Report of

InnovationClub@IGNOU

(2016-2017)

National Centre for Innovation in Distance Education
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110068
Contents

1. InnovationClub@IGNOU – An Introduction
2. A Talk by Dr. Leena Singh on “Commercialization of Innovation” in the Meeting of the Innovation Club
3. A Presentation by Mr. Damnish Kumar, MD and Founder mElimu in the Meeting of the Innovation Club
4. A presentation by Dr. Satya Raj, on an “Overview of Geospatial Technology and Its Application in Context of IGNOU” in the Meeting of the Innovation Club
5. A Presentation by Prof. Manoj Kulshrestha on the topic of “Innovation and Value Analysis” in the Meeting of the Innovation Club
6. A Presentation by Mr. Ajay Kumar Sharma on his Innovations “SCARP ENGINE and Biogas Bottling Machine” in the Meeting of the Innovation Club

Report prepared by:

Dr. Moumita Das
Assistant Director, NCIDE and Coordinator, InnovationClub@IGNOU (2016-2018)

Dr. Oum Prakash Sharma
Deputy Director, NCIDE and Coordinator InnovationClub@IGNOU (2015-2016)

Secretarial Assistance:

Mr. Praveen Chauhan
Introduction

InnovationClub@IGNOU

Innovation is considered to be the key for growth and development of an institute. In order to promote the culture of innovation in the country, the Government of India has declared this decade as the innovation Decade. Moreover, recently the Hon’ble President of India as Visitor of Central Universities has also emphasized on the need of innovation in the education sector. Hon’ble President of India as well as the Hon’ble HRM has asked all the central Universities to constitute Innovation Clubs in the Universities. In view of this, the NCIDE also formulated an InnovationClub@IGNOU in April 2015. Though the NCIDE has already being promoting innovation in the university, the formation of InnovationClub@IGNOU will further strengthened the drive to create the culture of innovation in the University and monitor the faculty and students to do innovations.

Objectives of the InnovationClub@IGNOU

The basic objectives of the InnovationClub@IGNOU are as follows:

- to contribute creatively and actively in the innovation related activities of NCIDE,
- to generate awareness about creativity and innovations in the ODL System,
- to identify the grass-root level innovations by the faculty and the students of IGNOU as well as the ODL System, and
- to create a network of innovators and create a culture of innovation.

Proposed Activities of InnovationClub@IGNOU

In order to meet the objectives of the InnovationClub@IGNOU, a verity of activities are organized on regular basis. Some of such important activities initiated by the Club are as follows:

1. Organizing periodic meetings of the club members to generate new ideas and explore and identify innovations by students, faculty, and staff of IGNOU and the ODL System.
2. Invite students, teachers and staff members to share their innovative ideas and skills and showcase their innovative products and processes.
3. Organizing awareness campaign on Creativity and Innovations within IGNOU and across the ODL System in the country.
4. Organizing various competitions like quiz, debates, posters, etc. on innovation and creativity.
5. Provide a platform to the students, faculty and staff to be engaged in the activities and programmes related to NCIDE.

6. Contribution to the e-news letter/journal on innovation published by NCIDE.

7. To set up and coordinate the innovation club at Regional Centres/Study Centres of IGNOU.

**Members of InnovationClub@IGNOU**

Initially the following were the founder members of the proposed club:

1. Prof. S. V. S. Chaudhary, Professor, School of Education
2. Prof. Anu Aneja, Director, SOGDS
3. Prof. Madhu Parhar, Professor, STRIDE
4. Prof. M. K. Salooja, Professor, SOA
5. Dr. C. K. Ghosh, Regional Director, Dwarka
6. Dr. Shubha Gokhale, Associate Professor, SOS
7. Dr. Biplab Jamatia, Assistant Professor, SOHS
8. Ms. Neerja Sood, Assistant Professor, SOHS
9. Dr. Hemlata, Deputy Director, NCDS
10. Dr. Shubhangi Vaidya, Assistant Professor, SOITS
11. Ms. Jatinder Jit Kour, Producer, EMPC
12. Dr. Mukesh Kumar, Assistant Professor, SOA
13. Dr. Nisha Singh, Deputy Director, IUC
14. Dr. Moumita Das, Assistant Director, NCIDE
15. Ms. Sujata Santosh, Assistant Director, NCIDE
16. Dr. Jyotsna Dikshit, Deputy, NCIDE
17. Dr. O. P. Sharma, Director, NCIDE

However, the club aims towards engaging as many students, faculty and staff as possible in the innovative activities of the university. Therefore, more members were added to the club. The list of the members of the InnovationClub@IGNOU provided at Annexure-I.
Report of the 1st Meeting of the InnovationClub@IGNOU

A Talk by Dr. Leena Singh on Commercialization of Innovation

The 1st Meeting of the InnovationClub@IGNOU was held on May 19, 2016 at NCIDE. Total 18 members were present in the Meeting.

