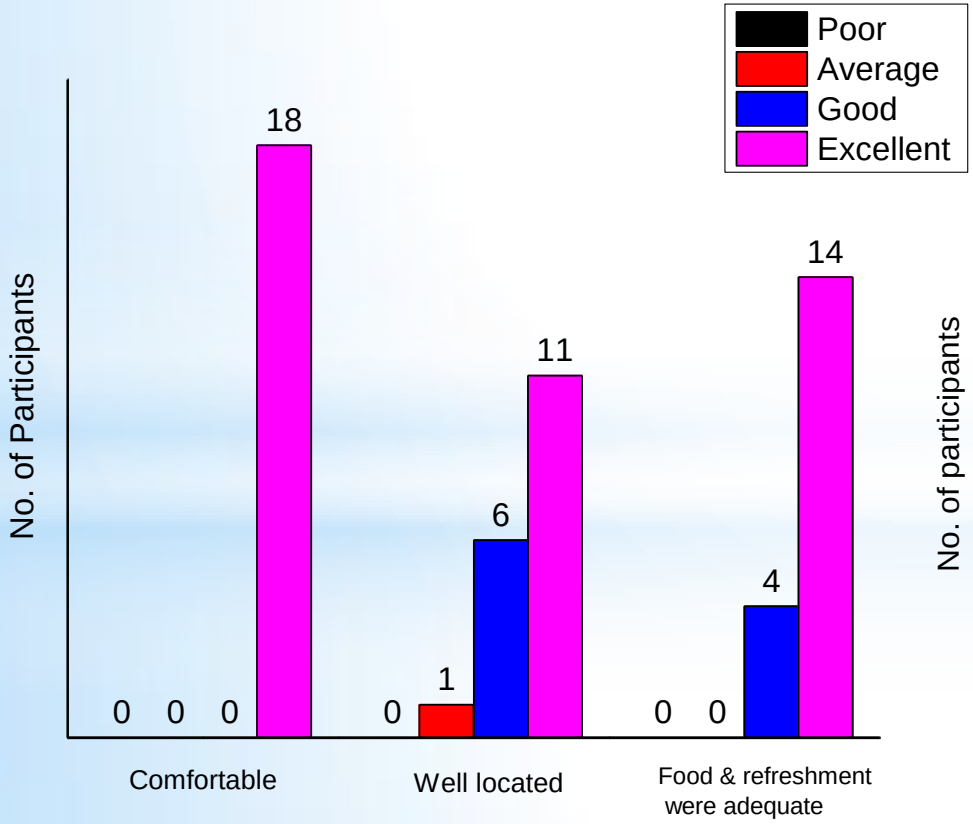
CONCLUDING SESSION






FEEDBACKS FROM PARTICIPANTS

The SS venue



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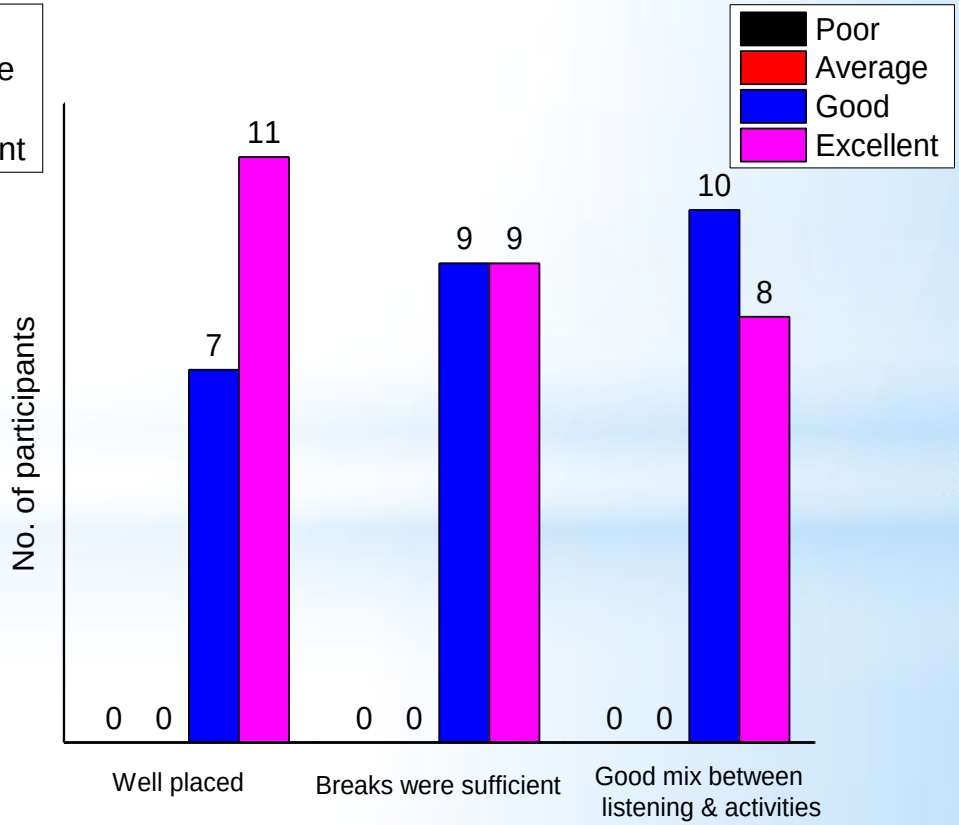