At the outset Dr. Moumita Das, Coordinator of the Innovation Club welcomed the members and informed that thirteen new members have been nominated for the club by the competent authority. They were Dr. Anurag Saxena, SOMS, Dr. Ruchika Kuba, SOHS, Dr. V. P. Rupam, RSD, Dr. Bijayalaxmi Mishra, SED, Dr. G. Mythili, STRIDE, Dr. Leena Singh, Dr. Anjali Ramteke, SOMS, Dr. Satya Raj, SOS, Dr. Shachi Shah, SOHS, Dr. Heena Bijili, SOCE, Dr. Sushmitha Baskar, SOA, Dr. Deepthi Nair, Legal Cell and Dr. Shikha Rai, SOJNMS.

The new members introduced themselves and expressed their thoughts on innovation.

Dr. Bijayalaxmi said that she would submit a proposal on a souvenir, such as ennovate, related to publication of innovations.

Dr. Heena Bijili said she would like to work upon certain areas on hands on learning.

Dr. Leena Singh said she would like to do some research on innovations in Distance Education. She also said that mentoring of innovations is very important, and a team should be constituted for mentoring.

Dr. Satya said she looked forward to the activities of the club and suggested the idea that the IGNOU functionaries could become the brand ambassadors of IGNOU.

Dr. Shachi Shah said that she was interested to work on the use of new technology in IGNOU.

Prof Shubha Gokhale said that efforts should be made by the SRD to put the database of the students on a bigger platform.

Dr. Ruchika Kuba said that the Innovation Club should provide a platform for problem solving of the issues of the University. Workshops to sensitize the administrative staff on innovations should be conducted. Also, the activities of IGNOU could be popularized innovatively, such as on the bills of the government-owned corporations like telephone bills etc.

Dr. G. Mythili suggested that the PGDEL course should be revived. She also said that the innovative “Automated Project Report” software developed by her needs to be revived and implemented.
Ms. Jatinderjit Kour said that the innovation Club should implement the ideas that were discussed in the previous year.

Prof. Madhu Prahar said that the GIS system developed by Dr. Anshu Miglani of IUC should be developed further with the cooperation with the RSD. Dr. V. P. Rupam said that and environment where innovations are implemented in IGNOU has to be developed. Further he added that the technological interventions at the RCs need to be recorded.

Dr. Anurag Saxena said that we should move beyond innovation into incubation.

Dr. Hemlata said that NCDS had developed a Programme on Foundation Course for the teachers on Education on Children with Disabilities, and translated it into nine languages. The NCDS had also developed question papers in nine languages for the On Demand Examination system with the help of NCIDE. This activity was discontinued.

All the members suggested that the On Demand Examination should be revived, and a recommendation to this effect should be communicated to the competent authority.

Thereafter, Dr. Jyotsna Dikshit Director (I/c) NCIDE and Coordinator of the Innovation Club addressed the members and said that the inception of NCIDE was inspired by Dr. A. P. J Abdul Kalam, who in the 16th Convocation in 2005 had expressed the need for an “innovation system”, and NCIDE was established with the aim to provide an environment to nurture the innovations by the faculty, administrative staff and the students through technical, intellectual and financial support. The NCIDE was committed to nurture an environment of innovations, and the various systems, such as the RSD, SRD, SED, the Schools of Studies, Campus Placement Cell, etc. are in place in the University. The Innovation Club, in cooperation with the various systems of the University, could accomplish much in facilitating innovation in the University.

Dr. Moumita Das introduced the online Innovation Management Platform, Navdharana, to the members. Navdharana is an interactive database of ideas and innovations in ODL developed by the NCIDE. She said that at present there are about 120 innovations and ideas uploaded in Navdharana and more are being added. There are more than 125 innovators whose ideas and innovations have been uploaded in Navdharana.

Thereafter, Dr. Leena Singh presented a talk on “Commercialization of Innovation”. She said that the Navdharana has documented the innovations and from there she took up two innovative programmes, Certificate in Craft and Design (Pottery) and Certificate in Competency in Power Distribution (For Technicians) and studied the gap areas with respect to commercialization and marketing. She said that these gap areas need to be addressed by mentoring and proposed that every innovation should have the mentoring of a team that comprises members from the relevant Schools and Departments of IGNOU, and members from the industry and government.
agencies. She also said that the IGNOU programmes should be linked to employability skills. She put forth the concept of customer-centric innovation for the learners of IGNOU and recommended several measures such as advertisements in the mainstream media, innovative prospectus, strengthening the alumni, contact with the industry, and the innovative use of the postal services. All the members appreciated the talk and hoped that it will inspire them towards innovation.

The members were requested to give their views and ideas to make the club more effective and useful for the students, faculty and the staff of the university. After discussion on different aspects of the club, following suggestion points emerged:

1. **A Working Group for Revival of ODE:** A working group was constituted for developing a document on the recommendations for the revival of the On Demand Examination. The coordinator of the group would be Dr. O. P. Sharma, NCIDE and the members would be Dr. Bijaylaxmi Mishra, SED, Dr. Hemlata, NCDS, DR. Ruchika Kuba, SOHS and Dr. S. K. Pulist, SRD.

2. **A Team for Revival of the GIS Project:** The GIS developed by Dr. Anshu Miglani, IUC, could be scaled up and the members for this activity were identified as Dr. Anshu Miglani, Dr. Ashish Awadhiya, IUC, Dr. Satya Raj, SOS and Dr. V. P. Rupam, RSD.

3. **A Team for Revival of Automated Project Report:** The Automated Project Report developed by Dr. G. Mythili, STRIDE and Dr. Sanjaya Mishra, STRIDE would be revised and for this activity the team members would be Dr. G. Mythili, STRIDE, Dr. Bijayalaxmi, SED, and Dr. S. K. Pulist, SRD.

4. **A Team to Study Commercialization of Innovations:** The concept presented by Leena needs to be further explored and the team members to study this would be Dr. Leena Singh, SAMS, Dr. Moumita Das, NCIDE and Dr. Jyotsna Dikshit, NCIDE.
Report of the 2nd Meeting of the InnovationClub@IGNOU

Presentation by

Mr. Damnish Kumar, MD and Founder mElimu

The minutes of the meeting of the Innovationclub@IGNOU held on June 27, 2016 were confirmed.

The issue regarding the names of the team members of the activity regarding the revival of the GIS project discussed in the meeting of the Innovationclub@IGNOU on May 19, 2016 came up for discussion. While confirming that the names had been proposed in the meeting, it was agreed to forward the names to the respective school for information.

While continuing the discussion on the topic “How would you envision IGNOU to be from the learners Perspective”, a few ideas were offered:

a) Prof. Anu Aneja stressed on the need to improve the interface between the students and the University. In this regard, she highlighted the need to keep up with the changing pedagogy, and take practical steps towards implementing new ideas into action.

b) Dr. Jyotsna Dikshit mentioned the Student Life Cycle Management as an enabling mechanism for facilitating the students using technology.

c) Dr. O. P. Sharma mentioned that a lot of hurdles have been overcome since the time the Online Admission System came into effect. He highlighted some of the features of the Online Admission System that highly facilitates the students during the admission process.

d) Dr. Bijoyalaxmi Mishra said that an online submission system for assignments and project reports should be in place, which could be accessed by the Regional Centres, Study Centres and the Headquarters. This will increase the coordination between the RCs and the SCs.

A presentation by Mr. Damnish Kumar, MD and Founder mElimu was arranged to become familiar with their flagship e-learning software “Digital University-in-a-Box platform”. He highlighted the features of the e-learning software, which was followed by interaction and discussion by the members of the club. The following was decided after the deliberations:

1. Since a web-support system hosted on the IGNOU server is already being provided to the students of MAWGS, to augment it, a proposal for a pilot project might be prepared by Mr. Damnish Kumar. Director, NCIDE and MAWGS programme coordinators may seek further guidance for submission of the proposal to the Competent Authority.
Report of the 3rd Meeting of the Innovation Club

Presentation on

“Overview of Geospatial Technology and Its Application in Context of IGNOU”

The minutes of the meeting of the Innovationclub@IGNOU held on July 27, 2016 were confirmed.