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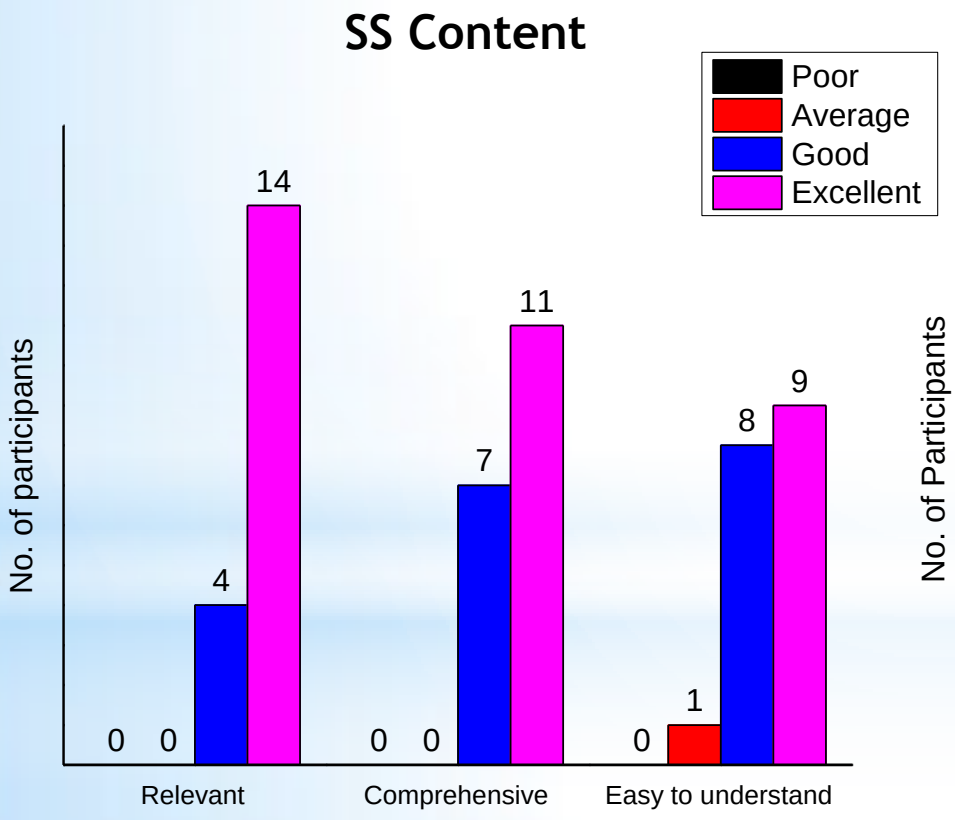