The activities of the innovation club were discussed afresh and the members were asked to provide their inputs. The members suggested that NCIDE should coordinate with the various Schools of IGNOU for designing and conducting the activities of quiz, poster, exhibition, etc. for the students.

A presentation by Dr. Satya Raj, Assistant Professor, School of Sciences IGNOU was arranged on the topic – An “Overview of geospatial technology and its application in context of IGNOU” She explained the concepts of Remote Sensing, Global Positioning System and Geographic Information System and their uses. She also explained that these geospatial technologies could be used in the context of IGNOU for various activities in the interest of the faculty, administration and the students. She informed that she has used these technologies for mapping the IGNOU campus at Maidan Garhi for better accessibility, and also developed a concept, using these technologies, for rainwater harvesting at the University. Her presentation was followed by interaction and discussion by the members of the club. The following was decided after the deliberations :

i. A pilot project may be initiated by Dr. Satya Raj, SOS, Dr. Ruchika Kuba, SOHS, and Dr. O. P. Sharma, NCIDE to develop a prototype by taking up one selected Programme in one selected Regional Centre.

ii. The concept of rainwater harvesting at IGNOU using geospatial technologies may be forwarded to Prof. Kapil Kumar, Campus Monitoring and Guidance Committee, for further necessary action.

The outgoing member of the Innovation Club, Dr. C. K. Ghosh was given a farewell by the club. On this occasion Dr. Ghosh suggested that the students of IGNOU need to be sensitized. For this, innovative presentation of the content is necessary. He suggested that the platform of MOOC could be used in an innovative way, and appropriate use of video snippets in the innovatively designed content would be very useful. He added that in this effort the NCIDE, in collaboration with Schools, could play an important role.

The members were requested to provide their inputs for making the Navdharana portal vibrant among the students of IGNOU. They provided the following suggestions:
i. Weekly posts of inviting students to submit slogans, posters, cartoons, poems, write-ups, etc. on pertinent issues in *Navdharana*. A scroll should be used on the main page of IGNOU website to attract the attention of the students. The best entries could be appreciated and the students given recognition in the form of a title of “The Best Student of the Week”.

ii. Innovative students could be felicitated on the Foundation Day of IGNOU.

iii. Celebration of International Day of People with Disability (Disability Day) on 03rd December every year with appropriate invitations of entries for innovative slogans, posters, cartoons, poems, write-ups, etc. and their recognition.

iv. Celebration of 02nd October as *Swachhata Diwas* by inviting slogans, posters, cartoons, poems, write-ups etc., by students on *Navdharana* and recognizing the best entries.

v. Celebration of Innovation Day.
Report of the 4th Meeting of the Innovation Club

Presentation on

“Innovations and Value Analysis”

The 4th meeting of the InnovationClub@IGNOU was held on January 18, 2017 at 11.00 AM at Baba Saheb Ambedkar Convention Centre, IGNOU. Total 29 members were present in the Meeting.

At the outset Dr. Moumita Das, the Coordinator InnovationClub@IGNOU welcomed all the members, including the new members and informed that this was the 18th meeting the InnovationClub@IGNOU. In this context, she presented a brief background of the genesis of the Innovation Club and stated its basic objectives. She reported that in more than one and a half years of its existence, the Innovation Club has held several brainstorming meetings, held presentations on innovative education solutions, planned projects proposals to develop prototypes, and had set up innovation clubs at four Regional Centres. But now, there are many more activities that need to be taken up from time to time, such as organising various competitions like quiz, debates, posters, etc. on innovation and creativity and organising awareness campaign on creativity and innovations within IGNOU and across the ODL System in the country, to name a few. She said that in September 2016, the NCIDE decided to reconstitute the Club and invited the interested IGNOU functionaries at the Headquarters to participate as members in the Innovation Club. She informed that 23 new members had joined, taking the total strength of the club to 52 members. She welcomed the new members of the club and requested them to introduce themselves.

After the introduction of the members, Prof. Manoj Kulshreshtha, Director, NCIDE and Coordinator of the InnovationClub@NCIDE was requested to address the members.