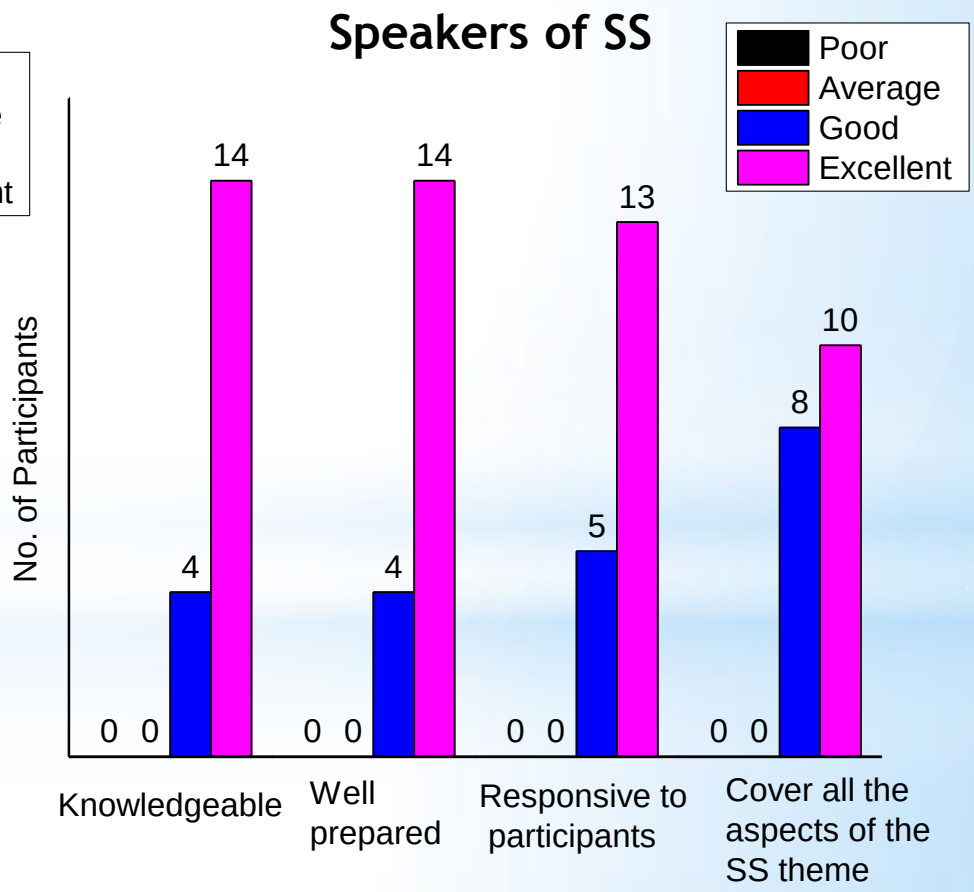

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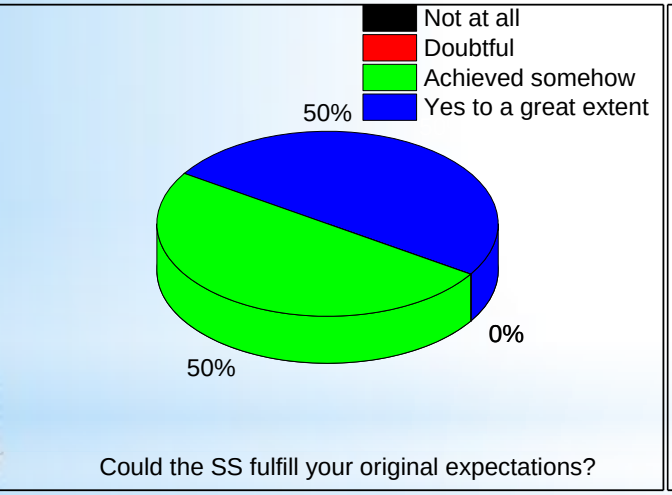
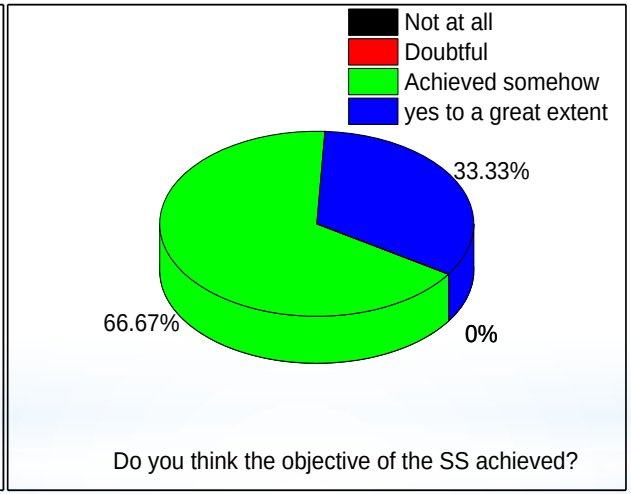
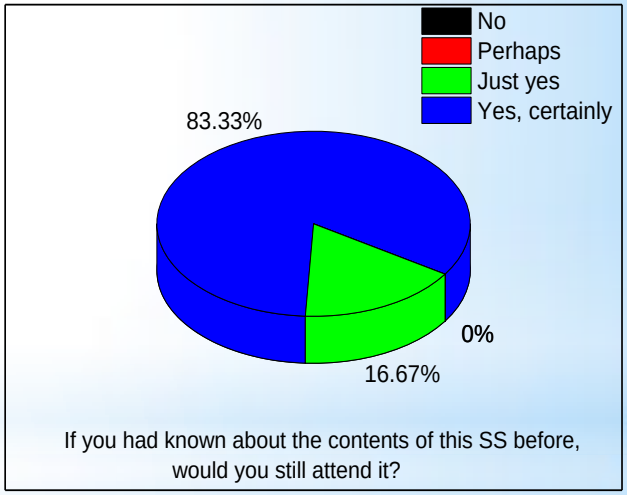