Prof. Kulshrestha said that this was his first meeting of the Innovation Club after assuming the charge of Director, NCIDE. He reiterated the objectives and activities of the InnovationClub@IGNOU and expressed the hope that with the active participation of the members the Club would be able to achieve its objectives of identifying and showcasing of innovations done by the students, faculty and staff of IGNOU thereby creating a culture of innovations in the ODL system and the country. Thereafter, Prof. Manoj Kulshreshtha gave a brief presentation on the topic of “Innovation and Value Analysis”. He elucidated the difference between invention and innovation and explained the concepts of Value, Value Analysis, Job Plan Phases and Value Innovation. The urged up on the members to think about how to apply the concept of Value Innovation in the context of the ODL system.

After his presentation, the forum was open for discussion. The members thoroughly discussed and provided the following observations and suggestions:
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name</th>
<th>Observations and suggestions                                                                                                                                                                                                                                                                                                                                ᨪ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Dr. Shubhangi Vaidya</td>
<td>While analyzing Value Innovation, the cultural and social aspects need to be factored in. We need to think from the perspective of our disciplines while thinking about applying the concept of value addition.</td>
</tr>
<tr>
<td>2.</td>
<td>Prof. P. Srinivas Kumar</td>
<td>Need is important for innovation. Encouragement from the organization is a must. We should create such an environment.</td>
</tr>
<tr>
<td>3.</td>
<td>Prof. Majhi</td>
<td>Need is important. Most innovations were done during World War II. Innovations are done today to cater to our needs. Today research is going on for alternative sources of energy.</td>
</tr>
<tr>
<td>4.</td>
<td>Dr. Nisha Singh</td>
<td>Encouragement and facilitation by the Institution is needed. It needs to motivate people who want to innovate.</td>
</tr>
<tr>
<td>5.</td>
<td>Mr. Shivaji Bhaskar</td>
<td>There is an urgent need to innovate in the SLM. The reasons are many. One of the reasons why innovation is not happening is the dearth of faculty. Because of the increasing fees (cost), the value of the SLM does not increase. In fact, the entire study material of IGNOU (in the form of offline, online, audio and video material) should be put on a ICT platform. Apps are the need of the hour.</td>
</tr>
<tr>
<td>6.</td>
<td>Dr. Parmod Kumar</td>
<td>Audio and Video are important while promoting the teaching of languages.</td>
</tr>
<tr>
<td>7.</td>
<td>Dr. M. P. Mishra</td>
<td>The Innovation Club should convey an message to the concerned people that we need to gear up to the new changes and developments that are taking place in the world. We need to improve all the components of our system in totality. Options for every kind of learner should be provided.</td>
</tr>
<tr>
<td>8.</td>
<td>Dr. Komolika Banerjee</td>
<td>We should be cautious about what content should be used in SLM. For example, too much multimedia should be avoided.</td>
</tr>
<tr>
<td>9.</td>
<td>Dr. Lalita Kumar</td>
<td>Student support should be made robust. There should be online support for them which should include all the required components.</td>
</tr>
<tr>
<td>10.</td>
<td>Dr. Leena Singh</td>
<td>We have a storehouse of ideas and innovations in Navdharana. It should be used properly. Incubation, acceleration and Mentoring for the innovation should be done by the club. There should be guidelines from the competent authority that the faculty should be spared for 1-2 hours for this activity.</td>
</tr>
<tr>
<td>11.</td>
<td>Dr. Sudhansh Sharma</td>
<td>We should list out the problems, we should list out the solutions and work on finding the right kind of solution for a given problem.</td>
</tr>
<tr>
<td>12.</td>
<td>Dr. Anupriya Pandey</td>
<td>We need to provide proper services for the students. Suitable innovations should be carried out in that direction.</td>
</tr>
<tr>
<td>13.</td>
<td>Dr. Satya Raj</td>
<td>A policy for MOOCs is needed. We should provide learner-centric study material so that they are appropriately facilitated.</td>
</tr>
<tr>
<td>14.</td>
<td>Dr. M. K. Bharadwaj</td>
<td>We have to seriously think about changing the way our course materials are written.</td>
</tr>
</tbody>
</table>

After due deliberations it was decided that the next meeting of the Innovation Club would focus on a talk on SLMs by Mr. Shivaji Bhaskar which will be followed by brainstorming. The next meeting of the Innovation Club was decided to be held in the fourth week of February 2017.
Report of the 5th Meeting of InnovationClub@IGNOU

Presentation on

“Scrap Engine and Biogas Bolting Machine”

The 5th meeting of the InnovationClub@IGNOU was held on March 20, 2017 at Convention Centre, IGNOU. Total 22 participants were present in the meeting.