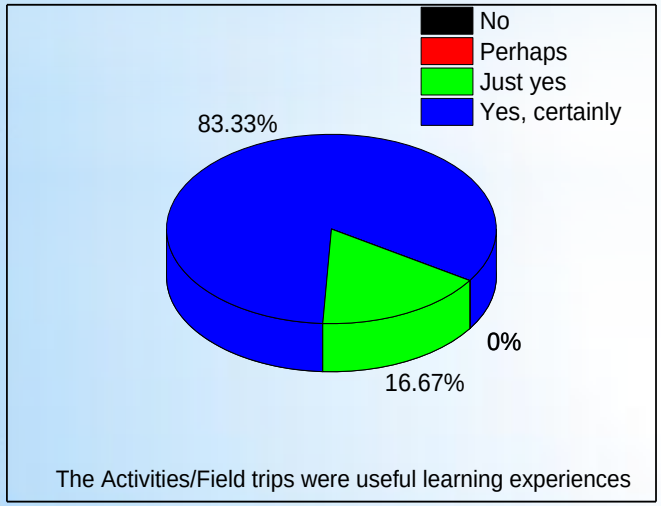
Could the SS fulfill your original expectations?



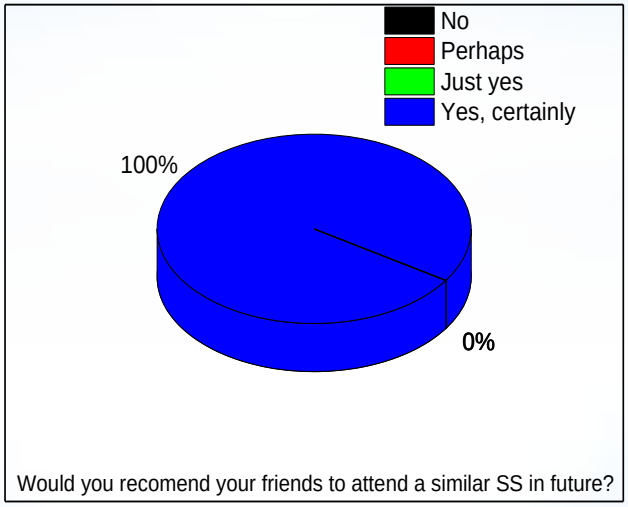
Do you think the objective of the SS achieved?



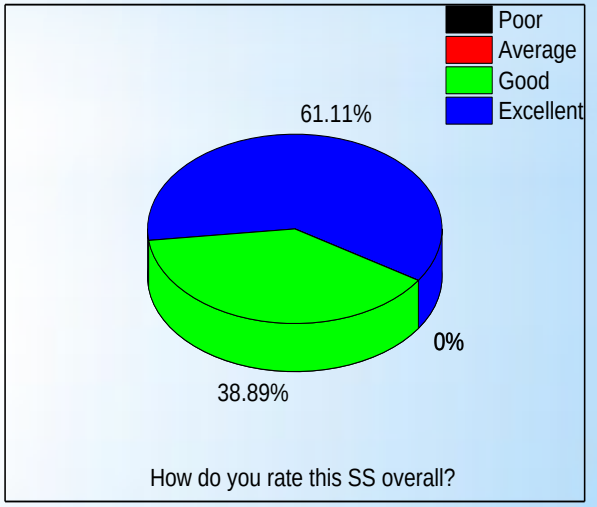
If you had known about the contents of this SS before, would you still attend it?



The Activities/Field trips were useful learning experiences



Would you recomend your friends to attend a similar SS in future?



How do you rate this SS overall?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তেজপুৰ বিশ্ববিদ্যালয়
THANK YOU