First of all Prof. Manoj Kulshrestha, Director, NCIDE welcomed Mr. Ajay Kumar Sharma and the participants. He briefly informed about the Festival of Innovation – 2017 organized by the National Innovation Foundation (NIF) at the President House during March 04 to March 10, 2017. He informed that Mr. Ajay Kumar was also one of the innovators who were invited by the President House for this Festival. He mentioned that it was a moment of pride of us to have IGNOU’s student with the President in the Festival.

Thereafter, Dr. O. P. Sharma, Deputy, Director, NCIDE gave a brief introduction of Mr. Ajay Kumar Sharma. He mentioned that Mr. Ajay Kumar is a grass-root innovator and it is a matter of pride that he is a student of IGNOU. He informed that the NCIDE came to know about Mr. Ajay Kumar in May, 2012 when he had submitted a proposal of one of his innovations named as SCARP ENGINE to the Vice Chancellor for support and guidance of IGNOU. Taking action on his proposal, NCIDE had proposed two main actions. As first action, it was proposed to visit and review the innovative product designed and developed by Mr. Ajay Kumar, and second proposal was to initiate a scheme to identify, nurture and support other such innovations by the IGNOU students. Both the proposals were approached by the Vice-Chancellor. Accordingly, a team of experts including Dr. C. K. Ghosh from NCIDE, Dr. Amit Chaturvedi, RD, Varanasi and two experts from IIT (BHU) visited this innovative product and gave their observations and recommendations to promot and support Mr. Ajay Kumar in this endeavor. Further he informed that Mr. Ajay Kumar has done several other innovations also which include Solar Power Improvement Machine, Foot Step Electricity for Ganga Ghat, Cooler Operated LPG stove and Biogas Bottling Machine for Farmers. Dr. Sharma informed that he last one i.e. Biogas Bottling system has been recently selected by the NIF for display and presentation at the Festival of Innovation at Rashtrapati Bhavan. He said that Mr. Ajay Kumar is a real innovator and a man of practical.

Thereafter, Mr. Ajay Kumar was invited to give a presentation about his journey as an innovator and give highlights of his innovative projects. Mr. Ajay Kumar Sharma first gave a brief self introduction and highlighted that he had been thinking differently right from his childhood, when he used to play with toys and other such items. He said that he always look around to identify the common problems faced by the people and the society. He pointed that he has been highly concerned about the problems of energy shortage and related environmental issues. That is why he thought of developing some innovative devices which could give more output in the form of energy with minimum pollution to the environment. In this context, he highlighted the innovative feature of his SCARP ENGINE which is an energy efficient
system having more output with less input. The salient features of his innovation include highly energy efficient, cost effectiveness and eco-friendly.

Thereafter, he gave a video presentation of his other innovation on Biogas Bottling Machine which was displayed in the Festival of Innovation. The innovative feature of this innovation, as highlighted by Mr. Ajay Kumar are as follows:

1. This is a portable, energy efficient and cost efficient biogas bottling compressor machine, this machine compress the biogas from 0-200psi in a biogas tank. It can operate with electricity, solar energy and also manually. This new "Farmer Friendly Biogas Compressor Machine" deals with a new idea with some innovation.

2. Bottling can be done directly from biogas plant/digester after purification and there is no need to store large volume of biogas to create high pressure for bottling by large tank.

3. This operation can be done by only one compressor cylinders also, manually as well as electrically which depends on consumer needs or source of energy.

4. This product saves 50% electricity or input energy

5. There is a new design cylinder for compressor machine of 4-6 inches stroke at low rpm. This cylinder creates required pressure at low rpm for manual operation. This cylinder works also on electricity and manually.

6. As this compressor machine can work without fossil fuels, it creates no pollution.

At the end of the presentations, all the participants first of all congratulated Mr. Ajay Kumar Sharma for his successful journey as an innovator and wished him for a brighter and more successful future. Thereafter, a number of questions were asked by the participants regarding the functioning of SCARP ENGINE and related issues. The discussion was very live and fruitful. The participants gave few suggestions also in the regards, such as:

1. The innovations done by Mr. Ajay Kumar should be properly publicized by IGNOU in newspapers and be put on IGNOU’s website,

2. The achievements of Mr. Ajay Kumar may be presented during Convocation, and

3. The IGNOU should initiate an innovation hunt drive from amongst the students and annual awards may be given to the best innovation.